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EXPERIENCES OF THE COMMUNITY TELEVISION SECTOR IN THE MIGRATION TO DIGITAL TERRESTRIAL TELEVISION IN SOUTH AFRICA 2007 – 2014

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A research report submitted to the Faculty of Humanities,
University of the Witwatersrand, Johannesburg,
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ABSTRACT

South Africa has a nascent community television sector, which is legislated as a tier of broadcasting. This sector is important in deepening democracy, creating access to information, giving communities the space to share information, and expanding media ownership to communities beyond the public and commercial television broadcasting sectors. Since 2007, when Soweto TV was the first community television station to be licensed, the processes towards migrating analogue to digital terrestrial television have been beset with delays and the experience of the community TV sector with respect to this migration have been not well understood.

The conceptual-analytical framework for this historical study of the period 2007 to 2014 drew on the key themes of sector and institutional governance including the effectiveness of policy and regulation, technological advancement, content and services. Using a constructivist methodology the key documents pertaining to broadcast digital migration were reviewed and interviews were conducted with three community TV stations, Soweto TV, Bay TV and Cape Town TV, as well as with the policy-maker, the regulator and sector experts.

The findings revealed that the community television (CTV) sector was faced with problems of sector and institutional governance not being effectively addressed in legislation and regulation, stagnation as a result of lack of spectrum in the analogue television-broadcasting dispensation and limitations on content provision. Using McConnell's 2010 framework, analysis of the data led to the conclusion that the DTTM programme has failed with respect to the community TV sector. Advances for the CTV sector will require revision to legislation and future regulation to guide the governance of the CTV sector and the digital terrestrial television migration should be concluded without further delay, in order to enable the sector to grow. Although CTV stations are providing content to communities, the opportunity for them to make a greater impact, if digital terrestrial television (DTT) is finally launched, should be prioritised as the new technology can provide them with the scope to expand their content offerings.

DEDICATION

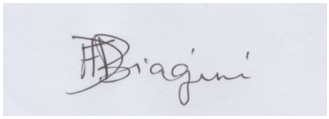
This work is dedicated to Francesco, Rehumile, Neo and Giume Biagini who were my pillars of strength.

ACKNOWLEDGEMENTS

I wish to acknowledge and commend my supervisor Lucienne Abrahams whose academic rigour, sagacity and supportive nature helped me to pull through. I wish to thank Ohara Ngoma-Diseko, Gaahele Diseko and Amuzweni Ngoma for their support, inspiration and encouragement.

DECLARATION

I, Fumane Diseko-Biagini, declare that this research report is my own, unaided work. It is submitted in partial fulfilment of the requirements of the degree of Master of Arts: ICT Policy and Regulation at the University of the Witwatersrand, Johannesburg. It has not been submitted before for any degree or examination in any other university.



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Fumane Diseko-Biagini

October 2016

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LIST OF ABBREVIATIONS AND ACRONYMS

ACT-SA	Association of Community Television South Africa
AMAC	Arts and Media Access Centre
CTV	community television
ASO	analogue switch-off
CBO	community-based organisation
COSATU	Congress of South African Trade Unions
CT CTVC	Cape Town Community Television Collective
CTVS	community television sector
CTTV	Cape Town Television
CVET	Community Video Education Trust
DBAB	Digital Broadcasting Advisory Board
DMWG	Digital Migration Working Group
DoC	Department of Communications
DTPS	Department of Telecommunications and Postal Services
DTT	digital terrestrial television
DTTM	digital terrestrial television migration
DTTV	Digital terrestrial television
DVB-S2	Digital Video Broadcasting – Satellite – Second Generation
DVB-T	Digital Video Broadcasting – Terrestrial
DVB-T2	Digital Video Broadcasting – Second Generation Terrestrial
GDTV	Greater Durban TV
HDTV	high definition television
IBA	Independent Broadcasting Authority
ICASA	Independent Communications Authority of South Africa
IDTV	integrated digital TV
ISDBT	Integrated Services Digital Broadcasting - Terrestrial
ICT	Information and communication technology
ITU	International Telecommunication Union
MISA-SA	Media Institute of Southern Africa – South African Chapter
MPEG-4	Motion Picture Experts Group Layer-4 Video

MTV	mobile television
MTTV	Midrand-Tembisa Television
MUX	multiplex
NAB	National Association of Broadcasters
NDP	National Development Plan
NGO	non-governmental organisation
OWN	Open Window Network
SABC	South African Broadcasting Corporation
SACF	South African Communications Forum
SADC	Southern African Development Community
SATRA	South African Telecommunications Regulatory Authority
SCTV	Soweto Community Television
SOE	state-owned enterprise
SOS	Save our SABC: Support Public Broadcasting Coalition
STB	set-top box
SDTV	standard definition television
STV	Soweto TV
TTV	Tshwane Television
UBS	Urban Brew Studios
USAF	Universal Service and Access Fund
USAASA	Universal Service and Access Agency of South Africa
WWMP	Workers World Media Productions

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CHAPTER 1: COMMUNITY TELEVISION AND DIGITAL TERRESTRIAL TELEVISION MIGRATION DEVELOPMENTS IN SOUTH AFRICA

1.1 Context and overview

This study seeks to explore the experiences of the South African community television (CTV) sector in the digital terrestrial television migration (DTTM) period from 2007 to 2014. The study expounds on the themes of governance, technological change, content and services, written mainly from the perspective of the community television sector. The first fully-fledged, democratic-era, community television station, Soweto Community Television, was licensed in 2007. In the same year, the DTTM discourse began in earnest. By 2014, there were six licensed CTV stations in total. Diverse problems have been identified by various stakeholders with an interest in the sector.

In 2013, the Department of Communications (DoC), which was responsible for issuing policy, mooted regionalising CTV stations to broadcast at provincial level on the digital terrestrial television (DTTV) platform and being given the power, as government, to appoint Boards of Directors for CTV stations. The regulator, the Independent Communications Authority of South Africa (ICASA), stated that the stations contravened their licensing conditions by not complying with regulations. CTVs identify sustainability, ownership and control, community participation and editorial integrity as some of the hurdles they faced (Mungadze, 2013).

Historically, in 2002 the government was expecting recommendations from the Digital Broadcasting Advisory Board (DBAB) on how to develop policy frameworks for digital broadcasting (Matsepe-Casaburri, 2002). There have been numerous obstacles to the DTTM mainly as a result of the developments in the policy and regulation spheres and final policy and regulations that were adopted in 2012.

Such problems point to an absence of a unified approach to address them. For this study the issues pertaining to CTV and DTTM were disaggregated and explored

through a synthesis of concepts articulated by Iosifidis (2007), McConnell (2010) and Rennie (2003).

For purposes of this research, some of the essential elements aimed at driving DTTM were derived from Iosifidis (2007) in order to create an understanding of DTTM in South Africa. McConnell's approach to "policy as programme" (2010, p. 354) was utilised in analysing some of the data. Rennie (2003) provides insight into the important role CTVs play by contributing to deepening plurality in the media. The aim was to further an understanding of the position of CTVs in a DTTM environment.

This first chapter looks at the background of the South African migration to digital terrestrial television and the position of community television stations, and also outlines the research problem. Chapter 2 looks at the academic literature pertaining to governance, technology and content and services. Chapter 3 outlines the research methodology in terms of the tools and methods applied. Chapter 4 presents the findings and organises them thematically. Chapter 5 is the analysis of the data, and Chapter 6 concludes and recommends areas of future research.

The world has experienced an evolving technological environment that has resulted in multiple shifts for the information and communication technology (ICT) environment. Globally, the telecommunications and broadcasting sectors have also evolved, moving towards the digitisation of information and content. The television landscape in South Africa is comprised of public, commercial and community television and is legislated in the Electronic Communications Act 36 of 2005 and the Broadcasting Act of 1999.

This research report explores the experiences of the South African community television (CTV) sector in a changing technological environment, brought on by the global shift from analogue to digital television broadcasting. The context for the South African television sector transformation in the post-apartheid era was a contentious issue. During apartheid the state-broadcasting sector was "an expensive state propaganda organ" (Gillwald, 2001). The discourse in the transition period

resulted in the recognition of the necessity for independent media (Teer-Tomaselli, 1994). It was resolved that broadcasting should be comprised of public service, commercial and community broadcasting at the The Jabulani! Freedom of the Airwaves conference held in 1991 (Duncan & Glenn, 2010).

The Constitution of South Africa was a significant transformatory Act that formally and legally began the work of undoing institutionalised racism. Its main objective was to build and entrench a culture of democracy and transparency, addressing years of racialised socio-economic and political life in the country. The Constitution of South Africa laid "the foundations for a democratic and open society in which government [was] based on the will of the people" (Republic of South Africa, 1996).

The role of the media was important in supporting plurality and a sound democracy. The Constitution provided for laws and institutions that support South Africa as a constitutional democracy. For example, Chapter Nine, Section 192 (Republic of South Africa, 1996) states: "National legislation must establish an independent authority to regulate broadcasting in the public interest, and to ensure fairness and a diversity of views broadly representing South African society". The Bill of Rights, in Chapter Two, Section 16 states that "Everyone has the right to freedom of expression, which includes (a) freedom of the press and other media; (b) freedom to impart information or ideas".

From a policy perspective, South Africa is committed to the provision of access to technology for its population. This was reflected by the National Development Plan (NDP), which states that "all in our society should be able to acquire and use knowledge effectively; everyone should benefit from important breakthroughs in science and technology and South Africa should continue to contribute to global scientific and technological advancement" (National Development Plan, 2011, p. 9).

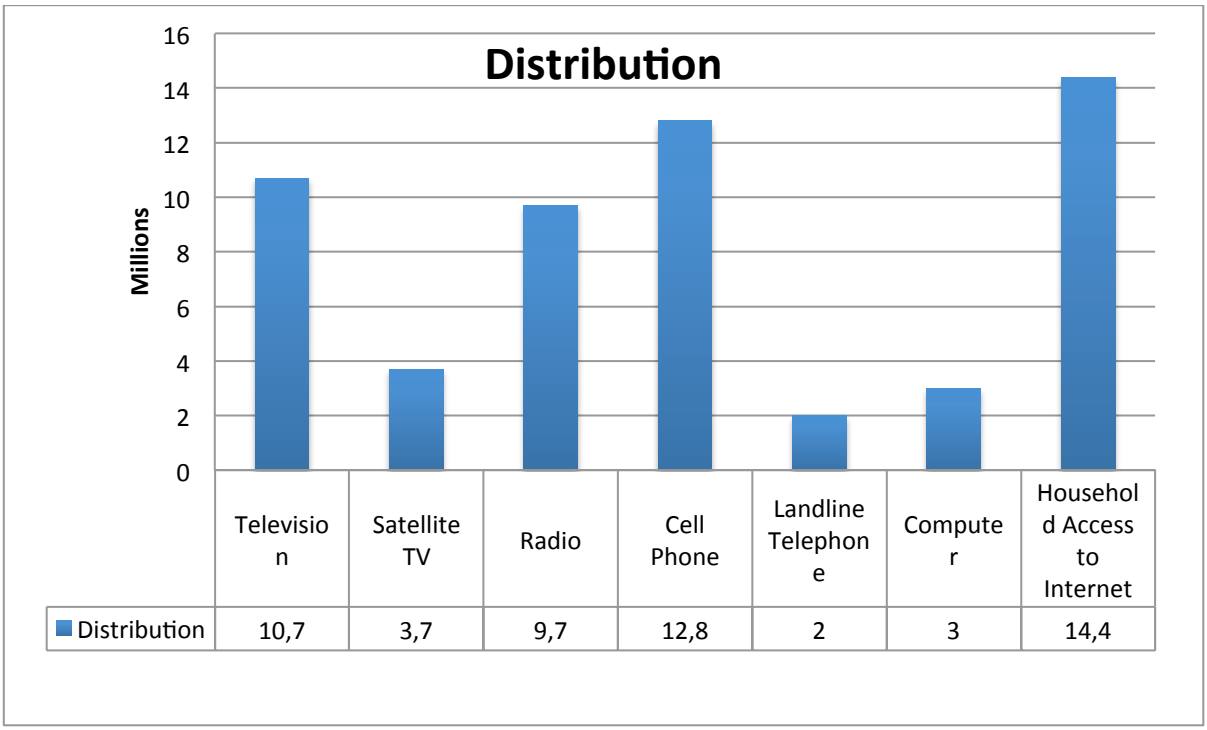
1.2 Television broadcasting in South Africa

In 2000 then-President Thabo Mbeki said, "in the age of globalisation and the power of communication and information technology, we need to find concrete ways of

harnessing this new phenomenon for the advancement and enrichment of our democracies as our ally in the struggle for an African Renaissance" (Mbeki, 2001, p. 151). Policy statements such as all in our society should be able to acquire and use knowledge effectively; "everyone should benefit from important breakthroughs in science and technology and South Africa should continue to contribute to global scientific and technological advancement" (National Development Plan, 2011, p. 9) may remain hollow if there was slow implementation of new technologies such as digital terrestrial television**.**

According to the 2011 Census there were 10.7 million households owning television and 3.7 million subscribed to satellite television. The total television viewership was 27 million, including 5.5 million satellite pay television viewers. Community television had an estimated six million viewers (Bizcommunity, 2013).

Figure 1 The distribution of ICTs in South Africa



Source: Statistics South Africa, 2011

South Africa is a country marked by great disparities in wealth. "Millions of people remain unemployed and many working households live close to the poverty line"

(National Development Plan, 2011, p. 1) and this also translated into the problem of accessing media and technology.

The country is engaged in technological change from analogue terrestrial television to digital terrestrial television. Taking cognisance of the economic inequality, where the majority of the population is poor, the policy position was that access to, imparting and creating information were constitutionally enshrined, the government had an obligation to ensure that the economically disadvantaged were not deprived of their right to access media.

The television landscape is comprised of public, commercial and community television. The purpose of this research report is to explore digital terrestrial television migration from the vantage point of the community television sector, which is the "Cinderella of the television system" (Duncan & Glenn, 2010). "…television and radio are the primary means by which most South Africans realize at least some of the rights guaranteed under the constitution" (de Lanerolle, 2011, p. 57).

South African regulations states that community broadcasting services are those which are fully controlled by a non-profit entity, carry on for non-profit purposes, serve the interest of the relevant community, have the support of the relevant community, in which members of the relevant community participate in the selection and provision of programmes to be broadcast (Republic of South Africa, 2005, S 50). The IBA Act, quoted in ICASA (2005, p. 19) provides for two types of community broadcasting services as a geographic community and a community of interest that "has a specific ascertainable common interest" (ICASA, 2003, p. 19).

In South Africa, community TV broadcasting was predicated on stations serving various communities mainly within a geographically defined analogue terrestrial broadcasting footprint, (Hadland, Aldridge & Ogada, 2006, p. 46). Communities of interest may also be expanded or defined across a variety of characteristics such as socio-economic categories, gender and municipal boundaries (Hadland et al., 2006,

p. 46). Free-to-air television "in particular, with its almost universal reach, appears to be one of the few public forum (sic) with the ability to cross social boundaries of language, race, class and geography" (de Lanerolle, 2011, p. 58).

As the country had disparities in wealth, which impacted on access to media, the universal service and access principles had a pivotal role to play in diminishing marginalisation. The concept of universal service was predicated on the belief that ICTs have a "fundamental and key role in commercial and social life and that everyone should have access to a basic level of telecommunications facilities and service if they are to participate fully in modern society" (Xavier, 1997, p. 829). The concept of the digital divide "is best defined in terms of a desired impact" (Hilbert, 2011, p. 1).

The National Integrated ICT Policy Green Paper recognised that the silo approach of the ICT sector needed to be reviewed so that South Africa does not "inadvertently create a digital divide where access to quality communications services, technologies, infrastructure and content is a privilege of the elite, rather than a right for all" (Department of Communications, 2014, p. 8). The digital divide in this case is in television ownership, access and the potential to access digital television. Rennie cautioned that "[e]quating social change with technology ignores the realities of existing social inequality and the importance of clear intentions in decision-making and policy" (Rennie, 2001, p. 60).

1.3 The community television landscape in South Africa

Before, and leading up to 2006 Soweto TV, Cue TV, Bush TV, Greater Durban TV and the Cape Town Community Television Collective (CT CTVC) were broadcasting for particular communities on an ad hoc basis, supported by temporary licenses issued by ICASA (Hadland et al., 2006). During this period Hadland et al. (2006) identified three models of CTV that were evident. The entrepreneurial model was adopted by Soweto TV, the user-community model by Cue TV and the sector mobilisation model was adopted by the CT CTV Collective.

“The entrepreneurial model is evidenced by Soweto TV” (Hadland et al., 2006, p. 46), which was a Section 21 company, whose founding members included journalists, businesspeople, the managing director of a retail radio and TV company and led by a Chief Executive Officer. Its license application stated its intention of relying principally on advertising for its sustainability and to run fewer adverts than mainstream television (Hadland et al., 2006, pp. 46-48). It also intended to target private and corporate sponsors and donors, government agencies and local and international NGOs for support (Hadland et al., 2006, pp. 46-48).

Cue TV, which fell under the Journalism and Media Studies Department at Rhodes University, was a user-group-driven initiative and “not a true CTV initiative” (Hadland et al., 2006, p. 49). Bush TV, which was located in the University of the Western Cape, adopted a user-group-driven approach. The communities of interest and the producers of both stations were students, and there was no relationship with or accountability to its audiences (Hadland et al.).

The Cape Town Community Television Collective (CT CTVC), comprising of a number of NGOs, was instrumental the formation of Cape TV and it followed a “model” developed by the Open Window Network (OWN) in the 1990s. OWN had ceased to exist by the time the CT CTVC was formed in 2004. The organisations founding CT CTVC were the Community Video Education Trust (CVET), Workers World Media Productions (WWMP), Arts and Media Access Centre (AMAC), Bush Radio and Public Eye (Hadland et al., 2006, p. 56).

In August 2005 CT CTVC held a public workshop, which was a “process of community mobilisation around the concept of CTV” (Hadland et al., 2006, p. 61). The channel was to be community-owned through sector-based interest groups including community-based organisations and non-governmental organisations, arts and culture and community media, with the proviso that “participants must be oriented towards developmental goals” (Hadland et al., 2006, p. 62).

In 2014 there were six licensed community television stations in South Africa: Soweto TV, Cape Town TV, Bay TV, One KZN, Tshwane TV, North West TV. Trinity Broadcasting Network Africa (TBN) was regarded as a community television station in South African regulations (Independent Broadcasting Authority Amendment Act, 1996, S. 47B. (1):

> Trinity Broadcasting (Transkei) and Trinity Broadcasting (Ciskei) (licensed broadcasters in terms of the law of Transkei and Ciskei respectively) shall, for a period of 12 months as from the date of commencement of the Independent Broadcasting Authority Amendment Act, 1996, each be deemed to be a holder of a broadcasting licence [license] in terms of this Act.

According to Hadland, et al., TBN did not entail "democratic mechanisms of community ownership and engagement" (2006, p. 45) because it was a privately owned foreign Christian broadcaster and most of its content was produced in the United States of America. TBN was also the only community television station member of the National Association of Broadcasters (NAB) (National Association of Broadcasters, 2014).

In 2012 a moratorium was placed on new licenses and despite many applications, ICASA had not lifted the moratorium on CTV licensing (Thomas & Mavhungu, 2012) because DTTM and the analogue switch-off (ASO) had not been realised. Soweto TV first broadcast, under a one-year license granted by ICASA, on the first of July in 2007 (Media Update, 2007) and was followed by Cape Town TV in 2008 (Mungadze, 2013). Tshwane TV came on air in the middle of 2011, after battling to acquire a broadcasting license from ICASA (Vomo, 2011).

Community television in South Africa faced multiple challenges, such as lack of access to funds, sponsorships, infrastructure, management capacity and resources for digital terrestrial television migration. Other problems related to lack of skills, governance, editorial integrity, signal distribution and sustainability. The combination of these challenges resulted in community stations struggling to stay on air (Mungadze 2013). Cape Town TV was dependent on donated equipment and

borrowed premises and sometimes faced financial crises (Thomas & Mavhungu, 2012). For example, Soweto Community Television (SCTV) was supported by Urban Brew Studios, a private enterprise with spare studio capacity, equipment, administration and advertising sales expertise and Urban Brew was also contracted to manage One KZN and Bay TV, with a business model that uses sponsorship and sales of programme time while competing with the national channels for advertising (Thomas & Mavhungu, 2012).

In 2012, there were reports of an improvement in the financial resources of community television stations. The audience of Cape TV had grown to 1.5 million viewers per month and the station also started signing up advertisers and actively seeking new clients. Soweto TV had 2.6 million viewers and "its advertising revenue has grown to such an extent [that] it no longer needs the R500 000/month injection from production house Urban Brew" (Bizcommunity, 2012). Later in 2012 Cape Town TV suffered a loss of viewers, from 1.3 million to 663 000, due to DTTM as the station was moved from channel 38 to channel 67 in analogue. The change in the channels resulted in the quality degradation of the station's broadcast signal. This caused the management of Cape Town TV to state that it was the responsibility of the regulator to preserve and protect existing broadcasting services during the migration process (IOL, 2012).

Since community television stations felt that government neglected them and did not provide them with any type of support, they had to find ways of sustaining themselves (Bizcommunity, 2012). Initially community TV stations paid a commercial rate for the broadcasting spectrum, however with time Sentech reduced the signal distribution costs for community TV broadcasters by 33% (Bizcommunity, 2012).

In mid-2013 the Association of Community Television South Africa (ACT-SA) was formed and all existing community television licensees in the country were members. These were Soweto TV, Cape Town TV, Bay TV, One KZN, Tshwane TV, North West TV and Bara TV. The association said it was committed to addressing community television problems such as governance, ownership and control, editorial

and fiduciary independence, and community participation in order to position these broadcasters as "major emerging players in the South African broadcasting environment including the digital terrestrial television" (Hawkes, 2013).

CTV had not been given a prominent role to play in the DTTM process, by the government. Some of the stakeholders, including Sentech, South African Broadcasting Corporation (SABC) and the DoC, were given financial support by the government (National Treasury, 2013). The government said that the major focus during 2013 included the finalisation of the Community Broadcasting Support Policy, and it was still considering "how to extend such support to community television" (Ndabeni-Abrahams, 2013).

The Media Development and Diversity Agency (MDDA) released the MDDA Community Television Summit Report in 2007. The report recommended that MDDA assist by providing start-up costs for community television stations (MDDA, 2007). The MDDA only provided grant funding for the Sekhukhune Community Television initiative and not for the other licensed community television stations that were on air in the 2012/13 financial year (MDDA, 2013, p. 29).

The government contradicted itself when it threatened to withdraw licenses for commercially run community television stations, as it also called on the private sector to work with broadcasters because "[g]overnment alone cannot achieve the aspiration of building a sustainable community broadcasting model" (Mungadze, 2013). The sector needed an attractive value proposition (Nyamukachi, 2013):

> based on a financially sound economic modelling that is strategically linked and located within other government programmes relating to economic development and job creation to justify government investment … which should be protected and safeguarded by a strong governance model instead of the fluid one that is currently prevalent in the community radio environment.

The view of Cape TV was that (Bizcommunity, 2012):

> dependence on advertising could move community TV stations away from their mandate to carry content relevant to the community; and this is the reason why the state should come up with a more structured way to financially support community TV stations. Without it, they could either be co-opted into becoming commercial broadcasters or forced to shut down.

The government recognised that community television had an immense potential to revolutionise the content industry, create jobs and promote development. The CTV sector empowered communities to tell their own story, control the communication medium and deepen participatory democracy (Mungadze, 2013).

In October 2013 Cape TV joined Soweto TV, Tshwane TV, Bay TV, 1KZN community television stations and a number of community radio stations on the DStv digital satellite-broadcasting platform. The benefits derived from joining DStv included the potential of increasing individual community television stations' viewership from an approximate collective six million (Bizcommunity, 2013) on the analogue terrestrial footprint to "more than 20 million viewers in more than 4,5 million DStv [owning] households" (Multichoice, 2013).

The paradox was that low income households did not accrue the same benefits of having a choice to access these CTVs, on satellite television, which have expanded their broadcasting footprint beyond the scope of the geographically limited analogue terrestrial television footprint.

1.4 Digital terrestrial television migration in South Africa

In South Africa DStv and TopTV (which became StarSat in 2013) subscribers will not be affected by DTTM, as the signal they received was already digitised by satellite. "In effect this means that the poor people will be more heavily affected by the migration process than the rich, as the rich have already largely contracted themselves out of free-to-air broadcasting" (Duncan, 2012).

Various trade unions including the Congress of South African Trade Unions (COSATU), independent film and television production sector organisations, some NGOs, CBOs, the South African Chapter of the Media Institute of Southern Africa (MISA-SA) and a number of academics and activists called in 2012 for "a firm date for the commencement of the digital switch-on and the dual illumination period, as well as a timeframe for how long dual illumination will continue" (Save our SABC: Support Public Broadcasting Coalition, 2012).

Analogue television viewers will need to buy set-top boxes for approximately R 700 in order to decode the digital signal, in order to continue to receiving television on their existing analogue television sets because failure to do so will result in the viewers not being able to access television at all from the existing free-to-air broadcasters (Duncan, 2012).

The DoC blamed the delays of South Africa migrating to digital terrestrial television on "the impasse among broadcasters and other private-sector stakeholders on whether the set-top-boxes should have a control system or not" (Mochiko, 2013a). Not many South Africans were aware of the "massive changes in the pipeline for free-to-air television" (Duncan, 2013).

It was unclear whether the government STB will have a return path (which may be utilised to provide Internet access) and therefore provide an opportunity to increase Internet access by households. Stakeholders such as the South African Communications Forum (SACF) lobbied government to include a return path in the STB in order to create the automatic benefit of Internet reception for whoever acquired STBs, especially the marginalised and poor households without Internet (Screen Africa, 2012).

Mediation to resolve the impasse of "whether set-top-boxes should use conditional access or an encryption system" (Mochiko, 2013b) was initiated by DoC. E-tv was in favour of conditional access but MultiChoice contended that conditional access was

"used by pay-tv operators to switch off non-paying subscribers" (Mochiko, 2013b) and that it would result in additional costs for the government if it was integrated into the set-top-boxes.

In May 2012 e-tv contested a government decision regarding access controls for set-top-boxes and won the case because the court concurred that e-tv "be in charge of its own access control" (Benjamin, 2013). In 2013 Sentech launched Freevision, which was a set-top-box for accessing satellite television, at a once off cost of R 1800, which Sentech said "will cater for viewers in outlying areas who are unable to receive the DTT signal" (Benjamin, 2013). E-tv launched Open View HD direct-to-home satellite platform, a once off cost to the consumer, in the same year. Incumbent pay-tv satellite broadcasters, DStv and TopTV, offered subscription packages at varying costs targeted at a broad consumer market (Benjamin, 2013).

The above choices competed with the government DTT set-top-boxes, aimed mainly at poor households whom the government was invested in migrating to digital television (Benjamin, 2013). However, the government was not opposed to consumers having more choices. The government-issue set-top-boxes were not available on the market or to the public because free-to-air broadcasters failed to agree on the encryption system (Benjamin, 2013).

1.5 Policy, regulation and institutional arrangements

1.5.1 National level of public policy pertaining to digital terrestrial television migration

In 2014, following the national and provincial elections, the newly constituted government divided the old Department of Communications into the new Department of Communications and the Department of Telecommunications and Postal Services (DTPS). The change was widely criticised for being contrary to the global trend of technological convergence, sowing confusion in the ICT sector and contradicting the Electronic Communications Act (2005) which was aimed at convergence (Mochiko, 2014a, p. 4).

The old DoC's objectives included modernising the broadcasting services in the country by ensuring a smooth transition from analogue to digital terrestrial television and facilitating the implementation of the broadcasting digital migration policies. The objectives of the DTTM policies included finalising the set-top-box manufacturing development strategy, creating a set-top-box ownership scheme for poor television owning households and operationalising the Digital Dzonga. Other objectives were submitting the Public Service Broadcasting Act by October 2010, Independent Communication Authority of South Africa Amendment Act, Electronic Communications Act, Local and Digital Content Policy to Parliament (DoC, 2011).

The history of the Digital Terrestrial Television Migration (DTTM) resulted in the above objectives not being fulfilled. The government recognised the importance of Digital Television Broadcasting as early as 2002. The then-Minister Ivy Matsepe-Casaburri stated that the DoC was expecting recommendations from the Digital Broadcasting Advisory Board on how to develop policy frameworks for digital broadcasting and the "display of South African content in our local and foreign markets" (Matsepe-Casaburri, 2002).

The Digital Migration Working Group (DMWG), which was established in 2005, included "representatives of the broadcasting sector, government, the regulator, organised labour and civil society" (Lloyd, Duncan, Minnie & Busiek, 2010, p. 72). The DMWG provided detailed proposals regarding the DTTM process and the future digital policy environment. It highlighted the importance of the government working with all stakeholders in order to successfully implement a digital switch-over (Lloyd, et al., 2010). Information pertaining to driving digital migration was compiled (including timelines). The campaign was branded as Go Digital and the Digital Dzonga Council was launched in 2009 (Kantor, 2009).

South Africa fell under Region 1 in the GE 06 digital terrestrial broadcasting frequency plans of the International Telecommunication Union (ITU) and it was supposed to complete DTTM by 17 June 2015 (ITU, 2014). The country's first Broadcasting Digital Migration Policy was released in August 2008, under the

auspices of Matsepe-Casaburri. A second policy, under the then-Minister Dina Pule, was released in February 2012. Both policies maintained the reference to the requirement to work at "lightning speed", albeit for two different deadlines for the analogue switch-off date, which was November 1, 2008 and the latter stipulated the last quarter of 2012.

In 2009 another Minister of Communications, Retired General Siphiwe Nyanda, said that significant progress had been made to meet the 1 November 2011 analogue switch off date. Nyanda said that on 20 October 2008 the digital signal was switched on and therefore the dual illumination period had begun (Nyanda, 2009). However, under Minister Nyanda's leadership, the DoC Director General Mamodupi Mohlala stated in early June 2010 that Southern African Development Community (SADC) members "…were reviewing their earlier agreement to adopt the DVB-T standard and were considering the possible adoption of another standard – possibly DVB-T2 or ISDB-T" (Armstrong & Collins, 2010, p. 6). This derailed the DTTM process and cast it further into disarray.

Parallel to the above events digital migration was taking place to some extent in the country, as a few hundred thousand households between 2008 and 2010 subscribed to digital satellite pay-TV offerings by DStv and TopTV. A few thousand homes in Pretoria, Johannesburg, Cape Town and Durban were participating in the DTT trials conducted by SABC and M-Net. This audience was also consuming trial digital add-on channels (Armstrong & Collins, 2010, p. 4).

In 2011 the Auditor-General found that the old Department of Communications underspent by R711 million and consequently had "not achieved the objectives of developing ICT policies and legislation that stimulate and improve the sustainable economic development of all South Africans" (DoC, 2011, p. 110). These developments illustrated that the policy process was floundering. However, the adoption of the Broadcasting Digital Migration Policy of February 2012, which amended the 2008 policy, was a milestone because the deadlock regarding DTT standard was resolved and a more advanced technology standard was adopted. The

significant changes in the Broadcasting Digital Migration Policy of February 2012 were the adoption of the DVB-T2 standard for digital terrestrial television, DVB-S2 for digital satellite television and MPEG-4 as the compression standard for DTT.

For as long as the digital terrestrial television migration process was not concluded and the terrestrial analogue signals were not completely switched off, the benefits of a digital dividend (Cambini & Garelli, 2011) are unachievable. The essential spectrum for the deployment of fourth generation high-speed wireless network and long term evolution will not be available or will be extremely limited. For example, Vodacom was attempting to buy Neotel in order to access spectrum and deploy a 4G network (Mochiko, 2014b, p. 10).

Digital Terrestrial Television (DTT) trials began in 2008. The DTTM process, which began with optimism, was hindered by bureaucratic processes in developing the necessary policies and regulations. Nor did it help that the Ministry of Communications has had three Ministers and an acting Minister since the inception of DTTM.

1.5.2 Regulation

Independent Authority of South Africa (ICASA)

The Independent Communications Authority of South Africa (ICASA) was formed through the promulgation of the Independent Communications Authority of South Africa Act 13 of 2000. This resulted in the dissolution of the Independent Broadcasting Authority (IBA) and the South African Telecommunications Regulatory Authority (SATRA). The formation of ICASA led to the creation of an independent regulator for the converged broadcasting and electronic communications sector (RSA, 2000).

In 2005 ICASA issued regulations for temporary non-renewable community television broadcasting licenses “with a term of validity not exceeding twelve months” (ICASA, 2005, p. 4) and costing R 1000. The regulations required that

applicants provide information regarding the non-profit status of their organisations, the nature of events to be broadcasted, definition of the type of community that would be served, how the applicants intended to involve members of the community in choosing and providing programming, community members' participation, details of employees, the type of programming that was to be broadcasted, programme schedule, how the station will be funded, technical competencies, signal distribution and geographic coverage area (ICASA, 2005).

In 2007 regulations aimed at converting CTV licenses into class licenses, and therefore aligning them with the Electronic Communications Act of 2005, were issued (ICASA, 2007). In 2009 the duration of community television licenses was increased to seven years. Community TV broadcasters were also required to provide music log sheets per week and advertising log sheets per month (ICASA, 2009).

ICASA's role in DTTM

ICASA published the first draft regulations for public comment in October 2008 after the release of the Broadcasting Digital Migration Policy (2008). The second draft regulations were issued in March 2009 for public consultation. The DTTM regulations were released on 15 February 2010. In 2012 ICASA issued draft regulations for comment. One of ICASA's objectives was to "promote the protection of consumers and accessibility for persons with disabilities; promote development of public, community and commercial broadcasting services in the context of digital migration" (National Treasury, 2012, p. 42). The regulations were re-drafted in order to align them to policies.

1.5.3 Sentech

Sentech Limited, which distributes the broadcasting signal and provides other services, is a state-owned enterprise (SOE). The South African government is the sole shareholder, represented by the Minister of Telecommunications and Postal Services. This SOE fell under the ambit of the DoC in the previous administration (Proclamation by the President, 2014, pp. 4-5). It is the largest signal distributor in

the country, and carries transmission signal for 98% of the radio broadcasters and 92% of the television broadcasters. It provides analogue television signal to SABC, e-tv, MNet, Soweto TV, Cape Community TV and Trinity Broadcasting Network and these broadcasters combined cover 92% of the population (Sentech, 2011). The SOE also deployed a Direct-To-Home Satellite infrastructure to ensure universal access to broadcasting services throughout the country (Sentech, 2011).

In 2011 Sentech said that it was ready to deploy the DTT network infrastructure "to meet the December 2013 Analogue Switch-Off deadline" (Sentech, 2011, p. 7). The SOE started rolling out DVB-T sites, based on the ICASA frequency plan, and the DTT population coverage was 56% during the 2010/2011 financial-year. However, the project was halted as a result of uncertainty surrounding the DTTV standard, until DVB-T2 was adopted. "The rollout of the new standard, DVB-T2 will be expedited during the 2011/12 financial year to achieve infrastructure and actual content coverage target of approximately 74% of the population by 2012" (Sentech, 2011, p. 15).

1.6 Summary of the research problem

Insufficient financing and sponsorship, marginalisation in DTTM regulations, weak political support – with the then impending new Community Broadcasting Support Policy seeming to put CTVs as a second thought – posed governance problems, negatively affected CTV sector development and appeared to yield little benefit for community audiences. According to the DTTM Regulations, the CTV broadcasters were allocated less space on the multiplex, compared to public and commercial broadcasters, and they were not permitted to have extra channels. Even though they were not obliged to dual illuminate, they were required to be on a DTT platform at the end of the dual illumination period. They were also afforded the opportunity to provide data services on the multiplexes, like other broadcasters (ICASA, 2012). This could result in opportunities to be leveraged, where they could innovate and provide new content and services (Rennie, 2003). This is explored in the following chapters.

DTTM is a process of technological change from analogue terrestrial television to digital terrestrial television. The lack of financial resources and skills, lack of access to infrastructure, disruption of signal distribution to the detriment of a station, as in the case of Cape TV, point to problems that may hamper the CTV sector to migrate to digital terrestrial television. Technology is key in achieving a successful migration (Iosifidis, 2007) and the CTVs need financial resources and skills in order to successfully migrate to DTTV. Understanding the impact of uncertainty regarding policy and regulation, which has lingered since 2007, will contribute to understanding the nuances of DTTM in the community TV sector in South Africa.

There is a deficiency of scholarly writing and mainstream media reports on how the CTV sector is impacted by or responding to DTTM in South Africa, as it is written about as part of the greater broadcasting or ICT landscape. The study utilises governance, content and service and technology (Iosifidis, 2007; McConnell, 2010; Rennie, 2003) to construct the description of the effects of DTTM and DTTV on the CTV sector.

CHAPTER 2: THE ECOSYSTEM OF COMMUNITY TELEVISION AND DIGITAL TERRESTRIAL TELEVISION MIGRATION

2.1 Introduction

The objective of this chapter is to review academic literature in order to introduce and explain the concepts pertaining to community television and digital terrestrial television migration, to create a conceptual framework, to introduce and explain the tools for analysis adopted for the research. The literature review elucidates on the concepts of governance, technology, content and services, the community television sector and presents an analysis framework.

2.2 The pertinent governance components in the television-broadcasting environment

Many scholars offer varied and complementary definitions, explanations and elements of governance. In the context of technological change in television broadcasting and its impact on the community television sector, the key elements of governance, which are interdependent can be identified as the role of stakeholders, mainly governments, in driving digital terrestrial television migration; the nature and characteristics of community television stations including their governance both by the state and internally by the owners (Adda & Ottaviani, 2005; Chhotray & Stoker, 2009; Iosifidis, 2007).

The rationale for governments to adopt DTTV was in order to allow their respective populations to participate in the information society, creating opportunities for domestic manufacturing, stimulating programme production industries, increasing economic and social benefits from the expansion and the penetration of digital television. Digital terrestrial television had the capability to facilitate increased competition in the television broadcast sector (Brown & Picard, 2004) and facilitate social inclusion. Governments were also interested in the digital dividend, which is the large amount of spectrum that will be released when the analogue television signals are switched-off completely. The digital dividend represents a “huge quantity of spectrum in the valuable UHF band (790-862 MHz)” (Cambini & Garelli, 2011, p.633).

The role of governments in broadcasting entailed governing for the public good whereby the provision of goods was conducted in the public interest and the responsibilities were shared between state and non-state actors and therefore resulted in the need for "appropriate coordination and oversight" (Lodge, 2003, p. 141).

The proposition that there "are no absolute principles or processes central to governance" (Chhotray & Stoker, 2009, p. 237) points to the necessity of creating a framework for the relevant aspects of governance being explored as states are "not the main loci of control over social and economic life" (Scott, 2004, p. 166) and therefore may fail to achieve their objectives because of governance failures and uncertainty may arise as a result of conflict, irresolvable conflicts between interests, lack of trust, and incompetent management by the state (Lodge, 2003; Chhotray & Stoker, 2009).

Governments were not the only stakeholders in the broadcasting ecosystem although they "play a key role in allocating resources, controlling content and regulating competition in the television industry" (Adda & Ottaviani, 2005, p. 171), and may therefore foster exclusion of marginalised sections of society. Television policy-making in democratic states must reflect the national, regional, local discourses (Armstrong, 2013). For example the freedom of expression rights in South Africa "help to identify a basis for the consistent legal and policy protection of broadcasting (especially public broadcasting) in South Africa" (de Lanerolle, 2011, p. 57). The freedom of expression paradigm, contained in the South African constitution, would focus policy and regulation on measuring to what extent changes or growth in broadcasting enabled new benefits and the extent to which they were made available to everyone (de Lanerolle, 2011, p. 57).

However, van Cuilenburg and McQuail also pointed to a trend where public interest was being "significantly redefined to encompass economic and consumerist values" (2010, p. 200). "Beyond the consumer welfare and corporate profit at stake in

broadcasting markets, important non-economic repercussions, such as political democracy and social cohesion come into play" (Adda & Ottaviani, 2005, p. 171).

"The task for policy is to recognize what needs to be done and can be done, recognising and respecting other dynamic forces that work for (but also against) the chosen objectives." (Van Cuilenburg & McQuail, 2003, p. 204) These authors also explain that the main goal of any communication policy can be described as that of securing the free and equal access to a social communication system that diversely provides for the information and communication needs in society. Analogue terrestrial broadcasting was "responsible for universal service delivery of television to viewers without other access to other platforms, the switch to digital terrestrial transmission has been the product of a complicated interaction of public policy, regulation and commercial incentives" (Cave, 2006, p. 26).

Values of political welfare were those that support and advance democracy, freedom of expression and so the "policy goal of universal provision is closely associated with equality" (Van Cuilenburg & McQuail, 2003, p. 185). In order to gauge policy successes or failures, McConnell states that policies "may succeed and/or fail in … along a spectrum of success, resilient success, conflicted success, precarious success and failure" (2010, p. 345).

2.3 Technology

In the context of digital terrestrial television migration, the role of governments was to determine the commencement and duration of the transition to digital television, protecting the principle of universal access and services so as not to cut off sections of the population from accessing television broadcasting, licensing of television and other digital services, the duration of the dual illumination period and the final switch-off of the analogue terrestrial television broadcasting signals (Brown & Picard, 2004).

Digital terrestrial television is the transmission of the baseband signal in a

compressed form. “Video and audio data and service information can be configured in a transport stream. […] The fundamental elements of digital video broadcasting are, therefore, data compression, channel coding and modulation” Dambacher, 2012, p. XIII). Digital television transmission “allows several channels to be provided in one TV transmission channel” (Dambacher, 2012, p. 81).

2.3.1 The role of the public service broadcaster

In Europe public service broadcasters favoured DTTV because it provided them with the opportunity to expand their operations through providing additional programming channels and maintaining their share of the television audience which had been eroded by commercial free-to-air and pay television satellite and cable services (Brown & Picard, 2004).

The tasks allocated to the public broadcaster including providing generic information about digital TV and radio, developing new interactive and web-based services, ensuring that there was adequate access provided for those with disabilities, helping to establish and manage the organisation that will co-ordinate the technical process to switchover and assisting the most vulnerable consumers make the switch (Iosifidis, 2007) may also be undertaken by the community television broadcast sector. Even though “European PSBs play a pivotal role in accelerating take-up of digital services and therefore bringing forward switchover. In some cases a specific mandate has been added to PSB purposes and as a response public broadcasters have taken a leading role in launching DTT services and driving the conversion process” (Iosifidis, 2007, p. 17-18). However, the literature did not address the role of CTVs.

2.3.2 The importance of digital television in a digital era

In terms of platforms, not all countries relied on digital terrestrial television as the dominant mode of broadcasting services provision. In Germany the TV market was dominated by cable, which had a high penetration rate of 20 million households,

followed by satellite in 13 million households and the digital terrestrial television households were a comparatively lesser 2.6 million; and the "low dependence on terrestrial reception and the decision not to provide universal digital terrestrial coverage" (Iosifidis, 2007, p. 19).

Digital television had the potential of creating a platform for more channels on a multiplex compared to analogue and it also "permits the use of interactive broadcasting services" (Falch, 2006, p. 140). Digital television was capable of providing public, community and commercial broadcasting. Other capabilities may include banking, credit transactions, facilitating health care and government information, for example, depending on its level of interactive capability (Sourbati, 2011, p. 297).

The role of the Public Service Broadcaster was crucial in driving the uptake of DTT by consumers (Iosifidis, 2007, p. 19), was an example of how broadcasters could contribute to driving DTTM. The European Commission outlined the following policy instruments to assist member states to manage the transition: regulation (preferable behavioural and ex-post), licensing, technical norms, communication campaigns, switch-off calendar and market incentives (Candel, 2008, p. 15).

2.3.3 Different approaches to the performance period

In most European countries terrestrial broadcasters were required to simulcast the programming in both analogue and digital during the dual illumination period, which requires substantial spectrum, before the analogue signal was switched off. Germany and Italy did not engage in dual illumination because of spectrum scarcity. Instead both countries adopted a region-by-region basis for the shutdown of analogue transmission (Brown & Picard, 2003, p. 4). Both these analogue switch-off strategies are aimed at ensuring that viewers had universal coverage and access during the transition. The universal "access to the traditional FTA channels was seen as a minimal condition to avoid this 'digital divide'. The universality objective implies

that switch off of analogue television will not be feasible until almost all viewers have migrated to digital television" (Adda & Ottaviani, 2005, p. 175).

"The many efficiencies of digitisation, particularly in the utilisation of the radio frequency spectrum, do not accrue until analog transmissions are switched off and the related spectrum is released for alternative uses. Any delays in the switch-off consequently translate into considerable loss of benefits to society that would otherwise accrue from alternative uses." (Papandrea, 2009, p.122) The eventual switch-off of analogue transmission networks to release spectrum for alternative uses was widely viewed as economically strategic (Brown & Picard, 2004).

2.3.4 Market versus state led digital TV adoption

The digital switchover in satellite and cable platforms was driven by commercial strategies because of profitability, and terrestrial networks did not have the same level of success because DTTV was identified as a basic and universal access point to the Information Society [others maybe] excluded from the social and cultural benefits. This was as a result of the non-interventionist position held by the governments of the United Kingdom and Spain. These failures led to a policy shift from a market to a public policy driven process (Candel, 2008).

Satellite digital television adoption was driven by the market and digital terrestrial television was driven by national governments in Europe and the responses from other television service providers using satellite and cable included resistance against DTTV (Brown & Picard, 2004); and this illustrated that "market forces alone may not bring about sufficient consumer take-up of digital terrestrial television to allow analogue networks to be closed down" (Brown et al., 2004, p. 8).

Switchover to digital broadcasting in Korea was characterised by a weakness in the socio-cultural aspects, whilst the technological transition was comparatively far easier according to Shin and Song (2012). "The ban on new entry remains unchanged and will continue to apply at least until the simulcast period. This not only quashes

an important source of new programs but also removes the necessity of incumbents to supply appealing programs on their multi-channel services to avert the competitive threats of new entry… In the absence of new entry, there is little incentive for commercial broadcasters to provide popular programs on their multi-channels" (Papandrea, 2009, p. 129).

Active "management is required to complete the switchover effectively" (Iosifidis, 2007, p. 13) and various countries, set up working groups which would consist of "members of broadcasting companies, service providers, service providers, network operators and consumer associations". The UK mandated the working group called Digital UK with coordinating the technical roll-out of DTT across the country (Iosifidis, 2007, p. 13):

> to communicate with the public about switchover to ensure everyone knows what is happening, what they need to do and when; and to liaise with TV equipment manufacturers, retailers, digital platform operators and consumer groups to ensure understanding of and support for the switchover programme.

2.3.5 Stumbling blocks which hampered digital terrestrial television migration

The reasons for the weak uptake of digital terrestrial television in Europe were that consumers had insufficient knowledge about DTT, technology fatigue, unaffordable reception equipment, uncertainty because of incompatible digital television standards, consumer scepticism about DTT performance, restrictions on the development of DTT services because of lack of certainty about its potential and limited capital availability (Brown & Picard, 2004). The lack of public awareness campaigns meant that many people were not aware of the benefits of DTV and were therefore not converting to digital television.

These developments proved that the assumption that the market would result in audiences migrating to digital television until universal service and access was achieved was incorrect (Iosifidis, 2007). Content and more channels were key in

driving DTV uptake because the need for state led process in order not to undermine the universal access principle and the vast majority of viewers who "saw little additional benefit to justify the associated costs of adoption. The simulcasting provision of digital TV conversion meant that by acquiring digital TV-reception equipment, including high-definition equipment, viewers gained little by way of additional program choices" (Papandrea, 2009, p. 123). This illustrated that when DTTV migration was assigned to the market, there remained a significant gap in access and therefore the need for a state led process.

In Brazil income disparities were severe and digital exclusion was resulting in social exclusion; therefore the government viewed the DTT as a means to reduce the digital divide (De Holanda, Ávila & Martins, 2008, p. 19). The digital divide had numerous aspects and was as dynamic as the technological industry was able to develop and disseminate new ICTs and services, thus increased or created new gaps among the more advanced societies and "those still hampered by social and economic problems" (De Holanda, Ávila & Martins, 2008, p. 19).

2.3.6 Digital converters

The need for set-top boxes or digital converters for consumers was a recurring theme in literature. According to (Brown et al., 2004, p. 8) there were "two main policies that the European national governments are considering to facilitate and hasten analogue switch-off. The first is to make it mandatory for manufactures to install digital tuners in all television sets […]. The second, more radical, form of intervention would be for governments to subsidise consumers in their purchase of digital reception equipment."

Cave (2006) pointed out that changing customers' equipment in order for them to receive digital terrestrial television was a slow process. In order to hasten DTT adoption the government of Italy offered a set top box subsidies of 40 euros per household as an incentive to drive consumer uptake. The UK public policy had outlined the conditions that had to be met before the analogue television signal was

switched off; which included that everyone who could watch the main public service broadcasting channels in analogue form (i.e. 98.5% of households) could receive them in digital; and switching to digital had to be an affordable option for the vast majority of the population (Cave, 2006).

Brown and Picard (2006) explain that a barrier to DTTV transition in European countries was because of the unwillingness of the European Commission to impose uniform standards across the various digital television platforms for digital transmission and reception equipment and the result was that there were different standards for satellite (DVB-S), cable (DVB-C and terrestrial (DVB-T) and the consequence was that viewers had to acquire different set top boxes for each platform.

However, the policy changed in 2005, and DTV was articulated as a technology for broadcast transmission delivering an increased choice of channels for viewers on terrestrial television (Sourbati, 2011, p. 297). This meant that the earlier policy intent – which may have supported innovation – was abandoned in favour of the successful migration to digital television broadcasting aimed at freeing the spectrum and releasing the digital dividend (Cambini & Garelli, 2011, p. 633).

2.3.7 Solutions that were adopted to stimulate digital terrestrial television uptake

In Britain it was found that the public announcement about the performance period triggered "many people who would have otherwise not have converted any televisions to make a plan and [the] study went to show that without a timetable for switchover, uptake was likely to plateau at between 70 and 80 per cent of households" (Klein *et al* 2004 pp. 3 & 11, cited in Iosifidis, 2007, p. 11) and many households would convert at least one television by the date of the switchover.

The subsidisation of digital receivers was found to be beneficial, for example, in Italy DTT, expanded rapidly because almost "every major network – including public broadcaster RAI and main commercial network Mediaset – started digital

transmissions, and the Italian territory covered by DTT signal approaches 70 per cent. Italy was expected to switch to digital terrestrial by 31 December 2006 and this ambitious target was promoted by heavy government subsidisation of set-top-boxes" (Iosifidis, 2007, p. 12).

Italy's experience of a rapid up-take of DTT services, with 500 000 STBs being sold by mid-2004, was attributed to the government subsidising consumers who bought STBs. RAI and Mediaset coupled the purchase scheme with a "strong marketing campaign demonstrating the leading role played by the public broadcaster (in collaboration with commercial broadcasters) in developing and promoting DTT" (Iosifidis, 2007, p. 16-17). Other strategies driving consumer uptake included British Sky Broadcasting subsidising digital set-top-boxes, offering them for free to new subscribers or cable operators offering incentives to convert to digital as customers could access telephone, digital TV services and broadband Internet as a bundled offering with a single subscription (Iosifidis, 2007).

The analogue switch-off would "render obsolete non-converted TV sets and raise another challenge for authorities as consumers are unlikely to respond kindly to the loss (or alternatively to the additional conversion costs to retain use) of their existing TV sets" (Papandrea, 2009, p. 127).

2.3.8 Effectiveness of a publicly known performance period

An analogue switch off date was an important objective because dual illumination "imposes costs in the form of additional transmission expenses for broadcasters… as well as the loss of revenue … which national governments could earn from the alternative use of the analogue spectrum" (Brown & Picard, 2004, p. 8). Therefore, a publicly announced performance period can be an "important motivator for DTTB uptake by TV viewers who wish to continue viewing but so far have shown little interest in digital TV technology." (Papandrea, 2009, p. 130)

The United States did not proceed with the switch-off of the analogue signal because of a "minority of non-adopters of DTTB" (Nielsen 2009, cited in Papandrea, 2009, p.122) and deferred the switch-off to February 17th 2009 because less than 6% of households remained; thus showing the political problem of switching off a minority could result in undermining universal service provisions (Papandrea, 2009).

2.4 Content and services that can drive digital terrestrial television uptake amongst consumers

The relevant literature dealing with the process and needs for driving analogue switch-off, included content as one of the drivers in stimulating DTTV up-take by consumers. In 2003 a UK policy framework articulated Digital Television as a means to provide all citizens with access to e-government services as well as a medium to deliver richer services and to promote inclusiveness. In analysing the process of the digital terrestrial migration in the UK, Sourbati (2011) revealed that there were initial ambitions to utilise the technology to widen household access to the Internet. However, there was a "perception by consumers that DTTV provides few benefits by way of additional services... [and] interactive television has been subject to false starts" (Brown & Picard, 2004, p. 5).

In the United Kingdom the success of digital conversion was also attributed to the introduction of "some 30 new free-to-air digital channels (freeview) with an extensive range of new programming supplied by existing operators and new entrants to the industry" (Ofcom, 2008 cited in Papandrea, 2009, pp.127-8) after which DTTB grew from approximately five per cent at the end of 2002 to 87.1% by the end of the first quarter of 2008 (Papandrea, 2009).

The importance of content was that (Van Cuilenburg & McQuail, 2003, p. 204):

> The concept of 'access to communications' applies to structure, content and audiences and it can in general be defined as the possibility for individuals, groups of individuals, organizations and institutions to share society's communications resources; that is, to participate in the market of distribution services

(communications infrastructure and transport), and in the market of content and communication services, both as senders and receivers.

2.5 The characteristics of community television

In South Africa community television was construed as broadcasting the interests and concerns of people at the local level in a way that national media do not, to operate in a way that was not dominated by the interests of commerce, to be structured on a non-profit basis where they were accountable to the interest of groupings of people at the small scale. On a political level they were designed to continue the democratic project that was still in the process of transforming the society and communities could express their concerns freely (Hadland et al., 2006 ; Duncan & Glenn, 2010). In South Africa community television stations were non-profit entities aimed at broadcasting interests of the local people and communities or communities of interest, they are controlled by and are accountable to communities, funded by donations, grants, sponsorships, advertising or membership fees (Hadland et al., 2006; Duncan & Glen, 2010).

When the digital transmission began in 2001 in Australia "there was no provision in legislation for community television services to migrate to digital television," (Rennie, 2001, p. 60) and "a narrow and unequal access structure" (Rennie, 2001, p. 63) was created by the government and therefore gave incumbents a head start in the digital television environment. They also generated social benefits (Rennie, 2001) by providing opportunities for access and effective use (Gurstein, 2003) of television broadcasting by communities that may not have the same opportunities in public and commercial television broadcasting.

Social benefits such as media training opportunities, encouragement of innovation and programme development, diverse content and diversity of ownership can be derived from community TV (Rennie, 2001, p. 64). Although community media was not a panacea for mainstream media limitations (Rennie, 2003, p. 51) it had the potential of giving a voice to the marginalised. The governance of community media

"is organised on a non-profit basis and relies on principles of access and participation…it provides new sites for cultural production" (Rennie, 2003, p. 52).

Governmental frameworks and programmes have to be taken into account in order to understand the dynamics of how the sector works. The negative impact of community television in Australia was as a result of no mention being made in the digital television legislation of "any arrangements for the digital transmission of community television and spectrum planning to date has not included a channel for community purposes" (Rennie, 2003, p. 52). Rennie positively described community media as inventive, generative and empowering rather than oppositional or resistant to the government and the economy (2003, pp. 51-52).

Gurstein (2003) cautioned that the challenge with ICTs [including community television] was not simply to provide passive "access" to the technology but rather to provide the means by which individuals in their communities can find ways of making "effective use" of these technologies for productive, wealth creating, and transactional as well as other processes. Access in all its various components was a pre-condition and an enabler of effective use of technology.

2.6 Summation of key concepts pertaining to community television in a DTTM environment

The literature illustrated the experiences of various countries, but lacked perspectives from African countries and the experiences of community television stations in a digital terrestrial television migration environment.

2.6.1 Governance

Policy and regulations for CTVs and DTTM were essential for driving technological change and creating an enabling environment (Iosifidis, 2007) for community television stations. The availability of licenses had diverse impacts; either too few licenses issued resulted in lack of competition in the television sector and gave incumbents a head start in this space of technological change. Giving away too many

licenses (Iosifidis, 2007) may result in stations not getting off the ground anyway because they did not have funding or other resources, or it may stimulate fair competition if new entrants were capable of sustaining themselves. The role of community television in enhancing the local sphere through providing for broader media ownership, diversity, creating opportunities for the marginalised and local programming was essential (Rennie, 2003). The participation of the community meant that should the status of CTVs be elevated during the DTTM, local communities may become immediately invested in contributing to driving technological change since they have ownership of CTVs and direct contact with local communities as a result of their location in communities.

2.6.2 Technology

The technical norms, performance period and digital tuners were some of the important elements in digital terrestrial television migration that were explored. Earlier failures of the European countries not adopting a standard, led to there being different standards for DTT, satellite and cable broadcasting platforms (Iosifidis, 2007). As mentioned in Chapter 1, South Africa also lost opportunity in reaching DTTM targets because in 2010 the government decided to "review the technical standard, DVB-T (which South Africa had adopted at the ITU in 2006) after powerful lobbying in favour of adoption of the ISDB-T standard" (Armstrong & Collins, 2010, p. 2). Some stakeholders were disputing whether set top boxes should have conditional access or not and were therefore engaged in litigation. Access was crucial to the whole population of South Africa, as access to information and imparting information was a constitutional right.

The declaration of a realistic performance period was a crucial element to drive the analogue switch-off. It may also include phased in regional switch-off approach as opposed to a once off national switch-off. It was also a viable project management tool to keep all relevant stakeholders on the same page.

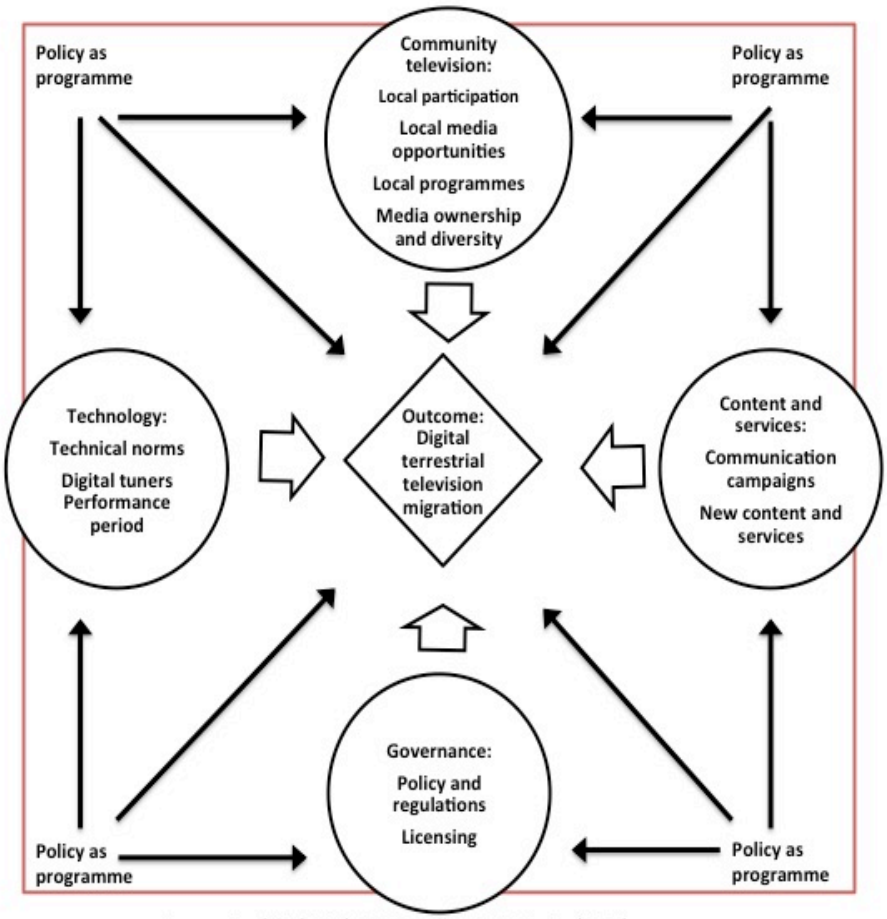
2.6.3 Content and services

Content "refers to material which is of interest to users, such as textual information, images, music and movies" (Fransman, 2010, p. 170). The community television sector, as a role player in diminishing social exclusion and marginalisation (Rennie, 2003) may be positioned to drive DTT uptake by consumers.

2.7 Synthesis of the paradigm and conceptual-analytical framework

In order to address the gap in the literature, and to elucidate on community television in a digital terrestrial television migration environment in South Africa, the conceptual-analytical framework, see Figure 2 below, utilised in this study connects governance, technology, and content and services.

Figure 2 Conceptual-analytical framework for CTV in the DTTM environment



Source: Iosifidis (2007), McConnell 2010 & Rennie (2003)

The concepts from a few key authors were selected and re-organised in order to create a framework to research CTVs in a DTTM environment. The framework for analysing the digital terrestrial TV migration programme for community TV can be thought of as the interconnections amongst the governance concepts utilised by Iosifidis (2007) [policy and regulation with respect to licensing, switch off calendar, market incentives], with the technology orientation of Iosifidis (2007) [technical norms, distribution of digital tuners, performance period], the community television perspective of Rennie (2003) [local participation, local media opportunities, local programmes, media ownership and diversity], the content and services approach of Rennie (2003) [communication campaigns, new content and services]. The value of including McConnell's (2010) perspective of assessing policy as a programme in this analytical framework is that it enables the researcher to assess the progress of DTTM as a programme of government beyond focusing simply on the individual components of this framework.

CHAPTER 3: QUALITATIVE RESEARCH DESIGN AND METHODOLOGY FOR A BROADCASTING ECOSYSTEM

Chapter Two reviewed the academic literature pertaining to community television and digital terrestrial television migration. The conceptual-analytical framework derived from the literature suggests approaches to research design and methodology, namely the application of qualitative research approaches, including document review and key informant interviews, to provide data on the three analytical components. This chapter elucidates on the research methodology, research process and data analysis, in order to answer the research question and sub-questions. Information regarding the selection of the interview respondents and documents, data collection and analysis and measures taken to ensure validity and reliability (Merriam, 2009) is explained.

3.1 Research problem statement

The research problem relates to the need to explain and analyse the experience of the CTV sector in the DTTM process. South Africa is engaged in a process of technological change from analogue to digital terrestrial television, which has experienced delays and which must address the needs of the community television sector to migrate to digital terrestrial television. The community television sector is the weakest of the three tiers of television broadcasting, because it has limited resources compared to the commercial and public broadcasting sectors. Policy recognises that all three tiers are essential for deepening democracy, increasing plurality and providing for a diversity of views. Community television has been battling problems of weak institutional and sector governance, which includes lack of skills, a moratorium on licensing, its specific location within policy and regulation, weak processes in the digital terrestrial television process, and the role of communities within which they are located.

Technology problems faced by the sector include the negative impact of spectrum shortages, lack of access and affordability of infrastructure, the general problem for all broadcasters of the absence of set-top boxes, and the phased digital migration

implementation. The stance in regulation that community television stations were not obliged to dually illuminate because they could not afford to, but had to be on a digital terrestrial television platform at the end of the dual illumination period, at face value appeared to protect community television.

While there is some information available on the digital migration issues for community television, this research study aims to contribute to the body of knowledge, by providing a more extensive review of the history and conditions for DDTM for the period 2007 to 2014.

3.2 Purpose statement

The purpose of this study was to enquire and describe the broadcasting environment and experience of DTTM in South Africa from the vantage point of community television from 2007 to 2014. The study was aimed at contributing to the body of knowledge about CTV and DTTM, primarily because it is an area that had not been researched extensively in South Africa. As the local community television sector was "the Cinderella of the television system" (Duncan & Glen, 2010), there was a knowledge gap about the subject, particularly when explored in the context of technological change.

For the purposes of this research report, some elements pertaining to broadcasting (Iosifidis, 2007), as presented in the conceptual-analytical framework, are examined. The elements are governance, technology, and content and services (Iosifidis, 2007; McConnell, 2010; Rennie, 2003). Governance is an important element to explore, because it focused this study on the challenges of financing, policy and regulation and technology confronting CTVs. Exploring technology assists in identifying the problems besetting digital terrestrial television migration and its impact on community television stations specifically. Content and services are also important in television broadcasting and therefore merit exploration, in order to create an understanding of how CTVs positioned themselves as distinct from commercial and public television broadcasters. The research seeks to create an understanding of the

broadcasting technological change, through analysing the themes of governance, technology, content and services, through the response to DTTM by CTVs.

The categories of sector governance, technology, content and services were selected in order to define the scope of the report and in order to expand knowledge on CTV and some aspects of DTTM and DTTV. The lessons from the study may contribute to the advancement of DTTM in the country and to the advancement of the CTV sector.

3.3 Research questions

The main research question is:

How has the community television sector been affected in the digital terrestrial television migration environment in South Africa from 2007 to 2014?

Sub-questions

(1) How are CTVs navigating the circumstances arising as a result of sector governance?

(2) How do technology issues affect CTVs?

(3) What challenges have CTVs experienced in preparing for the provision of digital content and services?

3.4 Qualitative research methodology for exploring the community television sector in a digital terrestrial television migration environment

This research was located within the constructivist paradigm, of which the guiding assumption was that knowledge was socially constructed and therefore "multiple mental constructions can be apprehended, some of which may be in conflict with each other, and perceptions of reality may change throughout the process of the study" (Mertens, 2015, p. 18). Furthermore, rather than adhering to the notion of objective reality, the objective of the researcher was to "understand the multiple social constructions of meaning and knowledge" (Mertens, 2015, p. 18) when conducting the research.

The methodology adopted for this study was qualitative because the objective was to describe a phenomenon that did not have quantitative characteristics. The constructivism/constructionism (Fuller & Loogma, 2009) research methodology frames the study because the strengths of qualitative research are its capability to provide an opportunity to utilise inductive probing, and therefore allowing the research to clarify expressions or meaning further (Guest, MacQueen & Namey, 2012). "Constructivism or social constructivism … is typically seen as an approach to qualitative research… Social constructivists believe that individuals seek understanding of the world in which they live and work" (Creswell, 2014, p. 8).

The study is constructivist because the author engaged in selecting elements pertaining to governance, technology, content and services in order to create a research framework, followed by compiling data through interviews and documents in order to construct a perspective on community television and digital terrestrial television migration. Interviews and document reviews are predominant in the paradigm of constructivism and "are applied in correspondence with the assumption about the social construction of reality" (Mertens, 2009, p. 19).

The salient characteristic of the study was the choice of seeking information in the aspects of governance, technology, content and services in order to shed light on the DTTM ecosystem in South Africa – by looking at the community television sector specifically. The method adopted was logical because it was broader than the case study (Petty, Thomson & Stew, 2012; Marshall & Rossman, 1989; and Creswell, 2003) approach. As many community television stations as possible were interviewed, in order to ensure that the information from the sector was rich, and to reflect their different responses to the areas of enquiry. The methodology offered the scope of conducting a basic enquiry of who, what, why, when, where and so what (Grimes & Schulz, 2002) and other themes were explored as they emerged during the data gathering process.

3.5 Data collection

The constructivist approach to data collection was adopted, whereby the process was a "personal, interactive mode of data collection" (Mertens, 2009, p. 19) as the "assumption is made that data, interpretations, and outcomes are rooted in contexts and persons apart from the researchers" (Mertens, 2009, p. 19). A "qualitative research approach would emphasize the various responses of both those who implement and those who are affected, the interpretation they evoke of the policy initiative, how they respond to each other's views, how perspectives change and so on" (Bryman, 1992, p. 66).

3.5.1 Data from documents/document review

The documents utilised were sourced from the Internet. According to Merriam (2009) documents must be authenticated, reasons for their being written and context must be explained. The documents were coded and categorised in order to understand the point of view of the text and to create an understanding of how "each part relates to the whole" (Neuman, 2011, 101). Documents were objective, unobtrusive and non-reactive because "they are unaffected by the research process. They are a product of the context in which they were produced and therefore grounded in the real world" (Merriam, 2009, p. 156). Descriptive information, emerging hypothesis, new categories, historical developments and tracking change over time (Meriam, 2009) were derived and deduced from the data in the documents.

The documents, which were "grounded in the real world" (Merriam, 2009, p. 165), were authentic because they were authored by the relevant stakeholders and the documents were available mainly from their respective websites. The researcher endeavoured to code the data in documents in alignment with responding to the research question. In analysing the documents, the researcher first read one document at a time and extracted information relevant to digital terrestrial television migration and community television. This was followed by creation of tables categorising the information, which was utilised to write a chronological narrative aimed at highlighting themes contained chapter four.

3.5.2 Data from key informants

The data were gathered through interviews, recorded Skype calls and e-mails with the relevant respondents in the community television stations, the Department of Telecommunications and Postal Services, ICASA and others. Further data was gathered through policies and regulations, secondary information arising from the mainstream media and academic studies. This data was also be verified through the relevant respondents in this study.

The purposive sampling and snowballing methodologies (Donnelly &Trochim, 2008; Petty et al., 2013 and Creswell, 2003) were adopted. This study was informed by experts, in the CTV and DTTM sectors, rather than by the general population. Semi-structured interviews (Gugiu, & Rodriguez-Campos-Campos, 2007) were conducted in order to gather the relevant data from the informants. The interviewees were representatives of community television stations, Independent Communications Authority of South Africa, Kagiso Media, Sentech, Save our SABC and Mobile TV. A group of representatives of government comprised officials from the Department of Telecommunications and Postal Services and the Department of Communications because the hand-over process from the old DoC was not concluded at the time of the interview. All the interviewees were selected because they were knowledgeable about the broadcasting sector, community television sector and the digital terrestrial television migration; and were knowledgeable in their areas of specialisation. All the interviews were transcribed verbatim because “transcripts can be enormously useful in data analysis, or later, in replications or independent analyses of the data” (Patton, 1987, p. 138).

Although “future-oriented questions involve considerable speculation, and responses to questions involve considerable speculation, and responses to questions about future actions or attitudes are typically less reliable than questions about the present and the past” (Patton, 1987, p. 121) these formed part of this study and they

resulted in the suggestion of practical solutions to the challenges experienced by the CTV sector and DTTM.

At the time of the data gathering process, the researcher had no vested interest in the sector under scrutiny but rather approached the report as a scholar. The proposal for this study was accepted in December 2013. The researcher conducted some interviews in March 2014, but subsequent to that, the national and provincial government elections took place in South Africa on the 7th of May 2014 and the ANC won. As a result, the President changed the national government departments. The significant change relevant for this study was the removal of the old Department of Communications' mandate, the formation of the Department of Telecommunications and Postal Services and a new Department of Communications had not been completed.

Table 1

Table 1 Interview respondents

	Institution	**Respondent's Acronym**	**Interview date**
1	Cape Town TV	CTTV1 interviewee	11/03/14
2	Cape Town TV	CTTV2 interviewee	11/03/14
3	Midrand Tembisa TV	MTTV interviewee	12/03/14
4	Kagiso Media	KM interviewee	19/03/14
5	Soweto TV	STV1 interviewee	21/10/14
6	Soweto TV	STV2 interviewee	23/10/14
7	Bay TV	BTV interviewee	05/11/14
8	Department of Telecommunications and Postal Services & the Department of Communications (DTPS/DoC)	DTPS/DoC interviewee	07/11/2014
9	Sentech	Sentech1 interviewee	25/11/14
10	Independent Communications Authority of South	ICASA1 interviewee	27/11/14

	Africa (ICASA)		
11	ICASA	ICASA2 interviewee	27/11/14
12	Sentech	Sentech2 interviewee	4/12/2014
13	Save our SABC: Support Public Broadcasting Coalition (SOS)	SOS interviewee	04/12/2014
14	Mobile TV	MTV interviewee	09/12/2014

The researcher also contacted 1KZN, Tshwane TV, to request interviews but the station representatives were not keen, and therefore evaded meetings or phone calls instead of declining the interview requests. Attempts were also made to secure an interview with a representative of the Media and Development and Diversity Agency, but the interview did not take place since the meeting dates kept on being postponed.

3.5.3 Validity of the data

"Triangulation is a validity procedure where researchers search for convergence among multiple and different sources of information to form themes or categories in a study" (Creswell & Miller, 2000, p. 126). The procedure of validity in this study entailed identifying themes, corroborating evidence compiled through documents and interviews.

3.6 Research instruments

The purpose of the document guide and the interview protocols were to enable the researcher to explore the themes pertaining to the main research question and the sub-questions. As documents are non-reactive, the document guide was utilised for extracting the data, which was relevant for the research report. The interview protocols functioned to guide the semi-structured interviews, and explore emerging themes without deviating from the core themes of the study.

Appendix A was the document guide utilised to extract the information relevant for the research from documents. Appendix B was the interview protocol for community television stations. Appendix C was the interview protocol for Sentech. Appendix D was the interview protocol for the Independent Communications Authority of South

Africa. Appendix E was the interview protocol for the Department of Telecommunications and Postal Services, at the time of the interview the new Department of Communications had not been constituted. All the interview protocols were used as loose interview guides, to keep the discussions within the scope of the research report. Appendix F was the letter of consent, which was supposed to be signed by respondents but proved unnecessary since they entered into a recorded verbal agreement, as part of the interview, with the researcher.

Appendix G was the legislation and regulation extracts about community television. Appendix H was the extraction of relevant parts of the digital terrestrial television policies from 2008 to 2013. Appendix I was the extraction of regulations pertaining to digital terrestrial television migration from 2008 to 2009. Appendix J was the extraction of digital terrestrial television migration regulations from 2010 to 2012.

3.7 Data analysis

"The analysis of qualitative data is a process of making sense, of finding and making a structure in the data and giving this meaning and significance for ourselves, and for any relevant audiences" (Jones, 1988, p. 56).

The data was analysed in order to create a descriptive and interpretive narrative about the digital terrestrial television migration and the community television sector in South Africa, from 2007 to 2014. The data presentation involved identifying the themes, analysing the context, paraphrasing, and explaining the material. It also included creating an understanding of factors arising from the research questions; extracting and summarising the findings, as guided by the literature review and background; and making recommendations.

A process whereby data analysis was undertaken and it involved ordering, organising patterns, creating categories and basic descriptive units (Patton, 1987). The process of data analysis undertaken was reflexive and interactive as the researcher had to continuously modify data in order "to accommodate new data and new insights about the data" (Sandelowski, 2000, p. 338).

The researcher extracted from the initial codes (Petty, et al. 2012 and Creswell, 2003) literature review, in order to create the research instrument and to utilise these codes at a later stage for coding purposes. The qualitative data was analysed through the process of coding using the Nvivo software, guided by the "detailed guidance for the coding process" (Creswell, 2003, p. 192), followed by thematic analysis. The simultaneous collection of data and analysis took place and both processes "mutually shape[d] each other" (Sandelowski, 2000, p. 338). In this case, no counting of phenomena took place, but rather interpretation was important because there was "an effort to understand not only the manifest (e.g., frequencies and means), but also the latent content of data" (Sandelowski, 2000, p. 338).

3.7.1 Analysis of data from documents and interviews

The areas of enquiry were drawn from the literature review and the background to the study. However new themes, which did not form part of the literature review and background, emerged; and were also explored because they were within the scope of the research. The analysis in Chapter 5 was conducted through exploring the main themes which emerged in Chapter 2 and data presented in Chapter 4.

3.7.2 McConnell: "Policy as programme" as an analytical tool

The elements of policy were analysed through the model of policy as programme because the policy and regulation process relating to digital terrestrial television migration was aimed at driving a process through creating enabling environment. McConnell (2010)'s framework provided the opportunity of grading policy based on the spectrum of programme success, resilient success, conflicted success, precarious success and programme failure. "The more tangible aspect of policy success relates to goal achievement. Hence, it is reasonable to suggest that a policy is successful insofar as it achieves the goals that proponents set out to achieve" (McConnell, 2010, p. 351).

3.8 Significance of the study

The significance of the study was that it provides understanding of the community television sector and digital terrestrial television migration in South Africa from 2007 to 2014.

3.9 Limitations

Due to time constraints, the researcher did not succeed in securing an interview with the new Department of Communications when it was finally allocated the responsibility of overseeing the broadcasting sector and digital terrestrial migration. This was because there was still confusion about where officials were supposed to be deployed, a further reason for the delay in securing a group interview.

The limitations of this study were that DTTM was dynamic. The technical engineering issues of DTTM and DTTV were not explored, but were mentioned for descriptive purposes in order to provide clarity. Furthermore, studies of the above aspects may be conducted in future, including the pace of consumer uptake, switch-off calendar and market incentives, as these may take place in the future in South Africa.

CHAPTER 4: COMMUNITY TELEVISION IN A FLAILING POLICY AND REGULATION ENVIRONMENT

4.1 Introduction

This chapter reports on findings from the data collected through in-depth interviews (Gugiu & Rodriguez, 2007) and documents (Merriam, 2009). The data was collected in order to answer the research question and sub-questions. The results were compiled using document analysis and through a constructivist methodology (Fuller & Loogma, 2009), emphasising descriptive and interpretive approaches, in order to construct a perspective of the broadcasting ecosystem in an environment of technological change.

4.2 Issues in sector and institutional governance

The defunct Independent Broadcasting Authority (IBA) hosted a workshop aimed at investigating a community television model in 1997 (ICASA, 2003). The agenda focused on funding, structure of services, programming and technical challenges. "However, the participants could not come up with a relevant and workable model for South Africa" (ICASA, 2003, p. 18). ICASA released a discussion paper titled Inquiry into Local Television in 2003, in order "to generate comment from all stakeholders on issues surrounding the introduction of Local Television ("LTV") in South Africa as enunciated by section 28 of the Independent Broadcasting Authority Act, No. 153 of 1993" (ICASA, 2003, p. 3).

In 2004 ICASA released the Community Television Broadcasting Services Position Paper, which found that there was a shortage of spectrum, and recognised that:

> The introduction and migration strategy for digital broadcasting hinges on the availability of spectrum and the Authority decided, in the Position Paper on Regional Television, to prioritise the allocation of frequencies for digital in order to secure a migration path that would enable a smooth transition to digital. An overarching migration plan however, cannot be finalised with out ministerial policy directives (ICASA, 2004, p. 11 – 12).

ICASA planned on proposing that spare commercial television frequencies in Johannesburg, Durban and Port Elizabeth and the spare public channel in Durban North be re-categorised for community television use (ICASA, 2004).

Community television applicants were required to "demonstrate the need, demand, capability and expertise. Applicants [were] required to submit proof of funding and a business plan for the first term of the broadcasting license. Applicants [were] required to demonstrate the technical quality of the proposed services" (ICASA, 2004, p. 15) and the duration of the licenses was four years (ICASA, 2004).

Temporary community television broadcasting licenses were non-renewable and "with a term validity not exceeding twelve months" (ICASA, 2005, p. 4). In 2007 all licenses issued under the Telecommunications Act, the Broadcasting Act and the Independent Broadcasting Authority Act were converted so that they comply with the Electronic Communications Act (2005) and Community television broadcasting licenses were converted to class licenses (ICASA, 2007).

4.2.1 Key tenets of legislation and brief overview of community television stations

The creation of a community television sector stemmed from the legislation providing for existence of public, commercial and community broadcasting services (RSA, 2005, ss 49-51). The Broadcasting Act and the Electronic Communications Act defined a community as including "a geographically founded community or any group of persons or sector of the public having a specific ascertainable common interest" (RSA, 2009, s1; ICASA, 2005, s1) and a "'community broadcasting service' means a broadcasting service which was "fully controlled by a non-profit entity and carried on for non-profitable purposes" (ICASA, 2005, s1). The community television sector was expected to "encourage ownership and control of broadcasting services through participation by persons from historically disadvantaged groups" (RSA, 2009, s2(c)).

Soweto TV (STV) was founded around 2000 (STV1 interviewee, 2014) and it was registered as "a legal entity" in 2004" (STV2, interviewee, 2014). The above legislation and regulation were in place when Soweto TV was formed and the Board

decided to form a commercial partnership with Urban Brew Studios, in the form of technical support and not shareholding (STV1 interviewee, 2014). Urban Brew Studios was not represented on the Board of Soweto TV, but it had a management contract (STV1 interviewee, 2014). It was difficult for Soweto TV to form a stable Board because of lack of knowledge about the creation of content and technical aspects of broadcasting (STV2 interviewee, 2014).

According to STV2 interviewee ICASA says that Board members must be members of the community and they must be elected on the spot during the annual general meeting, however, the reality was different because ICASA's requirement resulted in the station's Board changing every time there was a meeting, causing instability (2014). In order to address the Board governance problems, the station headhunted knowledgeable Board members, and reached a point where there was strong governance and fiduciary, editorial and other skills and the process was a learning curve (STV2 interviewee, 2014).

Soweto TV convened stakeholder meetings once a year and it positioned itself as the voice of the people of Soweto (STV2 interviewee, 2014). At stakeholder meetings the Board of Soweto TV reported back on the station's audience trends, financial expenditure and the station's programming (STV1 interviewee, 2014).

Cape Town TV (CTTV) held its founding meeting in September 2006, where the first Board was elected and the constitution of the station was adopted (CTTV1 interviewee, 2014). The meeting was preceded by a mobilisation campaign to engage non-governmental organisations, community-based organisations, unions and other stakeholders in Cape Town in order to garner support for the formation of a community television station (CTTV1 interviewee, 2014). A membership-based organisation composed of NGOs and other civil society organisation was formed (CTTV1 interviewee, 2014). Member organisations were divided into sectors, and each had two representatives on the Board of Cape Town TV (CTTV1 interviewee, 2014). The station went on air in 2008, following development of a business plan,

fundraising to start the station and lodging the application with ICASA (CTTV1 interviewee, 2014).

Since its founding, Bay TV (BTV) had a Board chosen by the community, it held annual general meetings with the communities, conducted road shows to educate the community about the station and to garner the communities' views (BTV interviewee, 2014). The station also endeavoured to involve the local community sectors such as the Association of Disabled People, Heritage Council, Council of Churches on content decision-making in order to comply with the station's license agreement (BTV interviewee, 2014). Bay TV also engaged Urban Brew Studios in a management contract during its nascent period (BTV interviewee, 2014).

Bay TV's Board of Directors took a back seat because Urban Brew Studios was managing everything for the station and this resulted in decision-making and problems in the station being referred to Urban Brew Studios, rather than being dealt with by the Board (BTV interviewee, 2014). The long distance between Urban Brew Studios in Johannesburg and Bay TV in Port Elizabeth meant that sometimes it would take unreasonable amounts of time to resolve problems (BTV interviewee, 2014). The station terminated the contract with Urban Brew Studios and ensured that control of all the station's elements rested with the community of Nelson Mandela Bay Municipality (BTV interviewee, 2014).

The problem with management contracts with Urban Brew Studios were that Urban Brew Studios was viewed as taking over ownership and control from communities and engaged community television stations in commercial activities (ICASA2 interviewee, 2014). This was a governance problem as the dominance of Urban Brew Studios meant that the stations no longer belong to the communities as they were meant to (ICASA2 interviewee, 2014).

4.2.2 Community TV licensing in an analogue TV broadcasting dispensation

Soweto TV was granted 30-day special events licenses in 2005 and 2006 (STV1 interviewee, 2014). ICASA granted Soweto TV 12 month licenses in 2007 and 2008

and a seven-year license in 2009 (STV1 interviewee, 2014). When Soweto TV acquired its temporary broadcasting license in 2004 it failed to broadcast because it did not have equipment, staff or premises, however it succeeded by partnering with SABC Outside Broadcast, and it broadcasted from the Dobsonville Shopping Centre, with the assistance of volunteers (STV2 interviewee, 2014).

Some community television stations operated in a more commercial manner because that was the only way to earn revenue and accusations were levelled against community television stations that they forgot the communities were the owners of the stations once they were licensed by ICASA (STV1 interviewee, 2014). Once Boards, which were custodians of the licenses, were appointed then the communities were excluded from the operations and decision-making of the stations because the stations wanted to make profits (STV1 interviewee, 2014. The stations needed profits in order to employ people, pay salaries and run the stations, and therefore revenue was sought through selling advertising, which in itself was a commercial activity (STV1 interviewee, 2014). Other types of legislative violations levelled against them were that once a license was granted the station ends up being run as a family business instead of a community television station (STV1 interviewee, 2014).

Bay TV, which was licensed in 2009, took two years to ensure that proper infrastructure was in place, and only started broadcasting in 2011 (BTV interviewee, 2014). The impediments to its take-off were that the "government" [sic] provided licenses without providing infrastructure or any other type of assistance and once the stations were operational advertising spend from the government was minimal (BTV interviewee, 2014).

The government interviewee acknowledged that community television stations were licensed in an environment which was not conducive to their sustainability because the television sector was very expensive compared to radio and therefore community television stations had to find means to survive (DTPS/DoC interviewee, 2014). Their licenses were supposed to be for the community, by the community and

their profits were supposed to be ploughed back into the stations and communities and the failure of community television stations to do so contravened legislation (DTPS/DoC interviewee, 2014). The government was of the view that it was a regulatory failure that community television stations contravened legislation because the onus was on the regulator to verify whether the license applicants could sustain their enterprises (DTPS/DoC interviewee, 2014). Government had the impression that some parties applied for community television licenses with the ulterior motive of running the stations commercially (DTPS/DoC interviewee, 2014).

The licensing requirements for community television stations prescribed that the applicants were responsible for ensuring that the stations were sustainable (ICASA2 interviewee, 2014). Communities who need the television stations did not have the resources to fund television stations, this presented a political dilemma because the rich stations can afford to pay for access and the poor cannot (KM interviewee, 2014).

ICASA declared a moratorium against licensing new community television stations because of a shortage of frequencies in the dual illumination analogue and DTTM environment and this resulted in the sector not growing (CTTV1 interviewee, 2014). DTT potential brought opportunities for diverse communities to begin owning television stations (STV1 interviewee, 2014).

4.2.3 A quest for sustainability

The Electronic Communications Act stipulated that community television stations "may be funded by donations, grants, sponsorships or advertising or membership fees, or by any combination of the aforementioned" (RSA, 2005, S2). Furthermore, the Electronic Communications Act said that they were to "encourage investment in the broadcasting sector" (RSA, 2005, S2).

Urban Brew Studios (UBS) assisted Soweto TV with administration, sales, and some Soweto TV employees were on the UBS payroll (STV1 interviewee, 2014). UBS provided technical assistance and support and financial support as a partner (STV1

interviewee, 2014). The station sold advertising at a lower rate than the bigger public and commercial television broadcasters and relied solely on advertising for its revenue (STV1 interviewee, 2014). Soweto TV grew to a point where it was able to pay UBS for its services, including the utilisation of the final control centre, because its news department and the advertising sales department was based at UBS studios (STV1 interviewee, 2014). Community television stations wanted government to provide them with financial assistance because financial support from government was negligible (STV1 interviewee, 2014).

Cape Town TV, which regarded itself as a social enterprise, adopted a financial model in which it derived its revenue from diverse sources, principally to avoid being dependent on a single source of revenue, avoid undue influence and to maintain the station's editorial independence (CTTV1 interviewee, 2014). CTTV sourced its funding from airtime sales, membership fees, advertising, sponsorships, donations, fundraising activities and through providing production services (CTTV1 interviewee, 2014). The business model enabled the station to remain afloat when it lost viewership for 18 months because the channel's spectrum was re-assigned by ICASA for DTT testing and as a result the station was off-air during the period, but had sufficient finances to re-launch (CTTV1 interviewee, 2014). The presence of CTTV on satellite DStv contributed to the station's sustainability because it complemented the local terrestrial television geographic footprint by boosting its viewership numbers (CTTV1 interviewee, 2014).

In its early days Bay TV entered into a management contract with Urban Brew Studios (BTV interviewee, 2014). Initially UBS managed the entire station and Bay TV paid UBS for its services with airtime and airtime resale value (BTV interviewee, 2014). The station sustained itself through advertising revenue, charging for broadcasting church content and off-setting employee costs by providing learnerships and internships (BTV interviewee, 2014). Bay TV was of the view that the government should provide funding for community television stations by utilising them to communicate with their respective communities (BTV interviewee,

2014). However that was not happening, even though it was contained in the National Development Plan (BTV interviewee, 2014).

There appeared to be problems of community television stations engaging in commercial activities, and this may defeat the purpose of community television and it was concerning that they may become commercial vehicles (ICASA2 interviewee, 2014). There had to be commercial activities where community television stations were located because if there weren't there would be nothing to sustain them (ICASA2 interviewee, 2014). Starting a community television station was expensive, and the "public private partnership" [sic] (KM interviewee, 2014) was the most sustainable model and the rules governing the relationships must be developed because so far it was a good model even though it was not perfect (KM interviewee, 2014).

MTV (2014) was of the view that community broadcasting was dying because it was not financially supported by the government, and a remedy proposed was that National Lottery funds must be set aside for community television as the National Lottery was already supporting charities, sport and arts, would not interfere with the independence of the stations.

According to a DTPS/DoC interviewee (2014) the government recognised that many municipalities further from the urban centres were in financial difficulty and as a result could not be relied upon to advertise in community television stations. The advertising spread tended to favour urban centres and therefore perpetuated inequality (DTPS/DoC interviewee, 2014).

Community television stations have also explored other avenues such as being on the DStv platform in order to leverage audiences and have sufficient numbers to garner advertising (CTTV1 interviewee, 2014). It was difficult for free-to-air broadcasters such as community television stations to be sustainable if they were not being carried on digital satellite pay TV, because the platform resulted in many opportunities to raise commercial revenue (CTTV1 interviewee, 2014).

DStv partnerships assisted the stations to leverage their audience share in order for them to generate revenue through advertising, however, management intermediaries such as Urban Brew Studios led to community television stations operating commercially and therefore threatened the mandate of community broadcasting (SOS interviewee, 2014). The stations and the managers could not be blamed for engaging in the commercially-orientated behaviour but the output was not palatable in terms of the results fulfilling the mandate of community broadcasting and its ownership (SOS interviewee, 2014).

4.2.4 The role of CTVs in skills development

The legislation put the onus on community television stations to "encourage the development of human resources, training, and capacity building within the broadcasting sector especially amongst historically disadvantaged groups" (RSA, 2009, S2) and to "provide assistance and support towards human resource development within the ICT sector" (RSA, 2005, S2).

STV1 interviewee said that most of the 85 permanent employees at Soweto TV started as volunteers at the station in 2007, when Urban Brew Studios initially provided training, and the channel viewed itself as accomplished because the volunteers who were uneducated about television broadcasting became skilled professionals (2014). The station continued to engage volunteers, provided learnership opportunities, and formed partnerships with Boston College to provide education and qualifications for its management echelon (STV1 interviewee, 2014).

Bay TV struggled to find skilled employees but benefitted from a partnership with Nelson Mandela Metropolitan University, which offered journalism and related courses, because the station could provide the students with practical experience and the stations employment costs were therefore reduced (BTV interviewee, 2014). This benefitted the community because the youth were exposed to the diverse professions within the broadcasting industry (BTV interviewee, 2014). Multichoice also assisted the station by giving it a final control centre, and thus enabling Bay TV

to offer a wider scope of career opportunities in the community, than was previously available (BTV interviewee, 2014).

4.2.5 CTVs role in local economic and social participation

Community television stations were obliged to serve particular communities (RSA, 2009) and therefore made endeavours in local economic and social participation. Ninety per cent of Soweto TV employees were from Soweto (STV1 interviewee, 2014). Soweto TV engaged the community about the status of the station through stakeholder meetings with local community organisations, and annual general meetings and this resulted in a high degree of participation by the people of Soweto (STV1 interviewee, 2014).

Community television stations engaged in philanthropy, for example in In 2013, the Soweto TV contributed to the improvement of a crèche in the destitute area of Protea South through a partnership with Transnet Freight Rail and other efforts were pursued in partnerships (STV1 interviewee, 2014). In 2014 Soweto TV also donated R400 000 to local charities (STV1 interviewee, 2014). Bay TV assisted fire victims by broadcasting a promotion calling on the community for assistance and raised relief funds (BTV interviewee, 2014). Although the station did not have surplus funds, it intended to register a company called Bay TV Cares, in order to build capacity to respond to the needs of the poorer sectors of the community (BTV interviewee, 2014).

The government recognised that community television stations contributed to social and economic development because they provided an entry point into the broadcasting sector and increased the opportunity for participation in the economy (DTPS/DoC interviewee, 2014). ICASA1 interviewee said that there were no regulations aimed specifically at the community television sector and ICASA was waiting for a policy directive from the Department of Communications (2014), however this is incorrect because regulations pertaining to community television were issued (ICASA, 2004) and (ICASA, 2007).

4.2.6 CTVs fostering a collective voice

The community television stations formed ACT-SA in order to have a unified voice in matters pertaining to broadcasting, especially in interfacing with government and the regulator about digital terrestrial television migration (STV1 interviewee, 2014). Before the formation of ACT-SA, the community television sector was not organised in order to take on issues pertaining to digital terrestrial television, conditional access in set-top boxes and other pressing issues regarding the migration because in the past stations were not unified (CTTV1 interviewee, 2014). Previously the stations made fragmented submissions and were marginalised for the digital terrestrial television migration process (CTTV1 interviewee, 2014). The formation of ACT-SA resulted in the sector lobbying collectively rather than individually (CTTV1 interviewee, 2014). It was very important for community television stations to belong to ACT-SA because it enabled them to speak with one voice (BTV interviewee, 2014).

The government's proposed Charter of Community Broadcasting Services was to be a legally binding instrument to "govern the operations, management and overall governance of community broadcasting services" (DoC, 2009, p. 17). The regulator was to create a Standard Terms of Agreement Framework that would govern the relationship between community broadcasters and municipalities, enforce the Community Broadcasting Services Charter, hold MDDA accountable for the PSB fund and monitor Sentech's performance as the common carrier (DoC, 2009, pp. 17 - 18). The proposed Charter of Community Broadcasting Services has since been handed over to ACT-SA by the government and may be implemented by the sector once it is finalised, instead of the government or the regulator (DTPS/DoC interviewee, 2014).

4.3 Technology as a catalyst for CTVs growth and development

The objectives of the Electronic Communications Act included promoting and facilitating the convergence of telecommunications, broadcasting, information technologies and other services, the development of interoperable and interconnected electronic networks, the provision of the services, promoting the universal provision of electronic communications networks and electronic

communications services and connectivity for all and ensuring the efficient use of the radio frequency spectrum (RSA, 2005).

One of the key institution in implementing the above provisions and digital terrestrial television technological change was the common carrier and broadcasting signal distributer Sentech Limited, which was established in terms of the Sentech Act (RSA, 1996).

4.3.1 Digital terrestrial television migration

Digital terrestrial television (DTT) will result in a new ICT landscape, which will require that policies and regulations provide opportunities for different communities to have their own voices whilst ensuring that community broadcasters thrive and are sustainable (Sentech1 interviewee, 2014). ICASA expected the community television stations to grow after the completion of the digital terrestrial television process, which will result in more frequencies. The regulator issued licenses for community television stations but did bear the responsibility to not sustain them (ICASA2 interviewee, 2014).

DTT will create a platform for more community television stations (STV1 interviewee, 2014). A multi-channel environment will allow for more operators and stimulate competition in the free-to-air television space (CTTV1 interviewee, 2014). DTT presented the opportunity for free-to-air TV to be more competitive because it created the capacity for new players to enter the market (KM interviewee, 2014). DTT will increase TV channels, providing space for more community television stations to be licensed, and therefore increase opportunities for content production (MTTV interviewee, 2014).

The government understood that community television stations would not be able to finance their migration to DTT (DTPS/Doc interviewee, 2014). Community television stations must also be the driving force ensuring that the implementation of DTT was done thoroughly and benefits all (BTV interviewee, 2014). CTVs should be

a point of communication to communities about DTT, informing and educating them about how it is happening and its impacts (BTV interviewee, 2014).

The government developed the DTT policy emphasising the need for DTT to facilitate the development of the community television sector by providing for them to be accommodated on a DTT multiplex (DTPS/DoC interviewee, 2014). Ideally community television stations should be obliged to dually illuminate and their signal distribution costs have to be subsidised and failure to do so will result in viewership attrition at the end of the dual illumination period (CTTV1 interviewee, 2014). The positive potential of DTT has not been felt because there was no policy and therefore uncertainty amongst broadcasters and communities (BTV interviewee, 2014). Community television stations were also not required to dually illuminate because they were not in a financial position to do so (ICASA, 2010).

There was capacity for 27 community television station channels in the country on the DTT multiplex, however the potential challenges of sustainability may result in lesser community television station channels (Sentech1 interviewee, 2014). The DVB-T2 network coverage has reached almost 84% population signal coverage, which was the target set by Sentech (Sentech1 interviewee, 2014).

DTT was “a monster” STV2 interviewee (2014) said and the DTTM process was a wait and see situation, whilst Soweto TV focused on its mandate to serve its viewers, it was actively engaged in the DTTM processes and held the view that it was a futile exercise to begin to be bothered about DTTM (STV2 interviewee, 2014).

If community television stations were not on the DTT platform after the ASO, they were going to be shut down (SOS interviewee, 2014). Dual illumination resulted in direct and indirect costs, which were additional and incurred as a result of a second network, which were unrecoverable (Sentech interviewee 1, 2014).

There was no proper communication about DTT implementation and its social and economic impacts (BTV interviewee, 2014). DTTM policies were not clear, there was

no proper communication strategy and realistic timeframes for the performance period and the absence of policy addressing these matters resulted in uncertainty for community television broadcasters (BTV interviewee, 2014). The delay of DTTM made planning difficult (CTTV2 interviewee, 2014).

Bay TV did not have the funds to migrate to digital terrestrial television (BTV interviewee, 2014). CTTV was on the DTT multiplex but abandoned the project because the station could not afford up-linking its signal to Johannesburg in order for it to be broadcast in Cape Town (CTTV2 interviewee, 2014). However, the station not being on the multiplex was not a problem because DTT had not been officially launched and STBs were not on the market (CTTV2 interviewee, 2014). The station was concerned that when DTT was launched and STBs were available it may not afford the transmission costs and then CTTV would only be available on DStv (CTTV2 interviewee, 2014).

Community television stations had to play a more significant role in the broadcasting sector and the digital environment in order to grow their audiences (Sentech1 interviewee, 2014). The DTTM policy had to be finalised, however the division of the DoC into the Department of Telecommunications and Postal Services and the Department of Communications has led to uncertainty about which department was responsible for the issuing of policy (Sentech1 interviewee, 2014). The absence of policy impacts on the digital terrestrial television regulations and specifications for set-top boxes (Sentech1 interviewee, 2014). The delay in DTTM was because of weak political will leading to indecisiveness and resulting in the failure to migrate (Sentech1 interviewee, 2014).

The government still had to put forward the DTTM performance period, the absence of which was as a result of the highly contested security of set-top boxes (DTPS/DoC interviewee, 2014). The amendment to the DTTM policy of 2013 was not adopted, and it followed the disagreement within the broadcasting industry (DTPS/DoC interviewee, 2014). Government's quest for consensus maybe undermined by litigation as had happened in the past (DTPS/DoC interviewee, 2014). This had

delayed the implementation of DTTM and therefore delayed the release of the digital dividend and licensing of new community television stations (DTPS/DoC interviewee, 2014). Government said that there would be a policy directive regarding set-top boxes and the performance period before 31 March 2015 (DTPS/DoC interviewee, 2014).

The government had to take a firm decision in order to drive digital terrestrial television (Sentech2 interviewee, 2014). The delays were caused by a delay in changing the technical standard and the frequent changes of ministers because the Department of Communications had other pressing issues resulted in the break in continuity and impacted on the duration of the migration period (Sentech2 interviewee, 2014). There was a need for a performance period with clear switch-on and switch-off dates (Sentech2 interviewee, 2014). The indecision about the characteristics of the set-top boxes had to be resolved and the policy had to be finalised (Sentech2 interviewee, 2014).

The process of ensuring that community television stations were on the DTT platform before the analogue switch-off date had to be managed and the performance period dates were necessary so that the stations can ensure that they have migrated before the analogue switch-off date (ICASA2 interviewee, 2014).

It was unclear which minister was responsible for DTTM (ICASA2 interviewee, 2014). The government needed a clear plan and strong coordination to roll out DTT because DTTM process was about consumers and DTT required highly skilled experts and experienced project managers, but there were not enough human resources who understand the dynamics of the digital terrestrial television migration process (KM interviewee, 2014). The government had to be decisive because presently there was short sightedness and therefore failure to view the bigger picture; too much political manoeuvring and an absence of focus on the real issues (KM interviewee, 2014).

The set-top box deadlock had to be resolved in order to move the country forward (MTV interviewee, 2014). The problems that had to be resolved in order to move

DTTM forward were conditional access in set-top boxes and leadership at government level because all the stakeholders were ready except the policy-maker (ICASA2 interviewee, 2014). ICASA's DTT regulations were ready, Sentech had covered more than 83% of the country with the DTT signal and the South Africa needed a DTT policy in order for DTT to be implemented (ICASA2 interviewee, 2014).

The DTTM policy was deficient because it had failed to address the contested issue of conditional access in set-top boxes (SOS interviewee, 2014). The 2013 amendment, aimed at resolving the STB contestation, which was never adopted was favoured by SOS because it recognised the encryption of STBs as pivotal in protecting free-to-air broadcasters, especially public service broadcasters and community television stations (SOS interviewee, 2014). Interoperability in set-top boxes will result in one box having the capacity to carry multiple free-to-air and pay television services (SOS interviewee, 2014).

South Africa has 182 digital terrestrial television broadcasting sites nationally, at which Sentech rolled out DTT, which were ready for the switch-off of the analogue terrestrial television-broadcasting signal (Sentech2 interviewee, 2014). The DTT network was a single frequency network, integrating all the 182 sites into a single network, unlike the analogue terrestrial television network (Sentech2 interviewee, 2014).

Once the DTTM process begins, it had to be completed and in order to achieve that objective it has to be allocated sufficient financial and human resources (KM interviewee, 2014). The analogue signal can only be switched-off in a geographic region when 95% of the consumers were on the DTT platform (KM interviewee, 2014). The obstacles to DTTM were weak political will, lack of skills, planning and a failure to recognise that DTTM is more of a consumer driven process than a political process (KM interviewee, 2014). The technical aspects were on track but the consumer process required a different skills set from the policy making process. The frequent change of Ministers had also hampered the DTTM process (KM interviewee, 2014).

Resolving the problems besetting the STB conditions will make it possible to determine the dates for the performance period (CTTV1 interviewee, 2014). The timelines for the performance period had to be realistic because short performance periods yielded nothing because at least four years were necessary in order to realise the analogue switch off (KM interviewee, 2014).

4.3.2 Technical Standards

Transmission standard

The country missed the initial migration deadlines of 2008-2011 because the digital terrestrial television technical standard had to be changed, since DVB-T2 surpassed DVB-T (DTPS/DoC interviewee, 2014). The deliberations regarding the selection of a new standard resulted in instability because the stakeholders did not know how it would pan out (BTV interviewee, 2014). There was merit in the deliberation about a new technical standard because DVB-T2 was a superior technology as it created capacity for more channels at the same cost as DVB-T (Sentech2 interviewee, 2014). The benefits were advancement and outweighed the costs (Sentech2 interviewee, 2014). The main cost of deliberations regarding the technical standards was a year, because during that time no changes could be implemented on the network (Sentech2 interviewee, 2014). Approximately 70% of the DVB-T network was rolled out (Sentech1 interviewee, 2014). The DVB-T trials began in 2008, there were discussions about the launch date but the process of reviewing the standard disrupted that process (KM interviewee, 2014).

Set-top boxes

As a member of ACT-SA, Bay TV was engaged in constructing a position regarding set-top boxes (BTV interviewee, 2014). The network was rolled out and some of the set-top boxes, which were not on the market, would be subsidised and some would be unsubsidised in any given area and the fundamental aspect was coordinating the distribution of the STBs to the correct areas in order to facilitate the phased switch-off (Sentech2 interviewee, 2014).

The South African Bureau of Standards (SABS) had issued STB specifications but what was outstanding was the digital terrestrial television policy, which had to be addressed urgently (ICASA2 interviewee, 2014). Another perspective was that conditional access could be excluded from the STBs because practically it did not contribute to consumers migrating to digital television (ICASA2 interviewee, 2014). In 2008 SABC supported conditional access because it could be utilised to switch off viewers who failed to pay for their TV licenses and e-tv was opposed to conditional access because if the SABC could turn off viewers it would erode e-tv's viewership (ICASA2 interviewee, 2014). E-tv's business model evolved, as the station was positioning itself to provide subscription services and it changed its position to supporting conditional access (ICASA2 interviewee, 2014).

Conditional access did not provide any benefit for community television stations, and may present a burdensome expense, but CTTV was not opposed to the Cabinet decision to enable conditional access as part of the STB specifications because broadcasters would not be obliged to use it (CTTV2 interviewee, 2014).

Another approach was that complications around the digital terrestrial television set-top box could be resolved through the creation of a basic, cheap STB that could even be distributed for free and the price of five million STBs could be negotiated even lower (ICASA2 interviewee, 2014). These STBs could then be distributed to poor TV-owning households and the country could migrate over five months (ICASA2 interviewee, 2014). Consumers who could afford better STBs could purchase them from commercial retailers and IDTVs must be part of the package of interventions aimed at consumers migrating to digital terrestrial television (CTTV1 interviewee, 2014). The manufacturers were risk averse because of the confusion they perceive in government, and were therefore waiting for the government to create a market for STBs and IDTVs before they put these on the retail shelves because all digital tuners had to be ICASA approved (ICASA2 interviewee, 2014).

Multichoice and SABC's opposition to conditional access had stalled the DTTM process (SOS interviewee, 2014). SOS supported the proposed 2013 amendments, which stated that the encryption potential should be included in STBs and the user pays principle (SOS interviewee, 2014). South Africa will not meet the ITU deadline (SOS interviewee, 2014). Soweto TV viewed its role in the DTTM process as ensuring that those within its broadcasting footprint had STBs (STV2 interviewee, 2014).

Change in technology took place rapidly and overtook policies and regulations, the contested STB specifications were old because they were finalised in 2012, only to be implemented in 2015 (Sentech1 interviewee, 2014). There was also the option of the government not prescribing specifications and leaving the decision to the market (Sentech1 interviewee, 2014).

Coupled with the challenge of moving audiences was that it was practically impossible to roll-out nine or 10 million set-top boxes into the retail market in one year, because the process would take a few years (KM interviewee, 2014. Big marketing campaigns, customer support services and educating viewers in order to foster understanding about digital television were some of the practical considerations on the DTTM performance period timelines (KM interviewee, 2014).

4.3.3 Radio frequency spectrum and network

Multiplex

Commercial and public broadcasters were allocated national coverage and community television stations were allocated provincial coverage on the digital terrestrial television multiplexes (Sentech1 interviewee, 2014). Community television stations were allocated 15% and SABC was allocated 85% of the multiplex, and there was concern that the SABC would struggle with utilising that capacity, whereas the community television sector was disadvantaged because there was more demand for licenses than the allocated multiplex capacity (CTTV1 interviewee, 2014). The post-analogue switch off frequency plan allows for capacity for more television broadcasters to be licensed (Sentech2 interviewee, 2014).

In 2012 CTTV was impacted when it was moved from channel 38 to channel 67, when the DTT test period was launched in March 2012, because it became inaccessible and its viewership dropped from 1.5 million to zero overnight. The problem was resolved in September 2013 when the station was allocated channel 32 and successfully negotiated for a channel on DStv, and subsequently its viewership increased and stood at 2.6 million in December 2013 (CTTV1 interviewee, 2014).

There was a shortage of frequencies in the analogue environment and therefore CTTV has a limited footprint and does not cover the whole of Cape Town (CTTV2 interviewee, 2014). However, satellite television continued to grow because of its capacity, where as terrestrial television was stagnant because of frequency shortages (KM interviewee, 2014).

Terrestrial television was not threatened by the proliferation of new media and the growth of satellite television in South Africa (DTPS/Doc interviewee, 2014). Meeting the ITU deadline was more about protection from harmful interference than anything else, and interference was managed through coordination within the region (DTPS/Doc interviewee, 2014).

Mobile television, or accessing content, including TV content on mobile phones was growing rapidly and community television stations had to benefit from the platforms and create a strong on-line presence (BTV interviewee, 2014).

Local insertion, which involved transmitting content from a local source was incorporated into a data stream at a local transmitter, will be available at the end of the DTTM (Sentech2 interviewee, 2014). The DTT single frequency network will result in the extension of CTTV's footprint and therefore making the station available to more viewers, however CTTV was concerned about the unknown costs of DTT (CCTV2 interviewee, 2014).

Mobile TV intended to have Soweto TV available on its DMB platform, which was deployed piggybacking on DAB, which was deployed throughout the country and

was efficient because it was not encroaching on the space of other technologies and simultaneously broadcasted radio and television (MTV interviewee, 2014).

4.4 Content and Services: a voice for and by the people

In order to serve respective communities a community television station had to encourage "members of the community served by it or persons associated with or promoting the interests of such community to participate in the selection and provision of programmes to be broadcast in the course of such broadcasting services" (ICASA, s1(d)). All television broadcasters had to "ensure plurality of news, views and information and provide a wide range of entertainment and education programmes" (RSA, 2009, p.12, s2(r)). They were also obliged to "encourage the development of local programming content" (RSA, 2009, p. 13, s2)).

All the broadcasters were obliged to comply with the existing television content regulations (ICASA, 2006) even though all the regulations made provision for incumbent broadcasters obliged to migrate could apply for incentive channels (ICASA, 2008; 2009a; 2009b; 2009c; 2010). The purpose of incentive channels was to compensate incumbent television broadcasters who were obliged to migrate and to create platforms for new content in order to stimulate the uptake of digital terrestrial television amongst consumers.

According to a DTPS/Doc interviewee the popularity of local stories, programmes and dramas resulted in commercial broadcasters DStv and e-tv creating local content specific brands of Mzansi Magic and Kasi Stories respectively (2014). The government also recognised that community television stations played a pivotal role in producing local content (DTPS/Doc interviewee, 2014).

Soweto TV had faced situations where it was unable to produce content because of limited resources and therefore believed that government should contribute to assisting the community television sector in creating content and this must be included in the Content Support Strategy (STV1 interviewee, 2014). Bay TV positioned itself as the window of the world to the Eastern Cape and produced

varied programmes in order to serve its audience (BTV interviewee, 2014). Programmes included religious shows, political programmes, magazine shows, music, education etc (BTV interviewee, 2014). Bay TV had a content body comprised of media students, local high school students, the Junior City Council and elderly people in order to ensure that they create relevant content and reflecting the community (BTV interviewee, 2014). Under UBS Bay TV produced content, uplinked it to Johannesburg for broadcasting but it had since made changes to have total control of its content production and broadcasting instead of just being a mere production company under UBS (BTV interviewee, 2014).

All the DTTM policies and regulations stipulated that all incumbent broadcasters comply with the ICASA South African Television Content Regulations (2006) until such time that they are amended or repealed. These regulations stipulated that community broadcasters must broadcast at least 55% of South African television content weekly and community broadcasters were not required to maintain records of broadcast content for monitoring purposes for ICASA (ICASA, 2006).

"A satellite subscription television broadcasting licensee must ensure that a minimum of 10% of their channel acquisition budget is spent on channels with South African television content and uplinked from South Africa" (ICASA, 2006, p. 13) and compliance with this provision excluded terrestrial free-to-air public television broadcasting services and licensed terrestrial free-to-air commercial television broadcasting services (ICASA, 2006) which meant that compliance involved broadcasting community channels.

Community television stations could play a part in marketing the DTT platform, the availability of CTVs on the platform may make it more attractive for consumers and therefore drive the uptake of DTT (CCTV2 interviewee, 2014). However, the problem was that community television stations were not subsidised to get onto the DTT platform during the migration period and that disadvantaged them (CCTV2 interviewee, 2014).

4.5 Other impending policy and regulation that may affect the community television sector

"The South African Community Broadcasting sector acknowledges that lack of resources and severe governance challenges have and continue to hamper growth of the sector despite the support from various institutions" (ICASA, 2011, p. 71). The South Africa Broadband policy recognised that "[p]olicy and regulatory bottlenecks associated with spectrum assignment, together with delays in the migration of land analogue broadcasting to digital, have meant that service innovation, increased competition, potential job opportunities and tax revenues have not been realised" (DoC, 2013, p. 19). Further more, the South Africa Broadband policy recognises that content plays a key role in digital inclusion and it is the "crux of the knowledge economy and information society" (DoC, 2013, p. 51).

According to a DTPS/Doc interviewee (2014) the Public Service Broadcasting Bill was in the pipelines and had yet to be published for public comment, the government intended to engage the community television sector in order to elicit their views on the needs of the sector, in order to determine what the sector's needs were and what role the government can play in assisting them, including governing management agreements and accountability structures. The community television sector, through ACT-SA has taken over the responsibility of devising a charter to govern the sector (DTPS/Doc interviewee, 2014).

The ICT Policy Review: Discussion Paper said that new policy will have to "facilitate and promote the availability of public interest programming, including South African music and content in all languages" (DTPS, 2014, p. 148) in the context of on demand content from all over the world. Other public interest goals that have to be protected include access to diverse content, constitutional rights of freedom of expression, imparting and receiving information and equality, bridging the information divide, and protecting children from harmful content (DTPS, 2014).

The ICT Policy Review: Discussion Paper called for ways of ensuring that community based content and programming was available on a wide range of platforms and

devices, communities have means to distribute their content across multiple platforms, that the community broadcasters were sustainable and viable. ACT-SA recognised that “many of the existing community TV services rely on partnerships with the private sector for survival” (DTPS, 2014, p. 179) and that these partnerships should be evaluated in order to ensure that “the public interest prevails” (DTPS, 2014, p. 179).

In the ICT Policy: Discussion Paper SOS proposed that, “the roles and responsibilities of existing funding agencies, including MDDA, should be reviewed” (DTPS, 2014, p. 180). ACT-SA stated that, “policy should oblige provincial and local government to fund community broadcasting” (DTPS, 2014, p. 180) whilst SOS “explicitly rejected any funding model that ties community broadcasting to the dictates of provincial and municipal authorities” (DTPS, 2014, p. 180).

The proposed Municipality links posed governance problems because they would undermine existing legislation (STV1 interviewee, 2014). Aligning community television stations with municipalities presented the danger of influence by politicians and funding of community television stations by municipalities would undermine their independence and control (STV1 interviewee, 2014).

4.6 Chapter summary

The evidence in Chapter 4 illustrated that, despite the problems of sector and institutional governance, community television stations were developed sufficiently to contribute to skills development and local social and economic participation. The community television sector was also playing a noticeable role in the provision of local content aimed at the communities they are located in. However, the delay in digital terrestrial television has resulted in the sector not growing further, since the moratorium on licensing applies until DTTM has been concluded.

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CHAPTER 5: A CONSIDERATION OF THE STATE OF CTVS AND THEIR POSITION IN DTTM

5.1 Introduction

The evidence presented in Chapter Four illustrated that the governance of community television stations was not clearly defined, the technological change to digital terrestrial television had stagnated and therefore limited the growth of the sector. Furthermore, lack of resources led to the formation of alliances with private sector companies, which kept some community television stations afloat. The community television tier was created with the intention of deepening democracy, creating access to local media content, particularly for marginalised South African communities and enhancing the provision of local content and services. The evidence portrayed that a small number of television stations are struggling to fulfil legislative requirements, whilst simultaneously battling for survival and being on the margins of a stagnant technological change.

The evidence showed how the community television sector was navigating sector governance and its location within the digital terrestrial television migration. It also elaborated on the conceptual framework and therefore made analysis of the data possible. In analysis, "policy as programme" (McConnell, 2010) is the analytical approach utilised in this chapter.

5.2 Governance: Community television stations navigate sector governance through trial and error

In South Africa the legislation for a three-tier television broadcasting system, which included the community television sector, was aimed at redressing the information divide. It was also aimed at increasing plurality and addressing issues of representation, universal service access, and deepening democracy in communities. The Community TV Position Paper (ICASA, 2004) provided regulations governing the community television sector. Amongst the requirements was that applicants had to provide evidence of certain competencies, including those aimed at sustainability and the proviso that the applicants were non-profit entities.

Soweto TV, the pioneering television station, turned to Urban Brew Studios for assistance in order to launch and sustain itself. The reason the venture was successful was because personalities who were already engaged in commercial media and had roots in Soweto were the patrons, who succeeded in business and media during a period when very few black South Africans had investments in commercial media.

The establishment of the Soweto TV board illustrated the complexities associated with establishing some form of community consensus for the purpose of launching, managing and operating the station. Bay TV emulated the Soweto TV model in order to establish itself. These followed a commercially oriented form of community TV governance.

Cape Town TV was viewed as having the best governance model by other community television stations, ICASA and the Department of Communications. It was well positioned in its geographic area to tap into the old "struggle" non-governmental organisations and community based organisations, in order to form the station. It followed an NGO-oriented form of governance.

When the community television stations were licensed the concepts of community and community broadcasting were defined in legislation, but the absence of clear guidelines on how to govern community television stations resulted in them engaging in practical trial and error in order to get off the ground. As Respondent KM (2014) stated a number of community television stations would not have succeeded launching and sustaining themselves if they had no assistance from Urban Brew Studios because communities lacked skills and other resources.

The consequences of forming partnerships with Urban Brew Studios were that the stations were viewed as being more commercial than community orientated because they had to pay for the services that Urban Brew Studios provided. A negative impact was that the Bay TV Board ceded governance to Urban Brew Studios. Positive impacts were that the community television license holders, who

entered into management contracts, succeeded in getting off the ground, being sustainable and reaching a state of independence from Urban Brew Studios. Bay TV severed its management contract with Urban Brew Studios because the partnership eroded the station's legislative compliance. However, like other community television stations it formed a partnership with DStv, which has supported the community television stations by providing them with national broadcasting reach through satellite pay television. Bay TV, which also received a final control studio donation from DStv, viewed the DStv partnership as healthy, because it fostered independence, unlike Urban Brew Studios, which it accused of reducing the station to a production house.

Even though the responsibility of overseeing the community television stations lay with ICASA, there was a disjuncture between the generally acknowledged lack of funding and support from government and the resultant sustainability struggles experienced by community television stations. What then followed were the different models of community television as evidenced by Soweto TV and Bay TV adopting the entrepreneurial model (Hadland et al., 2006) and Cape Town TV following the sector mobilisation model. The evidence showed that the formation of sustainable community television stations was not only dependent on existing conditions in their respective communities, but also that community, public and private partnerships were important.

The sector mobilisation model, which was viewed as reflecting authentic community roots and engagement, was not easily replicable compared to the entrepreneurial model. Yet it was the entrepreneurial model that came to be viewed as problematic by the government and Cape Town TV. The engagement of Urban Brew Studios resulted in mixed results because Bay TV was of the view that the station deteriorated into a content producer for Urban Brew Studios, whereas Soweto TV thrived from the private partnership.

The engagement of a management intermediary or service provider such as Urban Brew Studios in community television stations was a double edged sword because in

order to manage the television stations, the role of the community in the ownership, operations and management of the stations may have been eroded and there was a need for a balance between commercial and community leanings because some community television stations may not have launched without partnering with Urban Brew Studios. It was therefore prudent to recognise both models as beneficial because they were instrumental in the launching of community television stations.

Therefore, community television broadcasting policy "should be approached as a social policy, and attempt to take into account the inequalities that exist in media access and seek to rectify this" (Rennie, 2001, p. 66) and accommodate varying models for the sector instead of just idealising the mobilisation model because the sector was new compared to the public and commercial television broadcasting incumbents and needed more latitude to expand and evolve.

The fact that community television stations were entrepreneurial was not contradictory to legislation providing for them to seek funding through "donations, grants, sponsorships or advertising or membership fees, or by any combination of the aforementioned" (DoC, p. 6, 2009). However, there was perhaps a need for clearer standards regarding measuring the degree to which a community television station was commercial, without confusing this with the need for the stations to pay for third party services.

5.2.1 License to sink or swim

The licensing regime of community television stations evolved from one-month events licenses, to twelve-months special events licenses, to the seven-year licenses during the analogue terrestrial television dispensation. This illustrated that community TV as a nascent sector, comprised of small non-profit organisations, perhaps needed more support from the government and could not sustain itself independently like commercial television broadcasting.

As the on-air community television stations gained popularity, other parties applied for community television station licenses, however a shortage of frequencies led to a

moratorium on the issuing of community television station licenses on the analogue terrestrial television platform. The failure to advance technologically and migrate the country to digital terrestrial television meant that there were severe restrictions on the growth of the sector, which was limited to seven community television stations on air nationally.

While CTVs were evolving organically, many have struggled to become self-sustaining as expected in the relevant regulations. CTVs are evolving organically, but confusion introduced into the sector by contradictory positions on commercial orientation in regulations and statements by public policy-makers; echoed by senior officials in government. The evolution of the community television sector is stunted because of the moratorium on the issuance of community television licenses due to a shortage of frequencies in the analogue television dispensation.

5.2.2 Sustainability innovation

Directly linked to funding was the issue of commercial versus community orientation of community television stations. The legislative and regulatory provisions for community television stations stating that community television may fund itself on donations, grants, sponsorships or advertising or any combination thereof make it implicit in the license conditions that the stations needed sources of revenue although the stations were non-profit entities. This put some stations in a precarious position because of contravening regulations, especially the role of communities in light of UBS partnerships.

DStv's successful fulfilment of its regulatory mandate to carry the community television stations on its platform contributed to the growth of the stations' audiences and positively enhanced their resources and capacity because bigger audiences attract advertisers. However, the government's intervention in the form of setting aside 30% of advertising spend of government institutions and departments had not provided any discernable benefits for the stations as most of them advertised on national television or print media. The municipalities, which were pitched as possible allies of community television stations also faced their own

resource constraints and could not be relied upon to support community television stations in their respective geographic areas.

The general concern regarding the capture of community television stations by the state or state institutions was valid and necessitated that funding be sought from non-governmental entities. Perhaps the lottery, which supported the arts, culture, national heritage, charities, sport and recreation, should be mandated by the government to support community television stations as they were also a non-governmental organisation because the Media Development and Diversity Agency does not have sufficient funding to support the community television sector. The lottery would not erode the community ownership, management and operation of the community television stations, as it was an independent organisation.

5.2.3 Advancing the national mandate of job creation

The community television stations contributed to the development of human resource and training and supported human resource development particularly within the majority of the population who were historically disadvantaged. Models of taking on trainees, forming partnerships with educational institutions and mentorships contributed. Those who gained exposure and skills were integrated into the stations as professionals and also sometimes advanced to the public and commercial broadcasting sector or other fields in broadcasting.

Because of the broadness of the legislation it was not possible to ascertain to which degree the legislation intended these benefits to cascade and accrue, or how they should be measured, monitored and evaluated but evidence showed that the individual stations had a positive impact on their respective communities. However, the government should increase its efforts to support the skills development efforts of community television stations through targeted programmes in its Skills Education and Training Authorities in South Africa. As digital terrestrial television may result in the growth of the television sector and therefore more skilled employees than available at present may be required.

5.2.4 CTVs: Recognisable local economic and social participants

The community television stations were contributing to local communities, because they provide local employment, philanthropy and access to the broadcasting sector. The examples of Soweto TV and Bay TV showed that the stations were vested in their communities, because they actively engaged in ameliorating the negative impacts of poverty and unemployment. They delivered their legislative obligations despite their meagre resources, in line with the regulatory provisions (ICASA, 2004) that surplus funds derived from the stations be invested in the communities. The local participation of stations at this level was recognised in legislation and regulations and perhaps a trade-off or compromise with the stations forming non-profit and private partnerships, which were regarded as commercial generate benefits for communities.

5.2.5 A faltering voice of the community television sector

ACT-SA, which was a body formed to represent community television stations as a collective, had not been very active. It remained to be seen whether it would be a sturdy organisation, in order to represent community television stations as was envisioned at its formation. Furthermore, it has been low-key on DTT and it was difficult to discern its position regarding various issues, including the progress of the development of the Charter of Community Broadcasting Services, which was handed over the organisation by the government.

5.3 Technology: Community television stuck between analogue and digital terrestrial television migration

South Africa's objectives of facilitating convergence of the telecommunications, broadcasting and information technologies, developing interoperable and interconnected electronic networks, universal access to the electronic communication networks, provision of services and the efficient utilisation of the radio frequency spectrum can be achieved significantly with the implementation of digital terrestrial television and switching off the analogue television broadcasting signal completely. Therefore, it was important to analyse some aspects pertaining to

digital migration in order to understand the cause of the stagnation and the consequences of failing to advance the technological change.

5.3.1 Technical standards

The technical standards of the network and digital tuners have not benefitted community television stations.

Network technical standards

At the time when the government was considering changing the digital terrestrial television standards the community television stations rarely made an input because they did not have a unified voice. DVB-T was overtaken by DVBT-2, as a DTT technical standard, resulting in the SADC regional body to engaging on whether the new advanced standard would be ISDB-T or DVB-T2 and eventually DVB-T2 was selected. The deliberations meant that digital terrestrial television network deployment was on hold, despite DVB-T having an approximate 70% coverage of South Africa and set-top boxes or integrated digital television sets could not be produced. These deliberations delayed the implementation of digital terrestrial television, however the DVB-T2 technical standard created potential for the licensing of more community television stations, because of its efficiency, after digital terrestrial television migration was completed. The selection of standards may be gauged as being precarious success because there was “opposition to program… means” (McConnell, 2010, p. 354).

Set-top boxes: Out of tune

The set-top box technical standards were a contentious matter, which led to litigation by various stakeholders contesting whether government issued STBs should have conditional access. The litigation has resulted in the delay in manufacturing and therefore distribution of the STB. The government policy amendment of 2013, which was not adopted, stated that they had to have conditional access and another policy amendment of 2015 stated that conditional access was not mandatory. The benefits of conditional access included that content

could be protected, and therefore present the opportunity for community television stations to be able to vie for premium content and to be able to protect their content in order to be able to sell it to other broadcasters or exploit it further on the Internet, contrary to a view expressed by CTTV2, who said that community televisions do not have anything to benefit from conditional access. The attrition regarding set-top box standards was a "…failure to achieve desired outcomes" (McConnell, 2010, p. 354) and therefore undermined the public interest and universal service principles.

Another aspect which was lacking in the discourse regarding digital tuners, was digitally integrated television sets, which would be the replacement of old analogue television sets, and the gap illustrated the narrowness of the discourse pertaining to the strategy of migrating the country to digital television. Once the STB litigation was resolved, the country would do best to adopt both market led and public intervention strategies in order to expedite digital television penetration. The IDTVs would be another tool that CTVs could promote in order to advance DTTM once it began.

5.3.2 Radio frequency spectrum and network: Good intentions but no outcomes

Multiplex

The initial multiplex allocation of 2008 illustrated that community television stations were not a priority and instead were on the margin despite the fact that the policy committed itself to putting community television stations' development as a priority. However, the adoption of DVB-T2 and objections from stakeholders led to the position of community television representation on the multiplex finally being 15%. The 27 community television stations on the digital terrestrial television platform still had to be realised, because DTT was not available to consumers, and digital terrestrial television migration by consumers had not even began. This meant that the potential for developing and expanding the community television sector was inert as it was dependent on the realisation of digital terrestrial television.

Network: The station is there, but there are no trains to anywhere

The digital terrestrial television network was ready in South Africa, however, failure to utilise it as a result of the lack of set-top-boxes meant that extra costs were incurred as the analogue terrestrial television network was also operational and the benefits of digital terrestrial television were not accruing for the consumers and the rest of the ICT industry that anticipated benefits from the analogue terrestrial television radio frequency spectrum. Therefore, CTVs did not have the opportunity to reap the benefits of a digital network, through which they could diversify services beyond television broadcasting and explore other alternative income streams stemming from a digital economy.

5.3.3 Performance period: dual illumination in the dark

The three-year performance period starting on 1 November 2008, contained in the policy of 2008 illustrated the dissonance between the department and ICASA, because the start was three months after the issuance of the policy and too short for releasing related regulations. The policy regarding the dual illumination process was not released as there was a lack of set-top boxes, because the standards were contested by commercial broadcasting stakeholders. This problem hampered the commercial launch, which was required for consumers to be aware that they need to acquire set-top boxes before the scheduled switch-off of the analogue signals in their respective areas, never took place. South Africa missed the ITU deadline of 17 June 2015 to complete the digital terrestrial television migration and was scrambling for bilateral agreements, aimed at protecting its broadcasting signals, with neighbouring countries.

The existence of a DVB-T2 network was positive but the failure remained that digital terrestrial television was not rolled out to consumers because of a lack of set-top boxes. The digital terrestrial television multiplex allocation for community television was meaningless. The failure of the technological change has resulted in the community television sector being static. It was imperative that the selected elements pertaining to digital terrestrial television migration be addressed because they were inter-dependent in driving the migration.

5.4 Content and services missing a digital connection

The community television stations adopted various ways to engage their respective communities in content production because they had committees formed which included local community sectors and representatives. There was no clear uniform model for community television stations to follow in order to engage their respective communities in content production. Therefore it was difficult to gauge the degree to which communities participated in content production, furthermore, it was also difficult to gauge whether they complied with local content quotas because regulation also stipulated that they were not required to keep records for ICASA for monitoring and evaluation purposes.

As a result, there was no objective instrument for measuring their content production and concluding whether they complied with their content quotas as stated in the content regulations. This meant that the criticism that the stations were not compliant with content quotas and the provision that they engage communities in content production was not quantifiable and the criticisms against the community television stations were not based on factual evidence.

It was positive that DStv carried the community television stations because this was in compliance with the content regulations and contributed to the growth and sustainability of community television stations since DStv exposed them to wider audiences beyond the limited geographically bound terrestrial television broadcasting; and higher audience numbers made the stations more attractive to advertisers.

The possibility of Mobile TV taking off also presented the opportunity for the community television stations to broadcast their content on the mobile television platform, and may perhaps create similar benefits accrued from satellite pay television, however the scenario can only be assessed once Mobile TV was operational and launched.

Community television stations, like the public broadcaster and commercial free-to-air television, had an important role to play through the creation and distribution of

content and advertising aimed at driving the digital terrestrial television uptake amongst consumers in the future once set-top-boxes were on the market.

What was even more concerning was that the dates for the performance period were not set as these were important in galvanising all stakeholders, particularly viewers. It remained to be seen when digital convertors would be on the market as this was a key determinant in kicking off the migration. This state of affairs has resulted in a lacklustre CTV sector, which is trapped in technology backwardness on the analogue terrestrial broadcast platform, with mediocre results in expanding the CTV benefits in the country[1].

5.5 Future policy objectives: Pie in the sky?

The hodgepodge of impending policy and regulation did not provide specifically for addressing the governance of community television stations; or the stagnation of digital terrestrial television migration and failed to offer comprehensive content regulations aimed at a digital multiplatform environment. The consequences were that the community television sector has become stagnant, with the reality of operating through trial and error. These impending policy and regulation may be construed as programme failure (McConnell, 2010) because although they have been in the pipeline, they were never finalised and therefore could not be implemented and desired outcomes could not be measured.

The disruption of the division of the Department of Communications into the new Department of Communications and the Department of Telecommunications led to further delays in the digital terrestrial television migration process and the process regarding the creation of additional legislation in support of the community television sector. The policy regarding the set-top box standard which was developed in 2013 was never adopted, this meant that the change of the structure of the department responsible for broadcasting in 2014 resulted in the loss of time as there were also governance problems pertaining to lack of clarity on the responsibilities of the new departments. The division of the department was

[1] South Africa did not meet the ITU deadline of 17 June 2015 to conclude the digital terrestrial television migration.

concerning because it was contrary to the convergence of telecommunication and broadcasting global trends.

The existing community television stations have shown their mettle and resilience despite the tough environment in which they exist, they were therefore the incumbents in their tier of broadcasting, however they were threatened as a result of lack of funding. They were not obliged to dually illuminate because they could not afford to and if they fail to migrate to digital terrestrial television, they would be switched-off at the end of performance period. This may result in the loss of stations, which bit the bullet and navigated unchartered waters in order to forge the community tier of television broadcasting.

The threat to community television stations should be analysed carefully and a multipronged approach adopted to ensure that they are available on the next generation platform. The Department of Communications should conclude the Community Television Support Strategy. The Independent Communications Authority of South Africa should initiate supportive regulations specifically aimed at community television stations in order to ameliorate their regulatory burdens.

Much of the community television sector growth, was located in a future event that had failed to launch, the sector remained a “Cinderella of the television system” (Duncan & Glenn, 2010, np) facing the possibility of being switched-off from existence because they could not afford to migrate to digital terrestrial television.

The consequences would be the undermining of the provision in the country’s constitutional provision for the right to receive and impart information and result on the loss of the gains and contributions made by existing community television stations. The stagnation of the DTTM process also costs the country, as opportunities for developing other ICT applications cannot be realised without the spectrum occupied by the analogue television-broadcasting signal.

The reassurance by the government that spectrum interference was addressed at a regional level through bilateral agreements left much to be desired, as other threats to spectrum may not necessarily be covered by bilateral agreements and therefore

increased the country's vulnerability to interference in general and the vulnerability of the CTV sector in particular.

5.6 Application of McConnell's perspective on "policy as programme" to CTV in a DTTM environment

The elements relevant for the analysis are drawn from the McConnell (2010) framework of policy as programme, set out in Table 2 below. This is followed by an application of the framework analysing policy as programme with respect to the position of CTVs in a DTTM environment in South Africa.

Table 2 Policy as Programme

Programme Success	Resilient Success	Conflicted Success	Precarious Success	Program Failure
Implementation in line with objectives.	Implementation objectives broadly achieved, despite minor refinements or deviations.	Mixed results with some successes, but accompanied by unexpected and controversial problems.	Minor progress towards implementation as intended, but beset by chronic failures, proving highly controversial and very difficult to defend.	Implementation fails to be executed in line with objectives.
Achievement of desired outcomes.	Outcomes broadly achieved, despite some shortfalls.	Some successes, but the partial achievement of intended outcomes is counterbalanced by unwanted results, generating substantial controversy.	Some small outcomes achieved as intended, but overwhelmed by controversial and high profile instances or failure to produce results.	Failure to achieve desired outcomes.
Creating benefit for a target group.	A few shortfalls and possibly some anomalous cases, but intended target group broadly benefits.	Partial benefits realised, but not as widespread or deep as intended	Small benefits are accompanied and overshadowed by damage to the very group that was meant to benefit. Also likely to generate high profile stories of unfairness and suffering.	Damaging a particular target group.
Meets policy domain criteria.	Not quite the outcome desired, but close enough to lay strong claim to fulfilling the criteria.	Partial achievement of goals, but accompanied by failures to achieve, with possibility of high profile examples e.g. ongoing wastage when the criterion is efficiency.	A few minor successes, but plagued by unwanted media attention e.g. examples of wastage and possible scandal when the criterion is efficiency.	Clear inability to meet the criteria.
Opposition to program aims, values, and means of achieving them is virtually non-existent, and/or	Opposition to program aims, values, and means of achieving them is stronger than anticipated, but outweighed by support.	Opposition to program aims, values, and means of achieving them is equally balanced with support for same.	Opposition to program aims, values, and means of achieving them, outweighs its small levels of support.	Opposition to program aims, values, and means of achieving them is virtually universal, and/or support is

support is virtually universal.				virtually non-existent.

Source: McConnell, 2010

Utilising McConnell's (2010) criteria in analysing the implementation of DTTM in relation to the CTVs, the research revealed that the programme achieved mixed results of precarious success and program failure.

5.6.1 Governance perspective

In the period from mid-May to July 2014, the split of the old DoC, into the DTPS and the new DoC, resulted in lack of clarity regarding which government department was responsible for DTTM. Even after the transfer of administration, the powers and functions assigned to the respective Cabinet Ministers did not resolve DTTM policy deadlocks that had existed even before the split of the old DoC. This contributed to the inability of either department to meet the policy criteria, the failure to achieve desired outcomes and was damaging to particular target groups (McConnell, 2010), namely current and CTV audiences and prospective new CTV entrants. Achieving positive outcomes of DTTM and the growth of the community television sector are inextricably linked to the quality and effectiveness of the design of policy and regulation.

The failure of the DTTM programme resulted in the continuation of an effective moratorium on new entrants into the community television sector. The failure to launch new community television stations resulted in lack of opportunities for media diversity, absence of CTV sector benefits to more communities in South Africa, and no digital dividend to benefit the community television sector and other stakeholders in the ICT sector.

Policy decisions guide and influence the technological determinants that drive DTTM, creating access for consumers on the DTT platform and greater benefits for communities. In South Africa's case, DTTM policies did not meet policy domain criteria (McConnell, 2010), because digital tuners, dual-illumination period and a

clear switch-off date of the analogue terrestrial television network were absent. Given the constellation of failures noted above, we see programme failure from the governance perspective.

5.6.2 Technology perspective

The opposition to the initial programme aim of utilising the DVB-T standard, as reflected in the SADC regional body engaging on whether a new technical standard should be ISDB-T or DVB-T2 can be regarded as precarious success (McConnell, 2010), since the DVB-T2 standard was adopted. The deployment of the DVB-T2 network signified minor progress towards implementation and this minor achievement signified precarious success (McConnell, 2010), because it established one of the requirements for migration, but was dependent on other requirements.

However, the failure to roll out set-top boxes meant that the programme of DTTM tipped the situation into programme failure (McConnell, 2010). The contestation amongst stakeholders and failure to reach consensus regarding conditional access in set-top boxes led to the absence of their mass production and therefore failure of distribution to relevant households and communities. The allocation of space for CTVs on the multiplex was meaningless in the absence of digital terrestrial television migration and constituted programme failure (McConnell, 2010), because the CTV sector was stagnant as there was no point of entry for new stations.

Support for some key aspects of DTTM were outweighed by opposition (McConnell, 2010), including, most notably, the disagreement amongst stakeholders regarding the STB standards. The benefits of the DTTM for CTVs were not realised, instead stagnation occurred in the digital transition for the community television sector, leaving them as channels available to DStv subscribers and limited to their respective geographically bound analogue television frequencies. This represents programme failure from the technological perspective of digital terrestrial television migration and its potential for advancing the role of the community television sector in South African society.

5.6.3 Content and services perspective

The digital terrestrial television migration failure has resulted in the absence of new entrants in the CTV sector, meaning that there remain only limited opportunities for content production or media diversity oriented to CTV audiences. Local content is popular on satellite and analogue terrestrial television platforms. However, the stagnation of the DTTM process means that existing community television stations cannot play a part in developing content aimed at informing and driving further uptake of digital TV by audiences. This also means that employment opportunities for people in local communities without CTVs remains absent, representing programme failure by causing damage to these target groups (McConnell, 2010).

5.6.4 Other Pending policy and regulation that may affect the community television sector

The South African broadband policy has not been implemented, while the Public Service Broadcasting Bill has not been enacted and the ICT Policy review has not resulted in a policy white paper. It is therefore not possible to gauge how these policies would benefit the CTV sector or impact the DTTM. In their inconclusive state, these policies represent a "clear inability to meet the criteria" (McConnell, 2010, p. 354) for migration from a programme perspective.

5.7 Chapter summary

Chapter Five reflects mixed results regarding benefits for the CTV sector in a DTTM environment. The CTV sector has not benefitted from the intention to provide more capacity for community television stations through DTTM. It is evident that policy failures in DTTM undermined the growth of this sector and stalled the relevant regulations for creating a space for more players. The failure of DTTM resulted in communities not reaping the rewards possible from a successful migration.

The failure of policy to effectively guide the implementation of DTTM has also cost the country the opportunity of advancing technologically, of creating jobs from local

content production by new CTV stations in communities, of deepening democracy, of contributing to deepening media diversity and realising the spectrum digital dividend. It has relegated communities that could benefit from a successful digital terrestrial television migration to the margins of TV media access.

CHAPTER 6: CONCLUSION AND RECOMMENDATIONS

This chapter presents a conclusion on the research questions and addressed the gap identified in the problem statement. The main research question was:

> How has the community television sector been affected in the digital terrestrial television migration environment in South Africa, from 2007 to 2014?

6.1 Response to and conclusion on main research question

In order to answer the main question, I first review the sub-questions, as follows:
(1) How are CTVs navigating the circumstances arising as a result of governance?

Community television stations were innovative, in that they created various CTV models, even though the relevant policy and regulation contained definitions of what they should be, but gave no guidance on how to realise this. The lack of clarity and measurable monitoring and evaluation factors resulted in different interpretations and manifestations of community television sustainability models. The stations generally evolved by themselves. Their actual experience created the foundation to challenge certain assumptions of the policy-maker, because there were no measures of, nor scope, to deepen the meaning of community television contained in policy and regulation.

(2) How do technology issues affect CTVs?
The failure to migrate to digital terrestrial television has resulted in lost opportunities for the community television sector to result in a potential of 27 national channels. The real losers were the potential audiences as the number of community television stations would have contributed to the constitutional right to receive and impart information, deepened plurality, enhanced local participation, increased local programme development, contributed to media ownership and diversity and provided for a broader platform for local media training opportunities.

The absence of set-top boxes, resulted in the failure for government to declare a performance period also resulted in failing to consider the position of community television as a relevant stakeholder in the digital migration.

Other consequences included limitations in realising the potential for a digital terrestrial television network, which is far more advanced than an analogue television-broadcasting network, whereby more revenue streams exist and the potential for participating in a digital economy is broader.

(3) What challenges have CTVs experienced in preparing for the provision of digital content and services?

Community television stations continued to produce content, without putting too much currency on digital content, as reflected in their websites, for example. It appears as though they were respecting their local content requirements without exploring the potential of digital data. Community television stations are stuck in an analogue terrestrial broadcasting content framework.

The community television sector grew organically. It was a younger sector construed on idealistic premises, compared to public and commercial television. As Rennie (2003) stated that community television was not a panacea for limitations of public and commercial television shortcomings, policy and regulation under which it was construed occurs during a period where there was limited academic research on community television, compared to public and private broadcasting.

The digital terrestrial television migration developments showed that South Africa still had a long way to go in order to achieve digital terrestrial television and switch off the analogue television broadcasting signals without compromising the principle of universal access. Even though the DVB-T2 network was deployed, it could not be utilised because there were no set-top boxes on the market. A concerning aspect pertaining specifically to digital terrestrial television migration was that even though it was acknowledged that community television stations could not afford digital terrestrial television migration, no resources were mobilised to ensure that the

stations in existence could migrate successfully. Since digital terrestrial television migration had not began, it was important to also take cognisance of the responses to the questions, which guided the study. The community television stations were concerned about the fact they cannot afford digital migration, that they were not supported to participate in dual illumination and as a result treating digital migration as a wait and see situation since no policy was there to guide all television stakeholders.

6.2 Recommendations for a thriving DTT community TV sector

The recommendations from the study are outlined below.

6.2.1 Governance

It was reasonable to posit that the governance of community television stations in South Africa was fairly new, as the sector only began taking off in 2007, and was less than a decade old at the time of the research, unlike the public and commercial television broadcasting sectors. Furthermore, contrary to the other sectors, there was less experience internationally from which to draw lessons for policy and regulation. The community television broadcasting sector had illustrated its value through its successful launches and operations; positive contribution to society through providing opportunities for employment where they would not have existed in their respective operational geographic locations; in some cases in expanding media ownership beyond to historically disadvantaged groups; through giving communities a voice.

The legislation and regulation governing the sector must be reviewed in order to accommodate the formation of private-public partnerships, provide tools to monitor and evaluate the sector based on clear criteria rather than the current legislation, which was out of date since it was created before the sector took root and does not take into cognisance how the community television stations evolved in a period of eight years. The entering of several stations into partnerships with Urban Brew Studios exposed a tension between the means through which community television stations were permitted to raise funding and resources as stipulated in the Broadcasting Act (RSA, (1999) and some idealised form of community television

station definition contained therein and in the Electronic Communications Act (2005).

The abovementioned tensions also illustrated vagueness, as both laws expect community television stations to be non-profit entities, but fail to provide them with the requisite assistance in order for them to be non-profit entities and deny the reality that the stations engage in the commercial activities of selling advertisements and having to pay for services from the income earned. It was as though the government and other stakeholders expect community television stations to have access to resources by being located in communities; whereas the contrary was the reality. The legislation had to be reviewed with the looming digital terrestrial television environment in mind and provide for funding and other resources for community television stations so that even the poorest geographic areas may have access, capacity and capability in establishing and operating community television stations. Instead, stations are being marginalised because of poverty as some areas hardly have local economic activity and the requisite skills. Policy and regulation governing the community television sector must be enabling and address the allocation of resources in order to bridge the poor-and-rich divide in accessing community television and spreading ICTs to the poorer sections of society.

The onus to illustrate that communities participate in the community television stations lies with the stations themselves, as there are no clear rules as to how communities should participate. This is another element in the regulations that needs evaluation, in order that more realistic and measurable goals are put in place so as to create a clearer understanding of this aspect.

Monitoring and evaluation tools must be developed to measure the benefits of skills development and local economic and social participation that have stemmed from the existing community television stations. These tools should define and quantify the results of the activities of community television stations, and assist the country in benchmarking the impact of community television stations in order to assist them to grow further and create more positive benefits for the country.

The funding models of community television stations have to be versatile, because it is an emergent sector. The government should put more money into the sector because it has brought positive benefits to communities, which were otherwise marginalised. The governance of community television stations had to accommodate more flexible models of how the stations sustain themselves, coupled with realistic measurable standards.

The onus was also on existing community television stations to strengthen ACT-SA and to ensure that it truly represents the interests of the community television sector, with a bias of strengthening and growing the sector, and pressing for the government to complete digital terrestrial television so that more stations can be licensed and the sector can grow. The sector needs a unified voice, but was on the margins because of the low profile of its industry body ACT-SA.

6.2.2 Technology

As illustrated and discussed earlier, regarding digital terrestrial television migration, there were no digital tuners in the form of set-top boxes and IDTVs, and there was no performance period. The consequences were that community television stations could not be on a digital network, which would have addressed some of the technical challenges they were having on the analogue transmission. The sector remained stagnant as the 27 national slots for community television stations could not be licensed because, simply put, there was no digital terrestrial television.

The acknowledged fact that community television stations cannot afford to dually illuminate or migrate to digital terrestrial television has to be addressed by the government through providing these stations with the funding to enable them to dually illuminate - so that they do not experience blackouts as the country's viewers adopt digital terrestrial television and in order to ensure that the pioneers of community television are not lost together with their institutional knowledge. The knowledge and experience accumulated by the existing community television

stations has to be utilised in order to forge a stronger sector as new community television stations become licensed after the analogue switch-off.

The delays in digital terrestrial television have also made it difficult for the stations to plan for digital migration. Instead the stations remain accustomed to the status quo of analogue television; and perhaps this may result in the stations being less dynamic and not really advancing. Furthermore a digital terrestrial television environment may enable the stations to be more dynamic in exploiting digital platforms such as the Internet more aggressively. The set-top box conditional access presents potential for community television stations to protect their content and exploit it further by selling it to other interested stakeholders. It would be a loss for community television stations if they were not have the opportunity to protect their content.

In addition to better picture quality and increased number of channels for the consumer, the release of the radio electronic spectrum frequency was a key component of the country's economic development. South Africa's digital migration should not be held up by the dispute over the STB conditional access. The STB market should be opened and varied products must be on the market. Government issue set-top boxes are not the be all and end all; there needs to also be a rollout of IDTV sets so that the consumers who can afford them can have access to them. South Africa should adopt both a state-led and a market-led digital terrestrial television strategy. A compromise has to be reached. South Africa intended to use the manufacturing of set-top boxes to stimulate domestic manufacturing and to grow the economy; however perhaps trade-offs will have to be made and conditional access be excluded from the boxes. For now, the occupied radio electromagnetic spectrum and the potential manufacturers of set-top boxes and IDTVs are in limbo, resulting in the country not benefiting from the potential economic development that could stem from both sectors.

6.2.3 Content and services

It was acknowledged by the research respondents that the stations produced unique content that was different from the public and commercial television broadcasters. The regulations should require community television stations to record their content, as commercial and public television broadcasters do, because this will provide clear, and measurable results and enable the regulator to benchmark and determine whether the content was in line with regulations. It was understandable that perhaps the regulator does not wish to burden the stations, however it was difficult to gauge to what degree content was duplicated, or whether stations were threatened with becoming production houses for their private partners.

The government must support content production particularly for the community television sector. The basic logic of television production was that content production contributes to skills development, contributed to addressing issues of representation, deepening democracy and plurality and contributing to the national coffers and was potentially tradable on the global market.

The government must also make concerted efforts to expose the community television sector to other markets and other community media organisations in the world so that they may expand and share their knowledge and experience. The government, for example, takes business organisations to other countries in order to expose them to other marketplaces, and it supports the public broadcaster to participate in international content markets and forums, and therefore the same benefits must be extended to the community television sector so that it can also benefit from international exposure.

6.3 Conclusion

The community television sector need not be the Cinderella, nor the poor cousin of the television-broadcasting sector; rather, it can be a shining beacon if supported correctly. The revision of antiquated policies and regulations governing the sector should be viewed as an opportunity to utilise what has been learned and gained so far in order to create a dynamic and robust community television sector. The process

of migration to digital terrestrial television has to be completed in order to open up the scope for the sector to grow and empower communities, particularly marginalised communities. Furthermore, although some believed that he who pays the piper calls the tune, this need not be the case if government were to support community television stations' content production. Policy and regulation could be utilised to demarcate the role of the state and protect community television stations from undue government influence.

This study elaborated on the position of television stations in the context of digital terrestrial television in South Africa, and attempted to fill a knowledge gap related to an absence of a study of community television in the context of digital terrestrial television migration in Africa.

APPENDIX A

Title: Experiences of the Community Television sector in the migration to Digital Terrestrial Television in South Africa.

DOCUMENT QUESTIONS

1. Policy analysis: How are the relevant policies aligned towards the objective of complete DTTM migration?

    - licensing
    - technical norms
    - communication and marketing campaigns
    - switch off calendar
    - Prescripts pertaining to CTVs

2. Regulation analysis: How are the relevant regulations aligned towards the objective of complete DTTM migration?

    - licensing
    - technical norms
    - communication and marketing campaigns
    - switch off calendar
    - Prescripts pertaining to CTVs

3. What do policies and regulation state regarding universal access, media plurality and the right to information?

4. What do policies pertaining to creating an information society state is essential for reaching this objective? Eg. The need for analogue television spectrum (digital dividend) in order to create space for other ICT applications.

5. To what extent are licensing conditions of CTVs compatible with the policies and regulations governing DTTM?

6. To what extent are the content and services provisions in the policy and regulations governing DTTM supportive of stimulating consumer uptake of digital terrestrial television in the context of CTVs?

7. To what extent is the technology environment suitable for CTVs to participate fully in the DTTV space?

APPENDIX B

Community television stations interview protocol

Introduction: My name is Fumane Diseko. I am doing an ICT Policy and Regulation Masters degree at Wits University. My research topic is: The experience of the community television sector in the migration to digital terrestrial television and I wish to interview you. I promise that I will respect your confidentiality by not revealing your identity.

Section A: Background

1. Please outline the historical background of the station, eg. Below

Who were the founders?
When was this station licensed?
Why was there a need to establish this community TV station?

2. What were the aims and principles of the station when it was founded? What were your experiences of the journey of actually getting on air?

3. What is the station's ownership structure?

4. What did you think DTTM would mean for the station when it was mooted?

Section B: POLICY AND REGULATIONS

5. How do the current DTTM policy and regulations address the role that the CTV sector can play in the DTTM environment in South Africa?

5. How are the policy and regulation objectives impacting on your CTVs capability to implement DTTM?

6. What is the impact of the lack of a switch-off calendar on this station?

7. Should more CTVs be licensed in this current regime of DTTM? Why?

8. What is the station's position regarding the government's view that CTVs are violating their license conditions because they are behaving in a commercial manner?

Section C: FINANCING

9. How do you maintain your financial sustainability?

10. What means does the station have in order to achieve the stages of DTTM and to finally broadcast from a DTTV platform?

11. Section D: CONTENT AND SERVICES

12. What approaches have CTVs adopted in the provision of digital content and services?

13. Do you intend to apply for an exemption from your current content restrictions, as provided for by the DTTM regulations? If so, what do you intend to achieve?

14. What activities does the station engage in in order to enhance local participation, contribute to local social and economic development and media ownership diversity?

Section E: TECHNOLOGY

15. What was the impact of the indecision about DTTV technological standard on the station?

16. What are the successes and challenges for CTVs in the acquisition and utilisation of DTTV technology?

17. What is the station's position on the set top boxes, should they have conditional access or not? Please elaborate on your response.

Section F: FUTURE

18. What role do you think CTVs must play or should be playing in driving DTTM?

19. The DoC says it is finalising a model for implementing CTV and the new Community Broadcasting Support Policy. What are the key areas and elements should the government include? Please elaborate on your response.

20. What hopes does the station have for its future in the digital terrestrial television period?

CONCLUSION

I have completed my question session. Do you want to add more to our discussion?

Thank you for your time and insightful assistance.

APPENDIX C

Sentech interview protocol

Introduction: My name is Fumane Diseko and I am doing an ICT Policy and Regulation Masters degree at Wits University; and my research topic is: The experiences of the community television sector in the migration to digital terrestrial television and I wish to interview you. I promise that I will respect your confidentiality by not revealing your identity.

Sentech has a major role to play in the broadcasting ecosystem, including supporting community television stations and the migration to digital terrestrial television.

1. What is the relationship between Sentech and community television stations?
2. How does Sentech support and or assist the stations technologically?
3. What are the successes and challenges stemming from the interaction between community television stations and Sentech?
4. How will the multiplexes allocated for digital terrestrial television be managed?
5. Is the multiplex allocation of 15% for community television stations sufficient?
6. What is Sentech's progress so far, in its role as the main terrestrial signal provider, in the development of a digital terrestrial television network?
7. What are the major obstacles to digital terrestrial television migration in the country?
8. How are these impacting on Sentech's performance?
9. What is the impact of the absence of the ASO date?
10. What is the cost of dual illumination so far?
11. What was the impact of the change from DVB-T to DVB-T2, including the period when the Brazilian standard ISDB-T was mooted?
12. To date, how far has the SOE progressed in covering the country with the DVB-T2 signal?

13. Taking into cognisance the whole value chain and stakeholders involved in the digital terrestrial television migration, how do you think the migration problems can be resolved so that analogue switch-off can be achieved?
14. Looking at the frequency allocation on Sentech's website, why does Trinity Broadcasting have six channels in the Eastern Cape and Bay TV has only one?
15. Why is 1KZN TV not on that plan?
16. North West TV?
17. What does CSN stand for in the frequency plan?

Appendix D

Independent Communications Authority of South Africa interview protocol

Introduction: My name is Fumane Diseko and I am doing an ICT Policy and Regulation Masters degree at Wits University; and my research topic is: The experiences of the community television sector in the migration to digital terrestrial television and I wish to interview you. I promise that I will respect your confidentiality by not revealing your identity.

GOVERNANCE

1. What is the regulator's observations and assessment of the development of the community television sector, since its inception to now?
2. What brought about the view that CTVs are violating their license conditions?
3. What is the regulator's position on management contracts, with Urban Brew and Zallywood, held by some community television stations?
4. The licensing framework of community television stations has evolved over the past ten years, now they hold seven-year licenses, will this regime change once DTT is in place and if so, how?

CONTENT AND SERVICES

5. Community television broadcasters have content quotas that they have to fill, are the individual community television stations complying with their respective content quotas?

6. What are the individual channels challenges and successes in terms of fulfilling their content quotas?

7. What is the regulator's position regarding the role that Urban Brew Studios and DStv play in the provision of content to community television stations?

8. Are the other observations you wish to add about community television stations' compliance with content regulations?

TECHNOLOGY

9. How will the community television stations be impacted on by the change in frequency bands during the DTTM process? For example, Cape Town TV was off air for 18 months because of changes in the frequency allocation.

10. The current regulations on digital terrestrial television migration allocate 15% of multiplex 1 to existing CTVS, and possibility for future stations to be licensed as it accommodates three community television stations per province, are there sufficient resources to sustain new CTVs after the DTTM?

11. How does the regulator support CTVs to be on the DTT platform?

12. CTVs face a lack of funds, access to infrastructure, lack of resources for DTTM – for example CTTV had to stop being on the multiplex after they found it too expensive. Is there a risk that CTVs may be relegated to the Internet, as happened in Australia recently after the digital migration?

13. From the regulator's perspective, what measures can be adopted to mitigate against the possibility of existing CTVs failing to be on the DTT platform?

14. What are the obstacles to successful DTTM? (STBs, ASO calendar, project plan, etc.)

15. From the side of the regulator, how can these be addressed?

16. What is the regulator's view of CTVs being available nationally on satellite TV but being geographically limited on the free-to-air terrestrial TV broadcasting platform? Notion of more for the haves…

I have finished. Do you wish to add more insights?

Thank you very much for your time and assistance.

APPENDIX E

Department of Telecommunications and Postal Services and the Department of Communications group interview protocol

Introduction: My name is Fumane Diseko and I am doing an ICT Policy and Regulation Masters degree at Wits University; and my research topic is: The experiences of the community television sector in the migration to digital terrestrial television and I wish to interview you. I promise that I will respect your confidentiality by not revealing your identity.

RESEARCH QUESTION

How has the community television sector been affected in the digital terrestrial television migration environment in South Africa, from 2007 to 2014?

A) RESEARCH REPORT QUESTIONS

HISTORICAL

1. What is government's rationale for creating a community television broadcasting sector?
2. So far, what is the government's view of their contribution to fostering media diversity, deepening democracy and contributing to social and economic development?

GOVERNANCE

3. What are the issues that led the government to say that community television stations are violating their license conditions? Eg. [a commercial model and other governance issues]
4. How are these issues being addressed?

5. What is the rationale of government supporting free-to-air stations, mainly financially, but not CTVs in the DTTM era?

6. In 2009 the Minister of Communications issued a “Notice Inviting Comments on Public Service Broadcasting Bill 2009, Charter of the Corporation, and Charter of Community Broadcasting Services” Government Gazette, 28 October 2009, no. 32663. What were the subsequent developments and were documents produced regarding the “Charter of Community Broadcasting Services” since then?

7. What ideas does the government have regarding addressing governance problems within the community television sector?

TECHNOLOGY

8. What role does the government envision community television stations playing in driving DTT uptake amongst viewers?

9. What are the measures that the department plans on adopting in order to accelerate the adoption of digital terrestrial television, and why were these measures selected?

10. Under what conditions will the government deem the country ready to switch off the analogue terrestrial television transmission signals completely?

11. Will the set-top boxes have conditional access and a return path? Why?

12. When will digital terrestrial television set-top boxes be available on the market?

13. What is the progress with the set-top-box (STB) incentive scheme?

14. How is the STB incentive scheme going to be implemented?

15. What is the plan for the distribution of STBs?

16. Will the government subsidise the transmission costs of CTVs in the DTTM and DTT period?

17. Why did the government moot the Brazilian standard for DTV, after the country and the region had already adopted DVB-T?

18. What is the government's view of the new satellite digital television offering by e-tv?

19. What will be e-tv's satellite digital television's positive and negative impacts on digital terrestrial television migration and digital terrestrial television in the country?

20. Why did the government choose to undertake DTTM instead of satellite broadcasting for digital television?

21. Is there a concern about new technologies overtaking DTT and affecting uptake by consumers?

APPENDIX F

LETTER OF CONSENT

I (Name and surname) _____ consent to being interviewed by **Fumane Diseko**, for purposes of her ICT Policy and Regulation Masters research report to be submitted to the University of the Witwatersrand, student number **9408727K**.

I agree that the information gathered will be used for educational purposes and that my anonymity will be guaranteed as she will refer to the institution rather than my name and personal capacity.

I consent to:

Please tick

 Participating in the interview session

 Researcher taking notes during the interview

 Interview session audio to be recorded

_____

Signed Date

Optional information about the interviewee:

Job Title: _____

Institution: _____

Appendix G

Legislation pertaining to community television stations

DOCUMENT	GOVERNANCE	CONTENT AND SERVICES	TECHNOLOGY
Broadcasting Act No. 4 of 1999 'community' includes a geographically founded community or any group of persons or sector of the public having a specific ascertainable common interest (p. 6 S 1) 'community broadcasting service' means a broadcasting service which – (a) is fully controlled by a non-profit entity and carried on for non-profitable purposes; (b) serves a particular community; (c) encourages members of the community served by it or persons associated with or promoting the interests of such community to participate in the selection and provision of programmes to be broadcast in the course of such broadcasting services; and (d) may be funded by donations, grants, sponsorships or	(c) encourage ownership and control of broadcasting services through participation by persons from historically disadvantaged groups (p. 12, S 2) (f) encourage the development of human resources and training, and capacity building within the broadcasting sector especially amongst historically disadvantaged groups (p. 12, S 2) (g) encourage investment in the broadcasting sector (p. 13, S 2) (k) provide for a three tier system of public, commercial and community broadcasting services (p. 13, S 2)	(d) ensure plurality of news, views and information and provide a wide range of entertainment and education programmes (p. 12, S 2) (r) encourage the development of local programming content (p. 13, S 2)	(o) integrate multi-channel distribution systems into the broadcasting framework (p. 13, S 2) (3) Public and commercial broadcasting services must comply with international technical standards and the broadcasting system must be readily adaptable to scientific and technological advances (p. 15, S3) common carrier means a service for broadcasting signal distribution as provided by Sentech Limited, established in terms of the Sentech Act (1996) P.6

DOCUMENT	GOVERNANCE	CONTENT AND SERVICES	TECHNOLOGY
advertising or membership fees, or by any combination of the afore mentioned.			
Electronic Communications Act No. 36 of 2005 'community' includes a geographically founded community or any group of persons or sector of the public having a specific ascertainable common interest (p. 86, S 1)	'community broadcasting service' means a broadcasting service which – (a) is fully controlled by a non-profit entity and carried on for non-profitable purposes; (b) serves a particular community; (c) encourages members of the community served by it or persons associated with or promoting the interests of such community to participate in the selection and provision of programmes to be broadcast in the course of such broadcasting services; and (d) may be funded by donations, grants, sponsorships or advertising or	Ensure broadcasting services (i) promote the provision and development of a diverse range of sound and television broadcasting services on a national, regional and local level, that cater for all language and cultural groups and provide entertainment, education and information	Objectives of ECA include (a) promote and facilitate the convergence of telecommunications, broadcasting, information technologies and other services contemplated in this ACT (p. 95, S 2) (b) promote and facilitate the development of interoperable and interconnected electronic networks, the provision of the services contemplated in the Act and to create a technology neutral licensing framework (p. 95, S 2)

DOCUMENT	GOVERNANCE	CONTENT AND SERVICES	TECHNOLOGY
	membership fees, or by any combination of the afore mentioned. (p. 86, S 1) (l) provide assistance and support towards human resource development within the ICT sector (p. 96, S 2)		(c) promote the universal provision of electronic communications networks and electronic communications services and connectivity for all (p. 96, S 2) (e) ensure efficient use of the radio frequency spectrum (p. 96, S 2) (q) ensure information security and network reliability (p. 97, S 2) (1) No person may use, supply, sell, offer for sale or lease or hire any type of electronic communications equipment or electronic communications facility, including

DOCUMENT	GOVERNANCE	CONTENT AND SERVICES	TECHNOLOGY
			radio apparatus, used or to be used in connection with the provision of electronic communications, unless such equipment, electronic communications facility or radio apparatus has, subject to subsection (2), been approved by the Authority (p. 137, S 35) Technical standards for equipment and electronic communications facilities (2) must be aimed at (a) protecting the integrity of the electronic communications network; (c) ensuring interoperability, interconnectability and harmonisation; and (d) avoiding

DOCUMENT	GOVERNANCE	CONTENT AND SERVICES	TECHNOLOGY
			harmonisation; and (d) avoiding harmful interference with the electronic communications network. (p. 138, S 36)

APPENDIX H

POLICY FOR DIGITAL TERRESTRIAL TELEVISION

TITLE, GOVERNMENT GAZETTE NO. & DATE	**BROADCASTING DIGITAL MIGRATION POLICY: 31408 08 SEPTEMBER 2008**	**AMENDMENT OF BROADCASTING DIGITAL MIGRATION POLICY: 34538 19 AUGUST 2011**	***AMENDMENT: BROADCASTING DIGITAL MIGRATION POLICY: 35051 17 FEBRUARY 2012**	**PROPOSED AMENDMENT OF BROADCASTING DIGITAL MIGRATION POLICY: 37120 06 DECEMBER 2013**
PURPOSE OF THE POLICY	Sets out the parameters migrating the country's broadcasting from analogue to digital	Amends 2008 policy	To inform and guide the digital migration process during the dual illumination period.	Invitation for interested parties to provide written comments on proposed amendments of past policies (DoC, 2008; 2012a & 2012b)
PERFORMANCE PERIOD:	Announced in the policy.	Announced in the policy.	Unknown because the switch-on date was to be the last quarter of 2012 and there was no switch-off date.	Unknown because the switch-on date was to be on the 1st of April 2014 and there was no switch-off date.
Switch-on	01 November 2008	April 2012	Endeavour for last quarter of 2012	01 April 2014
Switch-off	01 November 2011	December 2013	To be determined by Cabinet, after sector stakeholder engagement	To be determined by the Minister, after Cabinet consultation and sector stakeholder engagement
Dual illumination duration	03 Years	1 year and 8 months	Unknown	Unknown

TITLE, GOVERNMENT GAZETTE NO. & DATE	BROADCASTING DIGITAL MIGRATION POLICY: 31408 08 SEPTEMBER 2008	AMENDMENT OF BROADCASTING DIGITAL MIGRATION POLICY: 34538 19 AUGUST 2011	*AMENDMENT: BROADCASTING DIGITAL MIGRATION POLICY: 35051 17 FEBRUARY 2012	PROPOSED AMENDMENT OF BROADCASTING DIGITAL MIGRATION POLICY: 37120 06 DECEMBER 2013
MULTIPLEXES	2 Multiplexes allocated for public and commercial broadcasting and not community TV. Three SABC regional stations mooted, with obligation to give community TV open windows during the transition.	Community television stations should be accommodated in the existing DTT multiplexes	Public, commercial & community television broadcasting services will be accommodated on two DTT multiplexes. Regional television services will be required to provide an open window for community television programming.	MUX 1 allocated for the public broadcaster shall aim to achieve 84% coverage by 31 March 2014. Two multiplexes assigned for public, commercial and community television stations.
ROLL-OUT TARGETS: Phased digital terrestrial television signal coverage of population	Fifty per cent by 2008, 80% by 2010 and close to 100% by 2011	Sixty per cent at the end of 2011, 74% by early 2012 and close to 100% by late 2013	Seventy four per cent by early 2012 and 95% by the end of 2013	84% by March 2014
	Satellite digital broadcasting utilised to cover areas that are not reached by the analogue and digital terrestrial television broadcast signal.			
TECHNICAL STANDARD	Terrestrial broadcasting: DVB-T	Terrestrial broadcasting: DVB-T 2		

TITLE, GOVERNMENT GAZETTE NO. & DATE	BROADCASTING DIGITAL MIGRATION POLICY: 31408 08 SEPTEMBER 2008	AMENDMENT OF BROADCASTING DIGITAL MIGRATION POLICY: 34538 19 AUGUST 2011	*AMENDMENT: BROADCASTING DIGITAL MIGRATION POLICY: 35051 17 FEBRUARY 2012	PROPOSED AMENDMENT OF BROADCASTING DIGITAL MIGRATION POLICY: 37120 06 DECEMBER 2013
	Satellite broadcasting: DVB-S	Satellite broadcasting: DVB-S 2		
DIGITAL TERRESTRIAL TV SET-TOP BOX	Interoperable, conditional access and return path	Interoperable, conditional access and return path	Interoperable, conditional access also referred to as a control system and manufacturing to be implemented within the context of the National Industrial Policy Framework	Control system not mandatory for broadcasters to use, to prevent subscription broadcasters unfairly benefitting from the STB control system and interoperable
	Non-available were ever available on the market and no roll-out targets were ever set.			

*** AMENDMENT OF BROADCASTING DIGITAL MIGRATION POLICY (7 February 2012), No. 35014 was excluded from this table because it was withdrawn and replaced by the BROADCASTING DIGITAL MIGRATION POLICY: 35051 of 17 February 2012.**

APPENDIX I

REGULATIONS FOR DIGITAL TERRESTRIAL TELEVISION

TITLE, GOVERNMENT GAZETTE NO. & DATE	**FIRST DRAFT BROADCASTING DIGITAL MIGRATION FRAMEWORK REGULATIONS 31490 03 OCTOBER 2008**	**SECOND DRAFT DTT REGULATIONS 32083 31 MARCH 2009**	**FINAL DTT REGULATIONS 32377 03 JULY 2009**	**THIRD DRAFT DIGITAL TERRESTRIAL TELEVISION REGULATIONS 32559 04 SEPTEMBER 2009**
PURPOSE OF REGULATIONS: Generally the regulations are aimed at guiding transition from analogue to digital terrestrial television migration, assigning DTT MUXES, setting rollout-targets, time frames for dual illumination and other matters.	Inviting interested parties to make written representations on these draft regulations. The regulations repealed the Television Broadcasting Technical Regulations contained in Notice 2329 and published in Government Gazette No. 20553 (08/10/1999)	Inviting interested parties to make written representations on these draft regulations	Final regulations	The final DTT regulations (July 2009) were withdrawn and these were released for public comment
PERFORMANCE PERIOD: After the March 2009 regulations the duration of the performance period was not assigned specific dates.		Switch-on: 01 November 2008 Switch-off: 30 November 2011. Duration of dual illumination: 3 years	Unspecified because dual illumination did not take place as planned because there are no set-top boxes available on the market.	1 April 2010 – 30 March 2012

TITLE, GOVERNMENT GAZETTE NO. & DATE	FIRST DRAFT BROADCASTING DIGITAL MIGRATION FRAMEWORK REGULATIONS 31490 03 OCTOBER 2008	SECOND DRAFT DTT REGULATIONS 32083 31 MARCH 2009	FINAL DTT REGULATIONS 32377 03 JULY 2009	THIRD DRAFT DIGITAL TERRESTRIAL TELEVISION REGULATIONS 32559 04 SEPTEMBER 2009
ROLL-OUT TARGETS (Phased population signal coverage) Satellite digital broadcasting utilised to cover areas that are not reached by the analogue and digital terrestrial television broadcast signal.	50% coverage by 2009, 80% coverage by 2010 and 100% coverage by 2011.	50% at the end of 2009, 60% at the end of 2010, 95% at the end of 2011	50% at the end of the 2009/2010 financial year, 60% at the end of the 2010/2011 financial year and 80% at the end of the 2011/2012 financial year.	50% at the end of the financial year 2009/2010, 65% at the end of the financial year 2010/2011 and 95% at the end of the 2011/2012 financial year.
ALLOCATION OF MULTIPLEXES	MUX 1: Two channels reserved for SABC commercial services, 5 channels for SABC public services and 1 channel reserved for TBN as a permanently licensed community television broadcasting service. MUX 2: to	MUX 1: 90% allocated to the SABC, 10% for TBN & SABC must broadcast two regional channels as well. MUX 2: 60% for e-tv, extra capacity reserved for future authorisation and MUX 3: M-Net allocated 50% and 50% set aside	MUX 1: set aside for public and community broadcasting. SABC allocated 100% and obliged to make 10% available for TBN in the Eastern Cape. MUX 2: Commercial free-to-air e-tv is allocated 60% and others can apply to test in the extra capacity. MUX 3: set aside for subscription broadcast services. M-	MUX 1: 90% for SABC and 10% for Trinity Broadcasting Network. MUX 2: 60% for e-tv and the rest of the capacity may be utilised temporarily for testing purposes. MUX 3: M-Net allocated 50%, which was required to conduct a hard switch-over of its channels over 12

TITLE, GOVERNMENT GAZETTE NO. & DATE	FIRST DRAFT BROADCASTING DIGITAL MIGRATION FRAMEWORK REGULATIONS 31490 03 OCTOBER 2008	SECOND DRAFT DTT REGULATIONS 32083 31 MARCH 2009	FINAL DTT REGULATIONS 32377 03 JULY 2009	THIRD DRAFT DIGITAL TERRESTRIAL TELEVISION REGULATIONS 32559 04 SEPTEMBER 2009
	carry 2 e-tv and 4 M-Net channels. The remaining 2 channels set aside for future assignment.	for future authorisation. Broadcasters on MUXES are expected to dually illuminate.	Net to conduct hard switch-over and allocated 50%. Others can apply for testing capacity on MUX 3.	months. Others may apply to utilise the remaining capacity for testing purposes.
COMMUNITY TELEVISION STATIONS	Community broadcasting services were to broadcast in their respective channels and restricted to their respective licensed coverage areas.	New community TV stations are regarded as temporary and therefore must continue broadcasting in analogue. TBN allocated MUX capacity because it is a permanent CTV.	Other community television services licensed on trial basis for a period not exceeding one year will continue to broadcast on analogue frequencies.	

APPENDIX J

REGULATIONS FOR DIGITAL TERRESTRIAL TELEVISION CONTINUED

TITLE, GOVERNMENT GAZETTE NO. & DATE	**FINAL DIGITAL MIGRATION REGULATIONS 32956 15 FEBRUARY 2010**	**FOURTH DRAFT DTT REGULATIONS 34642 28 SEPTEMBER 2011**	**FIFTH DRAFT DTT REGULATIONS 35508 10 JULY 2012**	**DIGITAL MIGRATION REGULATIONS 36000 14 DECEMBER 2012**
PURPOSE OF REGULATIONS : Generally the regulations are aimed at guiding transition from analogue to digital terrestrial television migration, assigning DTT MUXES, setting rollout-targets and other matters.	Revised final Digital Migration Regulations	These repeal 2010 (GG 32956) regulations and afford interested parties to make written and oral presentations	To amend the draft regulations of 2011 (GG 34642), to repeal DTT regulations of 15 February 2010 (GG 32956) and invitation to submit written presentations on these regulations.	These finalised and adopted regulations repeal Digital Migration Regulations of February 2010.
PERFORMANCE PERIOD: After the September 2009 regulations the duration of the performance period was not assigned specific dates.	Dual illumination of SABC, e-tv, M-Net and TBN channels so as to achieve the phased digital migration of those channels in the whole country.	The dual illumination commencement date would be announced by ICASA in the government gazette. Dual illumination of SABC, e-tv and M-Net channels so as to achieve the phased digital migration of those channels in the whole country.	Dual illumination of SABC, e-tv and M-Net channels.	Duration of performance period will be published by the Minister in the Government Gazette
ROLL-OUT TARGETS	50% within 12 months of the	80% by the end of 2012	74% within six months after	74% within six months after

TITLE, GOVERNMENT GAZETTE NO. & DATE	FINAL DIGITAL MIGRATION REGULATIONS 32956 15 FEBRUARY 2010	FOURTH DRAFT DTT REGULATIONS 34642 28 SEPTEMBER 2011	FIFTH DRAFT DTT REGULATIONS 35508 10 JULY 2012	DIGITAL MIGRATION REGULATIONS 36000 14 DECEMBER 2012
(Phased population signal coverage). Satellite digital broadcasting utilised to cover areas that are not reached by the analogue and digital terrestrial television broadcast signal.	commencement of the performance period, 80% within 24 months and 90% within 36 months	and 95% by the end of 2013	the commencement date of digital terrestrial television switch-on and 95% by the end of the dual illumination period	the commencement of dual illumination and 95% by the end of the dual illumination period
ALLOCATION OF MULTIPLEXES	MUX 1: allocated to SABC and TBN, and nothing for other community television stations. MUX : e-tv is allocated 50% and M-Net 40%	M UX 1: SABC allocated 80%, 10% to community TV stations, including new licensees Soweto TV, Cape Town TV and Bay TV and 10% is set aside for future use. MUX 2: 40% for e-tv, 30% for M-Net and the remaining 30% set aside for future use. TBN is no longer required to dually illuminate.	MUX 1: SABC 90%, 10% for community TV stations to broadcast their existing analogue channels. MUX 2: e-tv 50%, M-Net 40% and 10% set aside for future use and testing purposes. MUX 3: 40% for future subscription television licensee, 50% for new free-to-air commercial television service licensee(s) and	MUX1: SABC allocated 85% and community broadcasting services 15% to broadcast their existing television channels. MUX 2:e-tv allocated 50% M-Net 40% and 10% allocated to temporary license holders for tests and trials.

TITLE, GOVERNMENT GAZETTE NO. & DATE	FINAL DIGITAL MIGRATION REGULATIONS 32956 15 FEBRUARY 2010	FOURTH DRAFT DTT REGULATIONS 34642 28 SEPTEMBER 2011	FIFTH DRAFT DTT REGULATIONS 35508 10 JULY 2012	DIGITAL MIGRATION REGULATIONS 36000 14 DECEMBER 2012
			10% to be made available for commercial sound broadcasting licensees.	
COMMUNITY TELEVISION STATIONS	Community TV stations must continue broadcasting in analogue and are not required to commence digital migration. TBN was allocated MUX capacity because it was a permanent CTV.	New community TV stations are not required to dual illuminate but they must ensure that they have migrated at the end of the performance period. The use it or lose it principle applies to allocated multiplex capacity at the end of the performance. SABC's anticipated regional public and commercial television services are required to provide an open window for community television programming for a minimum period of 30	Community television stations may not apply for digital incentive channels, unlike other terrestrial television broadcasters. These were not required to illuminate dually but had to migrate at the end of the performance period. Regional public and commercial TV services were to provide an open window for community TV programming within their respective regions for a minimum period of 30 minutes between 6 and	Community television stations are not required to dually illuminate, but must complete digital terrestrial television migration by the end of the performance period.

TITLE, GOVERNMENT GAZETTE NO. & DATE	FINAL DIGITAL MIGRATION REGULATIONS 32956 15 FEBRUARY 2010	FOURTH DRAFT DTT REGULATIONS 34642 28 SEPTEMBER 2011	FIFTH DRAFT DTT REGULATIONS 35508 10 JULY 2012	DIGITAL MIGRATION REGULATIONS 36000 14 DECEMBER 2012
		minutes during 6-10 pm	10 pm.	

REFERENCES

Armstrong, C. & Collins, R. (2010). Digital Turmoil for South African TV. Link Centre. Retrieved 4 June 2011, from link.wits.ac.za/.../Armstrong-Collins-2010-Digital-Turmoil-SA-TV.pdf

Atta, J. & Ottaviani, M. (2005). The transition to digital television. *Economic Policy*. 20(4), 159 – 209. Great Britain. Retrieved 10 January 2014, from http://0web.ebscohost.com.innopac.wits.ac.za/ehost/pdfviewer/pdfviewer?sid=2cd1bfbe-8d92-4bee-bec4-c790cf54845c%40sessionmgr113&vid=2&hid=124

Benjamin, C. (13 September 2013). Dithering and delays hit digital TV. Retrieved 30 September 2013, from http://mg.co.za/article/2013-09-13-00-dithering-and-delays-hit-digital-tv

Bizcommunity (14 May 2012) Community TV: Adspend to the rescue. Retrieved 08 January 2013, from http://www.bizcommunity.com/Article/196/66/75101.html

Bohlin, E. & Teppayayon, O. (2010). Broadband Universal Service in Europe: Review of Policy Consultations 2005-2010. *Communications and Strategies.* 80. 21-42 Retrieved 12 February 2012, from http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1810895

Bradley, J. (1993). Methodological Issues and Practices in Qualitative Research. *The Library Quarterly.* 63(4), 431-449. Symposium on Qualitative Research: Theory, Methods, and Applications (Oct., 1993). Retrieved 15 June 2014, from http://www.jstor.org/stable/4308865

Brown, A. & Picard, R. G., (2004). The Long, Hard Road to Digital Television in Europe. 6th World Media Economics Conference. Centre d'études sur les medias and *Journal of Media Economics.* HEC Montréal, Canada. May 12-15 2004. Retrieved 24 February 2010, from www.cem.ulaval.ca

Bizcommunity (2013, June 3). Retrieved Association to advance community TV's interests. Retrieved 5 June 2013, from http://www.bizcommunity.com/Article/196/66/94348.html

Bryman, A. (1992). *Quantity and Quality in Social Research.* London and New York: Routledge.

Cambini, C., & Garelli, N. (2011). Evaluation of the opportunity cost of the spectrum: Application to the digital dividend. *Telecommunications Policy*, *35*(7), 633-649. Retrieved from ScienceDirect.

Candel, R. S. (2008). Comparing Public Policies for Digital Terrestrial Television: Sweden vs Spain within the framework defined by the European Union. 26th Congress of the International Association for Media and Communication Research. Stockholms Universitet – July 20th – 25th 2008. Retrieved 24 February 2010, from www.upf.ed

Cave, M. (2006). Spectrum Management and Broadcasting: Current Issues. *Communications & Strategies.* 62, 2nd quarter. Retrieved 24 February 2010, from http://mpra.ub.uni-muenchen.de/3514/

Chhotray, V. & Stoker, G. (2009). Governance Theory and Practice – A Cross-Disciplinary Approach. Retrieved 16 August 2014, from http://blog.ub.ac.id/irfan11/files/2013/02/Governance-Theory-A-Cross-Disciplinary-Approach-oleh-Vassuda-C.pdf

Creswell, J. W. & Miller, D. L. (2000). Determining Validity in Qualitative Inquiry. *Theory into Practice.* 39(3). Getting Good Qualitative Data to Improve Educational Practice. Retrieved 14 March 2015, from http://www.jstor.org/stable/1477543

Creswell, J. W. (2003). *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches* (2nd ed.). London, United Kingdom: Sage Publications.

Creswell, J. W. (2014). *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches* (4th ed.). London, United Kingdom: Sage Publications.

Dambacher, P. (2012). Digital Terrestrial Television Broadcasting: Designs, Systems and Operation Retrieved 10 May 2016, from https://books.google.co.za/books?hl=en&lr=&id=O2HvCAAAQBAJ&oi=fnd&pg=PR11&dq=digital+terrestrial+television+definition&ots=rd3FTD8-Qz&sig=L3Gdqzq3dpVc66p2ASmgY5urdEg#v=onepage&q=digital%20terrestrial%20television%20definition&f=false

De Holanda, G. M., Ávila, I. M. A. & Martins, R. B. (2008). Mapping users' perspectives and outlining social impacts from digitalization of terrestrial TV in Brazil. *Telematics and Informatics.* 25, 19-35. Retrieved from Science Direct.

De Lanerolle, I. (2011). Convergence and regulation in South Africa: in search of a new public interest paradigm, info, Vol. 13 Iss: 3 pp. 47-63. Emerald database.

Department of Communications. (2000). Independent Communications Authority of South Africa Act. Pretoria, Government Printer.

Department of Communications. (DoC). (2008). Broadcasting Digital Migration Policy. *Government Gazette*. (No. 31408). Pretoria, Government Printer.

Department of Communications. (2009a). Charter of Community Broadcasting Services. Government Gazette. (No. 32663). Pretoria, Government Printer.

Department of Communications. (2009b). Notice Inviting Comments on Public Service Broadcasting Bill 2009, Charter of Corporation, and Charter of Community Broadcasting Services. *Government Gazette*. (No. 32663). Pretoria, Government Printer.

Department of Communications. (2011). Broadcasting Digital Migration Policy. *Government Gazette. (*No. 34538, South Africa). Pretoria, Government Printer.

Department of Communications. (2012a). Broadcasting Digital Migration Policy. Government Gazette, (No. 31408) South Africa. Pretoria, Government Printer.

Department of Communications. (2012b). Amendment of Broadcasting Digital Migration Policy issued under Government Gazette No. 31408 on 8 September 2008. Government Gazette, No. 35014. Pretoria, Government Printer.

Department of Communications. (2012c). Broadcasting Digital Migration Policy. *Government Gazette.* (No. 35051). Pretoria, Government Printer.

Department of Communications. (2013a). Broadcasting Digital Migration Policy. *Government Gazette.* (No. 37120). Pretoria, Government Printer.

Department of Communications. (2013b). South Africa Broadband Policy. *Government Gazette.* (No. 37911). Pretoria, Government Printer.

Department of Communications. (2014a). Broadcasting Digital Migration Policy. *Government Gazette.* (No. 37261). Pretoria, Government Printer.

Department of Communications. (2014b). National Integrated ICT Policy Green Paper. Government Gazette. (No. 37261). Pretoria, Government Printer.

Department of Communications. (2014c). Media Briefing by Minister Faith Muthambi on Digital Terrestrial Television. Retrieved on 15 January 2015, from http://www.doc.gov.za/content/newsroom/media-releases/media-statements/Minister_Muthambi_Digital_Terrestrial_Television12Nov2014

Duncan, J. (2012). Unpacking South Africa's digital broadcasting transition.
Retrieved 31 January 2013, from http://themediaonline.co.za/2012/03/unpacking-south-africas-digital-broadcasting-transition/

Duncan, J. & Glenn, I. (2010). Turning points in South African television policy and practice since 1990. Retrieved 12 December 2012, from http://scholar.google.com/scholar?q=Glenn+%26+Duncan+2010#

Fransman, M. (2010). *The new ICT ecosystem: Implications for policy and regulation*. New York: Cambridge University Press.

Fuller, T. & Loogma, K. (2009). Constructing futures: A social constructionist perspective on foresight methodology. F*utures*. 41, 71-79. Retrieved from Science Direct.

Gillwald, A. (2001). Experimenting with Institutional Arrangements for Communications Policy and Regulation: The case of telecommunications and broadcasting in South

Africa. Southern African Journal of Information and Communication, Vol. 2. No. 1. Retrieved 8 April 2016, from http://wiredspace.wits.ac.za/bitstream/handle/10539/19836/SAJIC-Issue-2-2001-Gillwald.pdf

Grimes, D. A. & Schulz, K. F. (2002). Descriptive Studies: what they can and cannot do. The Lancet (359) 145 -149. Retrieved 27 July 2014 from, www.thelancet.com

Guest, G., MacQueen, K. M. & Namey, E. (2012). *Applied Thematic Analysis*. Carlifonia, Unites States of America: SAGE Publications.

Gugiu, P. C. & Rodriguez-Campos, L. (2007). Semi-structured interview protocol for constructing logic models. *Evaluation and Programme Planning*, 30, 339 – 350. Retrieved on 5 August 2014 from Science Direct

Gurstein, M. (2003). Effective use: A community informatics strategy beyond the digital divide. First Monday, 8(12), 1-18. Retrieved 9 August 2013,from http://ojphi.org/htbin/cgiwrap/bin/ojs/index.php/fm/article/view/1107/1027

Hadland, A., Aldrigde, M. & Ogada, J. (2006). *Re-visioning Television: Research on the Policy, Strategy and Models for Sustainable Development of Community Television in South Africa*. Cape Town, South Africa: HSRC Press.

Hawkes, R (2013, June 4) South African Community TV forms collective. Rapid TV News. Retrieved 12 June 2013, from http://www.rapidtvnews.com/index.php/2013060428099/south-african-community-tv-forms-collective.html

Hilbert, M. (2011). The end justifies the definition: the manifold outlooks on the digital divided and their practical usefulness for policy-making. Telecommunications Policy, 35(8), 715-736. http://dx.doi.org/10.1016/j.telpol.2011.06.012 Retrieved from Science Direct.

Independent Broadcasting Authority (IBA). (1996). Independent Broadcasting Authority Amendment Act. Government Gazette. (No. 17052). Pretoria, Government Printer.

Independent Communications Authority of South Africa (ICASA). (2002a) Temporary Community Licences: Criteria to Measure Community Support Regulations. *Government Gazette.* (No. 23332). Pretoria, Government Printer.

Independent Communications Authority of South Africa. (2002b). Notice of Regulations Relating to Applications for Special Licenses for Community Broadcasting Services. *Government Gazette.* (No. 2332). Pretoria, Government Printer.

Independent Communications Authority of South Africa. (2003). Inquiry into Local Television Discussion Paper. Retrieve 02 January 2015, from http://www.mdda.org.za/IBA%20Triple%20Inquiry%20Report.pdf

Independent Communications Authority of South Africa. (2004). Community Television Broadcasting Services Position Paper. Retrieved 01 May 2016, from http://media.wix.com/ugd/f97c7f_2b0f70a8ef0d4e1d84aa78470870112a.pdf#page=1&zoom=auto,-87,621

Independent Communications Authority of South Africa. (2005). Regulations Relating to the Application for Special Event Community Sound Broadcasting Licences or Temporary Community Television Broadcasting Licences. Government Gazette. (No. 27973). Pretoria, Government Printer.

Independent Communications Authority of South Africa. (2007). Conversion of Licences in Terms of Chapter 15 of the Electronic Communications Act No. 36 of 2005. Government Gazette. (No. 29687). Pretoria, Government Printer.

Independent Communications Authority of South Africa. (2008) Draft Broadcasting Digital Migration Framework Regulations. *Government Gazette.* (No. 31490).

Independent Communications Authority of South Africa. (2009a). Amendment of the regulations: Standard Terms and Conditions – Class Licence, Government Gazette. *Government Gazette*. (No. 32402). Pretoria, Government Printer.

Independent Communications Authority of South Africa. (2009b). Digital Terrestrial Television Regulations (Draft). *Government Gazette*. (No. 32083). Pretoria, Government Printer.

Independent Communications Authority of South Africa. (2010). Digital Migration Regulations. *Government Gazette*. (No. 32956). Pretoria, Government Printer.

Independent Communications Authority of South Africa. (2011a) Issues Paper: A Review of the Broadcasting Regulatory Framework Towards a Digitally Converged Environment. *Government Gazette.* (No. 34828). Pretoria, Government Printer.

Independent Communications Authority of South Africa. (2011b). Explanatory Memorandum on the Repeal of the Digital Migration Regulations and the Publication of the Draft Digital Terrestrial Television Regulations for Public Comment. *Government Gazette*. (No. 34642). Pretoria, Government Printer.

Independent Communications Authority of South Africa. (2011c). A Review of the Broadcasting Regulatory Framework towards a Digitally Converged Environment. *Government Gazette*. (No. 34828). Pretoria, Government Printer.

Independent Communications Authority of South Africa. (2012a). Explanatory Memorandum on the Decision to Amend the Draft Digital Terrestrial Television

Regulations for Public Comment. *Government Gazette*. (No. 35508). Pretoria, Government Printer.

Independent Communications Authority of South Africa. (2012a). Digital Migration Regulations. *Government Gazette.* (No. 36000).

Independent Communications Authority of South Africa. (2013). Position Paper on Digital Migration Regulations, 2012). *Government Gazette.* (No. 36170). Pretoria, Government Printer.

Iol news (2012, 5 October). Cape Town TV bemoans digital switch. Retrieved May 1 2013, from http://www.iol.co.za/news/south-africa/western-cape/cape-town-tv-bemoans-digital-switch-1.1397518#.UgKbiLwTqMF

International Telecommunication Union. (2014). Guidelines for the transition from analogue to digital broadcasting. Retrieved June 16, 2014, from https://www.itu.int/en/ITU-D/Regional-Presence/AsiaPacific/Documents/AtoDguidelinesV3.pdf

Iosifidis, P. (2007). Digital TV, Digital Switchover and Public Service Broadcasting in Europe. *Javnost – The Public*, 14(1), 5-20.

Jones, S. (1988). *The Analysis of Depth Interviews.* In Walker, R. (ed.) Applied Qualitative Research. Great Britain: Gower Publishing Company.

Kantor, L. (21 July 2009). Leading the Migration to DTT. Retrieved 29 May 2016, from http://www.godigitalsa.co.za/files/Presentations/Leading%20the%20migration%20to%20DTT.%20%20L%20Kantor.%2021%20July%202009.pdf

Lloyd, L., Duncan, J., Minnie, J & Bussiek (2010). Public Broadcasting in Africa-A Survey. South Africa Country Report. Retrieved 25 March 2016, from http://www.mediamonitoringafrica.org/images/uploads/Annexure_D_-_Afrimap_Research.pdf

Lodge, M. (2003). *Accountability and Transparency in Regulation: Critiques, Doctrines and Instruments* in Jordana, J. & Levi-Faur, D. (2004) The Politics of Regulation: Institutions and Regulatory Reforms in the Age of Governance, Edward Elgar, Cheltenham.

Marshall, C. & Rossman, G. B. (1989). *Designing Qualitative Research*. United States of America: Sage Publications.

Matsepe-Casaburri, Budget Vote Speech, 2002. Retrieved 4 August 2011, from http://www.polity.org.za/polity/govdocs/speeches/2002/sp0507.html

Mbeki, T. (2001). *Mahube: The Dawning of the Dawn: Speeches, Lectures and Tributes*. Braamfontein, South Africa: Skotaville.

McConnell, A. (2010). Policy success, policy failure and grey areas in-between. *Journal of Public Policy*, *30*(03), 345-362.

Media Development & Diversity Agency (MDDA). (2007). Retrieved 11 March 2012, from MDDA Community Television Summit Report. http://www.mdda.org.za

Media Development & Diversity Agency (2012/2013) Annual Report. Retrieved 06 November 2014, from http://media.wix.com/ugd/f97c7f_2722af838ae143dba45184c7698814f9.pdf

Media Update. Soweto hits the air, 13 November 2007. Retrieved 2 January 2014, from http://www.mediaupdate.co.za/?IDStory=2132

Merriam, S. B. (2009). *Qualitative Research: A Guide to Design and Implementation* (2nd ed.). United States of America: Jossey-Bass.

Mertens, D. M. (2009). *Research and Evaluation in Education and Psychology*. Sage Publications.

Mertens, D. M. (2015). *Research and Evaluation in Education and Psychology.* Retrieved on 23 March 2015, from http://www.uk.sagepub.com/books/Book238180#tabview=samples

Mochiko, T. (05 September 2013a). Shift to broadcasting 'significantly behind schedule'. Retrieved 30 September 2013, from http://www.bdlive.co.za/business/technology/2013/09/05/shift-to-digital-broadcasting-significantly-behind-schedule

Mochiko, T. (05 September 2013b). Divided over decoding of SA's new digital TV signal. Retrieved 30 September 2013, from http://www.bdlive.co.za/business/technology/2013/09/20/divide-over-decoding-of-sas-new-digital-tv-signal

Mochiko, T. (2014a, 4 June). Two Towers Model a Blueprint for Telecoms Strife. Business Day, p. 4.

Mochiko, T. (2014b, 27 May). Vodacom Buyout 'Important' for Neotel. Business Day, p. 10.

Multichoice. (2013). Cape Town TV chooses DStv, the home of digital entertainment. Retrieved 10 January 2014, from http://media.multichoice.co.za/media/news/cape-town-tv-chooses-DStv,-the-home-of-digital-entertainment/

Multichoice. (2013). DStv provides platform for community television service. Retrieved 26 January 2014, from http://media.multichoice.co.za/media/news/DStv-provides-national-platform-for-community-television-service/

Mungadze, S. (2013). *Community TV 'breaking licence rules'*
Retrieved 31 January 2013, from
http://www.bdlive.co.za/business/media/2013/01/31/community-tv-breaking-licence-rules

National Association of Broadcasters (2014). State of the Broadcasting Industry Report. Retrieved 19 May 2016 from http://www.nab.org.za/uploads/files/NAB_State_of_the_Broadcasting_Industry_Report_2014_-_November_2014_%28Final%29.pdf

National Planning Commission. (2011). National Development Plan: Vision for 2030. Pretoria: National Planning Commission.

National Treasury. (2013). Vote 27: Communications. Retrieved 10 June 2014, from http://www.treasury.gov.za/documents/national%20budget/2013/ene/FullENE.pdf

Neuman, W. L. (2011). *Social Research Methods: Qualitative and Quantitative Approaches* (7th ed.). Boston, USA Allyn & Bacon.

Ndabeni-Abrahams, S. T. (2013). Budget vote of the Department of Communications. Retrieved 14 September 2013, from http://www.info.gov.za/speech/DynamicAction?pageid=461&sid=36606&tid=107524

Nyamukachi, S. (2013). *DoC holds community TV workshop*
Retrieved 31 January 2013, from
http://www.screenafrica.com/page/news/television/1510314-DoC-holds-community-TV-workshop#.Us0f7ft5ocs

Nyanda, S. 2009. Budget Vote Speech. Retrieved 4 August 2012, from
http://www.pmg.org.za/briefing/20080604-minister-communications-budget-speech

Papandrea, F. (2009). Fiddling with the Digital TV Tuner: Recent Adjustments to a Poor Policy. *Agenda*, 16 (3). Retrieved 24 February 2010, from *epress.anu.edu.au/agenda/016/03/pdf/whole.pdf*

Patton, M. Q. (1987). *How to Use Qualitative Methods in Evaluation.* Sage Publications. Unites States of America: Carlifonia.

Petty, N. J., Thomson, O. P. & Stew, G. (2012). Ready for a paradigm shift? Part 2: Introducing qualitative research methodologies and methods. *Manual Therapy*, (17) 378 – 384.

The Presidency. (2014). Transfer of administration and powers and functions entrusted by legislation to certain cabinet members. Government Gazette, No. 37839, 15 July 2014. South Africa.

Rennie, E. M. (2001). Community television and the transition to digital broadcasting. *Australian Journal of Communication*, *28*, 1, 57-68.

Rennie, E. M. (2003). Trespassers are welcome: access and community television policy. *Javnost (The Public)*, *10*(1), 49-61.

Republic of South Africa (1999). Broadcasting Act No. 4 of 1999.

Republic of South Africa. (1996). Constitution of the Republic of South Africa. Retrieved on 13 November 2013, from http://www.justice.gov.za/legislation/constitution/SAConstitution-web-eng.pdf

Ritchie, J. & Spencer, L. (2002). *Qualitative Data Analysis for Applied Policy Research*. In Huberman, A. M. & Miles, M. B. (eds.) The Qualitative Researcher's Companion. Carlifonia, USA Sage Publishers.

Sandelowski, M. (2000). Focus on Research Methods: Whatever Happened to Qualitative Description? *Research in Nursing & Health,* 23, 334 – 340. Wiley Online Library. Retrieved 12 June 2014, from http://onlinelibrary.wiley.com/doi/10.1002/1098-240X%28200008%2923:4%3C334::AID-NUR9%3E3.0.CO;2-G/abstract

Scott, C. (2004). *Regulation in the Age of Governance: The Rise of the Post –Regulatory State* in Jordana, J. & Levi-Faur, D. (2004) The Politics of Regulation: Institutions and Regulatory Reforms for the Age of Governance. Cheltenham: Edward Elgar.

Screen Africa. (2012). Subsidised DTT STBs to include return path.
Retrieved 12 July 2012, from
http://www.screenafrica.com/page/news/television/1292245-Subsidised-DTT-STBs-to-include-return-path#.Us1g7_t5ocs

Sentech. (2011). Annual Report 2010/2011. Gauteng, South Africa: Sentech.

Simpson, S. (2004). Universal service issues in converging communications environments: the case of the UK. *Telecommunications Policy*, 28. Retrieved 27 January 2010 from ScienceDirect.

Save our SABC: Support Public Broadcasting Coalition (SOS). (2012). SOS Statement on DTT developments. Retrieved 12 July 2012, from http://www.screenafrica.com/page/news/television/1323767-SOS-statement-on-DTT-developments#.Us1eKvt5ocs

Sourbati, M. (2011). The digital switchover as an information society initiative: The role of public policy in promoting access to digital ICTs. *Telematics and Informatics*, *28*(4), 295-302. Retrieved on June 20 2013, from ScienceDirect.

South Africa: Community TV – Adspend to the Rescue. (2012). Retrieved 31 January 2013 from http://www.bizcommunity.com/Article/196/66/75101.html

Statistics South Africa. (2011). General Household Survey, 2011 (P0318). Pretoria.

Teer-Tomaselli, R. (1994). Militancy and Pragmatism: The Genesis of the ANC's Media Policy. African Media Review. 8(2) 73 – 87. Retrieved 21 March 2014, from http://pdfproc.lib.msu.edu/?file=/DMC/African%20Journals/pdfs/africa%20media%20review/vol8no2/jamr008002009.pdf

Thomas, H & Mavhungu, J (2012, October 12) Can community television go the distance? The Times. Retrieved 4 November, 2012 from http://themediaonline.co.za/2012/10/can-community-television-go-the-distance/

Trochim, W. M. K. & Donnelly, J. P., (2008). *The Research Methods Knowledge Base* (3rd ed.). United States of America: Atomic Dog.

Van Cuilenburg, J. & McQuail, D., (2003). Media Policy Shifts: Towards a New Communications Policy Paradigm. *European Journal of Communication, 18(2) 181-207.* Retrieved 27 January 2010, from http://ejc.sagepub.com/cgi/content/abstract/18/2/181

Vomo, M. (2011). Community television finally takes to air in Capital City. Retrieved 31 January 2013, from http://www.iol.co.za/tonight/tv-radio/community-television-finally-takes-to-air-in-capital-city-1.1078931#.Us0vvPt5ocs

Xavier, P (1997). Universal service and public access in the networked society' Telecommunications Policy, Vol 21, Nos 9/10, pp . 892-843. ScienceDirect.