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**Convergence of Information, Communication and Technology:
A case study of Sentech**

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Declaration

I declare that this research dissertation represents original work by the author and has not been submitted for examination at any other university. I have fully acknowledged all the materials that have been extracted from other sources.

Signed by: 

Marathane Reggy Metso

Date: 23.12.05

Place: DURBAN

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Dedication

This dissertation is dedicated to my son King William, who was born in the mist of writing it. When the end of the tunnel seemed gloomy and futile, his presence in my soul was like a morning breeze reviving my gratifications.

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ACRONYMS

ASDL – asymmetric digital subscriber line

DAB - digital audio radio

DSTV – digital satellite television

ICASA – Independent Communications Authority of South Africa

ICT- Internet, Communication and Technology

ISDN – integrated services digital network

ISP – internet service providers

IRD – Integrated Reception Decoders

M-Net – Electronic Media Network

SNO – Second National Operator

TBVC – Transkei, Bophuthatswana, Venda and Ciskei

UMTS-TDD – Universal Mobile Telecommunication Systems-Time Division Duplexing

ABSTRACT

The global media landscape has undergone fundamental changes. South Africa is one of the countries that has been part of the global media revolution, and it is therefore not surprising that the broadcasting and the telecommunications industry in South Africa finds itself in the midst of critical and rapid changes. From a technological and legislative viewpoint, the industry is grappling with the meaning and implications of the convergence of broadcasting (Sentech *Annual Report*, 2002). Sentech Limited is used as a case study for this dissertation. The present study examines the nature of Sentech's transformation as a service arm within the South African Broadcasting Corporation (SABC) to a fully-fledged, profit driven, state-owned enterprise. The advent of technological convergence and the introduction of new digital technologies afford Sentech exciting new opportunities to expand in the communications arena.

The first chapter entails the methods of data collection used, as well as the analysis of data collected from the interviews and surveys. It is worth reviewing the challenges that Sentech faces as it operates independently of SABC, as well as how its transition into a digital oriented enterprise has developed and necessitated the possible access to information.

Chapter two discusses and outlines Sentech's history and its structure. The two issues raised guide the reader towards a better understanding of the 'old Sentech', and its transformation to a 'renewed entity'. The history surveys Sentech's establishment from the initial stages when it was a mere division of SABC, focused on technological aspects of analogue terrestrial signal distribution. The new technological revolution introduced and transformed Sentech into a digital transmitter. The 'new Sentech' is outfitted with new technological platforms for distribution and transmission. For instance, IPWireless mobile broadband and other new technological structures contributed to reshaping Sentech into a digitally oriented transmitter. The design of the company tracks different developments in which Sentech has engaged over the past ten years, and are dealt with the following sections.

The third chapter deals with Sentech's transformation as an outcome of the liberalization wherein the effects of this process need to be looked at including the role of the government, market structure, issues of competition with Orbicom and Telkom, the new competitive strategies and ICASA's role as a regulator.

The fourth chapter covers the concepts and theories that may help inform the discussion in the dissertation. Three theories will be used in the discussion to help to analyze and evaluate the data collected. The theories are very important as they motivate this study. They are concerned with the concept of political economy. Political economy signifies "the production, distribution, and consumption of the more general interest in the process of control and survival in social life" (Mosco, 1996: 17). These will exemplify the opportunities that Sentech faced as an independent commercial enterprise. Furthermore, the section explains technological components. Sentech is a signal distributor, which underwent transformation. Concepts such as 'convergence' produce a vivid explanation of how Sentech was allowed to undertake an aggressive business transformation, from being traditional signal distribution to international telephony and multimedia service.¹

Chapter five entails the performance of Sentech. This part discusses the revenue, public interest on matters relating to access and some of the key challenges. There is also a discussion on globalization, digitization and convergence which Sentech has engaged in. The last chapter will be concerned with a conclusion and will recommend a way forward.

¹ www.cto.ict.org (Commonwealth Telecommunications Organisation)

INTRODUCTION

Sentech is a South African signal distributor that was part of the SABC but separated from the SABC in 1992. The aims of the thesis are to critically examine how Sentech survive to carry on with signal distribution activities, as an independent company. The study critically investigates how politically, technologically and economically this separation affected Sentech. It also investigates the mechanism through which Sentech has positioned itself to move from broadcast signal distribution alone, to a mix of signal distribution and telecommunication and the Internet access provision.

Sentech began operations in 1992 under the auspices of the SABC, as a signal distributor for all transmissions related to the Corporation. At that stage, Sentech was a department within the SABC, wholly owned by the Corporation, but acting as a separate cost-centre within it. The SABC is a state owned enterprise, financed largely by commercial sales of airtime for advertisements. Sentech provided the technological backbone of broadcasting in South Africa. As a licensed broadcasting signal distributor under the “common carrier”² category, Sentech was, and remains, the largest signal distributor in Africa.

In 1993 the focus within the broadcasting sector was on diversity of voice, and incorporating the previously disadvantaged sector of the South African population into both employment within broadcasting, as well as spreading the advantages of broadcasting across a broader front. Technology issues seemed secondary. Then, it was realized that satellite and transmitter installation costs were so high that they could effectively exclude smaller players from the broadcasting (*Sentalk*, March 2004: 5). To ensure diversity, economies of scale had to be guaranteed. This could be achieved by creating a single signal distributor to absorb these costs and charge affordable prices to new entrants in the broadcasting arena (*Sentalk*, March 2004: 5). For this reason, the SABC unbundled its signal provider in 1995, and Sentech was established as a separate

² Common carrier means that the company carries signal for a variety of businesses, including direct competitors to their core business.

and autonomous public enterprise. All its shares were transferred from the SABC to the state, represented by the Minister of Posts, Telecommunications and Broadcasting (now the Ministry of Communication). It became a public company in 1996 with the State as the sole shareholder, at present. Sentech has its own Board of Directors, Chief Executive Officer (CEO) and management structure, and is registered as a wholly owned state enterprise reporting to the Department of Communications (DOC).

In 1999 a parallel process took place where M-Net also unbundled its signal provider, Orbicom. Orbicom is a wholly owned subsidiary of MultiChoice, the dominant satellite player, through providing uplink services for Direct Satellite Television (DSTV). DSTV in turn was bought by Johnnic (South Africa's leading telecommunications, media, entertainment and black empowerment group). Orbicom remains an important competitor to Sentech in the area of satellite distribution of broadcasting signals, and this thesis will return to a discussion of this later.

In the early years of the 'new Sentech', the focus was on providing signal capacity to the broadcasting industry as new entrants emerged. These included new radio stations in the commercial and community sector, and later e-tv, the free-to-air terrestrial television broadcaster. Initially Sentech was operating off an entirely analogue platform. Although existing analogue technology had to be upgraded and expanded, it was never a 'patch-and-mend' strategy (*Sentalk*, March 2004: 5). Internally, massive transformation took place to create a company that accurately reflected the nation it served. This meant extending the pool of hi-tech skills within Sentech so that they met the clients' needs (*Sentalk*, March 2004: 5). At this point, a technological revolution was creating imperatives of its own as the worldwide web joined the media mix. A key decision, therefore, was made to move Sentech towards an Internet protocol based technology, and the company entered the communication arena with bi-directional, dual transmission (analogue and digital) capabilities (*Sentalk*, March 2004: 5).

Since its formation, Sentech has operated as a terrestrial analogue platform, which has been extended to a digital satellite platform and optic fibre technology, thus offering the distribution of other multimedia content. It has now diversified to include a primary responsibility for broadcasting signals to over fifty broadcasters (Sentech *Annual Report*, 2003). Sentech provides a full range of services to establish a single-point broadcasting signal distribution.

The acquisition of InfoSat (a satellite based Internet service provider) was a stepping-stone in Sentech's process of being a full multimedia industry in 2000. Sentech's InfoSat is involved in the development of a number of niche products and e-commerce services and also offers consulting services in the Internet Protocol (IP) arena (Sentech *Annual Report*, 2002).

Methodology and an approach of the study

The study has utilized a number of methods through which to collect data. The study concentrates on a quantitative approach. This can achieve a thick description of the multiple factors determining the transformation of Sentech as a signal carrier, from being a part of the SABC to becoming a commercially oriented enterprise. Two primary sources of information have been used in the present study. The first was documentation and data analysis, both printed and Internet based; including the company reports, feasibility studies, reports to the parliament and the regulator (ICASA), newspaper and economic journals. The second was interviews (including policy makers, analysts, employees of Sentech and their client companies). All the interviews were taped and transcribed.

Political economy has been used as an approach to enable us to understand the transition and transformation of Sentech. Political economy has "traditionally given priority to understand *social change and historical transformation*" (Mosco, 1996:27). This paradigm, according to Mosco, has three levels, namely, spatialization,

structuration and commodification. These levels will be subjected to Sentech's business strategy.

Chapter 1

METHODOLOGY

This chapter will concentrate on the methods used to collect data and the analysis of the data collected, in terms of the application of theories in the following sections.

A qualitative approach can achieve a thick description of the multiple factors determining the transformation of Sentech as a signal carrier, from being a part of SABC to a commercially oriented enterprise. The approach also helps to understand and explain the impact of liberalization. Susanna Priest (1996) is of a view that qualitative methods are designed to explore and assess things that cannot be easily summarized numerically. “Qualitative methods rely on the interpretation and [the] analysis of what people do and say without making a heavy use of measurement or numerical analysis as quantitative methods do” (Priest 1996:5). Anderson and Meyer (1988:247) note that “qualitative research methods are distinguished from quantitative methods in that they do not rest their evidence on the logic of mathematics”. Actual talk, gesture, and other social actions are the raw materials of analysis. A useful perspective on qualitative method is offered by Lofland (1971:13) who views qualitative inquiry in terms of the following questions:

What are the forms of this phenomenon? What variations do we find in this phenomenon? That is, qualitative analysis is addressed to the task of delineating forms, kinds and types of social phenomenon, of documenting in living detail the things that exist.

Qualitative study does not always take holistic account of a fully interacting group with an enduring history (Press, 1989). In the present study, the primary aim is to decode the in-depth descriptions and understanding of actions and events and how the transformation in technology, economy and politics impacted on Sentech.

Two primary sources of information have been used in the present study. The first was documentation and data analysis, both printed and Internet based; including the

company reports, feasibility studies, reports to parliament and the regulator (ICASA), newspaper and economic journals. The second was interviews (including policy makers, analysts, employees of Sentech and their client companies). The aim was to examine the establishment, transition and transformation of Sentech from the foundation of the company. A further intention of the interviews was to find the advantages and requirements for Sentech of operating independently of the SABC. All the interviews were taped and transcribed.

An interview is one of the most frequently used methods of data gathering within the qualitative approach. This research will opt for the in-depth interview “which is an open-ended conversational exploration of an individual’s word view or some aspect of it” (Priest, 1996:26). It does not have a rigidly set structure. Nevertheless, the interviews were not entirely random, since they were guided by similar questions to those that appear in Appendix One.

In-depth interviews are highly important as it gives access to information that is not in print form, though the expectation is that the interview may qualify, contextualize or expand on printed information available elsewhere. Thomas Lindloff (1995:165) claims that interviews would be of dubious value if the material they produced did not refer to something outside the dialogue. Further, interviews allow for the interrogation of information not in print format. This approach supplies much information because of the interaction between the interviewer and the interviewee. Although the interviewer may begin with a particular set of questions/concerns to be addressed, he or she is entirely free to ask follow-up questions in response to the informant’s answers and interests, to rephrase a question to get a more complete answer or to ask for clarification of interesting points (Priest, 1996:26), something that cannot be achieved if the researcher were to rely on printed information only.

Not all interviewees answered all the questions – for instance, Neëls Smuts, the founding-Director of Sentech in 1992, answered only ten out of the sixteen questions posed. Smuts believed that the current managing administration was in a better position to answer the remaining questions, since he was no longer working at Sentech at the time of the interview.

In-depth interviews with an open-ended conversational exploration were conducted with: The Head: Competitive Business Intelligence and Marketing Sales, Jeremiah Sikhosana; the Portfolio Manager: Signal Distribution, Rian Emerich; the Portfolio Manager: Product Development Marketing and Sales, Marcel Steyn. These three interviews were conducted in the Sentech's offices in Johannesburg, Augusta House, Fourways Golf Park, on the 12 January 2005. A fourth interview was conducted with the Regional Manager, Teddy Mtshali. The latter interview was conducted at the University of KwaZulu Natal offices on the 16 December 2004. Each of the interviewees was interviewed individually.

Finally, all the collected material was to be subjected to a critical analysis.

There are possible weaknesses in this study of which owing to the nature of the techniques used that the researcher is aware. Having consulted the proper division, which deals with specific portfolios at Sentech, the focused division withheld from the researcher other information about the company. Much information was said to be highly confidential to the company. The other weakness lies in the fact that the “qualitative methods rely on the interpretation and analysis of what people do and say without making a heavy use of measurement or numerical analysis as quantitative methods do” (Priest 1996: 5). As such, the information obtained may be analyzed and interpreted according to what respondents said.

Chapter 2

TRANSFORMATION OF SENTECH

The South African signal distributor, Sentech, transformed in order to comply with the mandate driven by the state. There was a need for Sentech to 'go digital', while it still operated as a terrestrial signal distributor. Digital access to information is far more efficient than that provided by analogue transmissions. However, it requires a far more sophisticated infrastructure. In May 2002, Sentech was given two telecommunications licences (wireless broadband licence and 'carrier of carriers' licence), a technological opportunity that allowed Sentech to improve the means by which people would be able to receive information. The Telecommunications Amendment Act (No 103 of 1996) was the enabling Act that made provision for Sentech to carry international telephony traffic as a 'carrier of carriers' (Government Gazette 08.05.2002).³ Sentech's "carrier of carriers" licence constitutes a basis for its new international business (Sentech *Annual Report*, 2002). "Carrier of carriers" means

a telecommunication service (including any signal conveyed by means of a telecommunication system of that service) which originates on the telecommunication service licensee or mobile cellular telecommunication licensee or an under-serviced area licence in the Republic and terminates in a telecommunication system in another country or vice-versa or originates and terminates in a telecommunication system of an operator licensed in another country to provide international services, but is conveyed via a telecommunication system in the Republic on a wholesale basis, which specifically excludes the termination of international telecommunication services to end-users directly in the Republic. (*Government Gazette*, 06.05.2002 A: 3)

It was also awarded a Multimedia Services Licence to provide multimedia services directly to the end-user (*Government Gazette*, 06.05.2002B). A "Multimedia Service Network" refers to a "telecommunication service that integrates and synchronises various

³ The licence was issued in terms of Section 32c (1) (A) and Section 32c (6) of the Telecommunication Act 103 of 1996 as amended.

media to communicate information or content in an interactive format” (*Government Gazette*, 06.05.2002B:4).⁴ The licences made possible a raft of opportunities in the installation and commissioning of broadcasting infrastructure and technical training. This changed Sentech’s structure to fit into a technologically and digitally oriented enterprise.

The multimedia services licence allowed the company to deliver e-commerce, Internet, broadband and value-added telecommunications services direct to consumers and businesses for the first time (Sentech *Annual Report*, 2002). Tracing how these licences have been put to use is part of the purpose of this thesis. Dr. Mokone-Matabane, CEO of Sentech, noted that “as we enter this new era of diversification and development of new technologies, the challenge we face is how best to equip and manage this most important asset” (Sentech *Annual Report*, 2002).

Through its current operations, that is, infrastructure and expertise, Sentech has set itself the goal of being balanced to play a significant role in linking the African continent into the global information and communication and technology (ICT) revolution, as well as connecting under-resourced African ICT operators and providing affordable services to the continent (Sentech *Annual Report*, 2002). Edward Herman and Robert McChesney (1997:108) remind us that “the development of radically new digital technologies are shaking the foundations of the industries, however, there are also much wider openings for start-up firms to enter the market”. As such, Sentech needed to position itself as a profitable and a long-term sustainable business in broadcasting signal distribution, international telephony and digital multimedia communications (Sentech *Annual Report*, 2002). At this juncture, convergence and the shift to digital communication demonstrated by Sentech are breaking down the barriers between traditional media industries and also between the broader media and communication sectors (Herman and McChesney, 1997: 107).

⁴ Such services would include Internet through television; pay-per-view; video on demand; electronic transactions (including e-commerce); text; graphics; data; animation; audio; and visual content.

The advent of technological convergence and the introduction of new digital technologies afford Sentech exciting new opportunities to expand in the telecommunications arena (Sentech *Annual Report*, 2004). The broadband is one of the initiatives that exemplifies Sentech's attempt to enter the age of media convergence. It may be understood as a technology that allows a rapid transmission of large quantities of information. Broadband is the common term for a high bandwidth⁴ Internet or telecommunications connection, one that can transmit or download information "up to 40 times as fast as a standard telephone and modem" (Mobbs, 2002). It is an advanced system, somewhere between broadcasting and telecommunications (Mobbs, 2002).

Sentech has accommodated the convergence of information and communication technology (ICT) to grow its business and meet national priorities. It has taken an advantage of opportunities in the liberalized telecommunications environment in South Africa (Sentech *Annual Report*, 1999). The company has repositioned itself as a multimedia operator offering a variety of services while having a strong focus on meeting national priorities. Dr. Mokone-Matabane stated that the transformation of Sentech into an entrepreneurial and profitable entity does not obscure the need to further national objectives, as set out by the government (Sentech *Annual Report*, 2002). Thus the company aims to contribute to the growth of the national economy through building infrastructure, expanding Sentech's skills and attracting direct foreign investment (Sentech *Annual Report*, 2002).

The Sentech *Annual Report* (2002) indicates that the development of digital technology in broadcasting and telecommunications has paved the way for the convergence of previously separated industries, as well as the development of many new applications in the communications and media fields (Sentech *Annual Report*, 2002). Various global trends have emerged which impact on Sentech, for instance, the need for broadcasting

⁴ A number of bits per second that can be sent through a given medium, such as fibre optic cable or the air.

network operators to provide distribution infrastructure and operating platforms according to international transmission standards (Sentech *Annual Report*, 2002).

To summarise, then, there are at least three ways in which Sentech ‘transformed’ itself over the period under discussion:

- Separation from the SABC to form a fully fledged independent company
- Movement from the analogue to the digital platform
- Diversification from being only a broadcast signal provider to a provider of multimedia broadcast and telecommunications services to large corporations, small-to-medium enterprises and home customers.

The objectives of the study are to examine: (i) how and why Sentech negotiated its separation from the SABC to become an independent company, (ii) the advantages or disadvantages and requirements of operating independently of SABC, as well as Sentech’s technological, economic prospects, and (iii) the mechanisms through which Sentech has positioned itself to move from broadcast signal distribution alone, to a mix of signal distribution and telecommunication and Internet access provision.

There was a complexity of the process of transformation. This will be expanded in the coming chapters under the performance of Sentech. Sentech was part of the SABC and was just a division of technology at that time. It faced many challenges since it moved into a technological world to compete with other strong companies which were already in the same field for some years. Sentech possessed the old infrastructure which was almost dilapidated and needed to be restored. Meanwhile, Telkom, Orbicom and the others, were seriously focusing on their projects especially owing to the threat brought by a newly established company, Sentech. Initially, Sentech and the SABC used an analogue satellite platform, while Orbicom ‘went digital’ from the outset.

The challenges that Sentech was faced with, were alleviated. Sentech renewed and improved the old infrastructure, and may continue with the same process. The government gave Sentech some revenue to cater for the loopholes they had with regards to these new technological devices. Furthermore, Sentech has attracted and retained many clients who pay well for the services they get from Sentech. Sentech does have a steady income revenue, but as the discussion on the balance sheet in the forthcoming chapters elaborates, Sentech has a poor financial record. For example, in the 2004 financial year, Sentech reported on operating loss of R 19 million (down from a R15, 5 million profit in 2003 (www.fm.co.za: October 2004)). In the remaining chapters, the thesis will consider some of the challenges faced by Sentech that have resulted in this shortfall.

Chapter 3

SENTECH'S TRANSFORMATION AS AN OUTCOME OF THE LIBERALIZATION

It is important to understand the specific meaning of the word 'transformation'. This may enable us to distinguish between the uses of the words 'transformation' and 'restructuration'. 'Restructuring' simply means to reorganize the structure of the company. At a surface level, transformation means a change, or a conversion from one form to another. Teer-Tomaselli mentions that transformation "refers to the change in ethos and structure within organization, its values, ways of doing business, issues in governance and priorities it sets in delivering on content and accessibility" (Teer-Tomaselli, 2004: 15). Sentech sees itself in the new technological sphere, doing different tasks, with different intended outcomes. When Sentech was established as an independent company, many new developments, including goals, had to be developed in accordance with the company's expectations.

In discussing the transformation of Sentech, I have discussed ICASA (Independent Communications Authority of South) and its mandate, from which Sentech have to align its services. I have also organised the material under the three main areas of service provided by the company: Signal distribution, Broadband multimedia and International telephony.

ICASA Act of 2000

The Independent Communications Authority of South Africa (ICASA) is the regulator of telecommunications and the broadcasting sectors. It was established in July 2000 in terms of the Independent Communications Authority of South Africa Act No.13 of 2000. It took over the functions of two previous regulators, the South African Telecommunications Regulatory Authority (SATRA) and the Independent Broadcasting Authority (IBA). The two bodies were merged into ICASA to facilitate effective and

seamless regulation of telecommunications and broadcasting and to accommodate the convergence of technologies (<http://www.doc.gov.za/ICASA.htm>, 2000). The ICASA Act effectively dissolved the IBA and SATRA but the substantive parts of the IBA Act and the Telecommunications Act still remain in force. In other words, all matters that were governed by the IBA Act continue under ICASA's broadcasting division, while Telecommunications Act matters will fall under ICASA's telecommunications division. ICASA therefore has jurisdiction or regulatory power over both broadcasting and telecommunications matters (<http://www.naledi.org.za/docs/ict2.pdf>, 2000). Therefore, it befits ICASA to be included and discussed in this thesis because it is the regulator that granted Sentech a multimedia services licence, effective from 7 May 2002.

The Department of Communications, which Sentech is under, has a vision, a mission and key performance areas. The vision of the department is to be a leader in harnessing information and communications technologies for socioeconomic development while its mission is to enhance the well being of peoples of South Africa, the African Continent and the world through the creation of a sustainable and enabling information communications technology (ICT) environment. As part of its mission, it endeavours to, through leveraging its world-class knowledge, skills and experience, deliver on its social contracts to the people in a professional manner reflective of its national value system and informed by Batho Pele ethos (www.pmg.org.za, 2003). Some of its vision and mission are tabulated by the following key performance areas:

- A policy framework to facilitate universal access.
- Develop an ICT framework.
- Develop and ICT competition framework.
- Develop mechanisms to support local content.
- To ensure and maintain effective and appropriate steps to prevent unauthorised, irregular, fruitless and wasteful expenditures and losses.
- Provide affordable and high-quality access of regional broadcasting.
- Analyse convergent technologies. (www.pmg.org.za/docs, 2003).

Signal Distribution

Sentech provides digital satellite and digital/analogue terrestrial broadcast transmissions to SABC, e-tv, M-Net (but not DSTV), commercial and community radios. It has now diversified to include a primary responsibility for broadcasting signals to over 50 broadcasters (Sentech *Annual Report*, 2003). Sentech provides a full range of services to establish a single—point broadcasting signal distribution, meaning that it is able to broadcast from the point of production – the radio or television studio – and deliver the signal to the consumer’s home or place of work.

In the traditional analogue broadcast environment, broadcasters like SABC, e-tv, M-Net and radio stations used – and continue to use - Sentech’s analogue terrestrial network of transmitter towers scattered around the country. The broadcasters direct these analogue signals to transmitter towers that in turn broadcast it to homes where it is received on a standard wire or metal aerial (www.sentech.co.za: 2003). In 1995, Sentech announced the launch of its satellite analogue platform *AstraSat*, the country’s first alternative to MultiChoice. With terrestrial transmitters almost at capacity, the company believed that the future of television lies with satellite. Sentech owns and operates satellite transmission system making use of Intelsat and PanAmSat capacity to provide linking for terrestrial transmitter networks and direct satellite broadcasting services (www.sentech.co.za: 2004). Satellite transmissions for direct-to-user reception was provided in analogue PAL format for public broadcasting services to achieve lower reception cost in thinly populated areas. This allowed Sentech to ‘fill-in’ areas where traditional terrestrial broadcast signals are not available. Consumers were required to supply a satellite dish at their own expense, but no subscription fee was required (www.sentech.co.za: 2004). This analogue service was named ‘AstraSat’.

The company also established a digital satellite-broadcasting platform in 1997, called ‘Vivid’. On the 23rd September 1998, an agreement was reached with the SABC to terminate analogue satellite transmissions (Sentech *Annual Report*, 2002). Digital satellite transmissions were provided for all SABC national services through a project

executed for the migration of analogue satellite to digital by offering a subsidized satellite receiver exchange programme (www.cto.ict.org: 2000). This meant that consumers who were reliant on the satellite service (that is, those who fell outside the terrestrial broadcast footprint), could exchange their old analogue Astrasat dish for a new digital Vivid dish. Sentech's new digital decoder, "Vivid", was developed locally, and used to replace the analogue receivers still in use in many rural areas (www.iol.co.za: 2005). This platform delivers encrypted free-to-air radio and television programmes to areas of the country that are geographically not serviced by terrestrial transmitting networks (Sentech *Annual Report*, 2002).

The provision of services to far-flung regions was part of the reason why Sentech separated from the SABC. The mandate from ICASA included the provision that Sentech have a broader coverage and enable people access information easily. Spatialization as a level of political economy discusses the issue of 'shrinking the space and time'. A newly instituted digital decoder could cater for this problem of making the world 'a global village'. Nonetheless, the outcome will be assessed in the coming chapters.

The transformation of Sentech was initiated from the top, that is, by the government. Any intervention of this type by the government falls under the rubric of liberalization. Liberalization, in this particular case, indicates the desire on the part of the state to privatize, or partly privatize, previous state-owned enterprises. While Sentech remains wholly-owned by the state, the logic of liberalization demands that Sentech should be a profit-oriented business. The result at this juncture, prompted the introduction of digital communications. Liberalization is an important catalyst in building and developing the economy of the country (creative commons© 2003bridges, org).

Channelling signals from the broadcasters to transmitter stations using landlines and microwave links have proved an expensive exercise (www.sentech.co.za: 2004). Sentech was of the view that traditional analogue broadcasting had a limited life span because of

its inefficient use of spectrum, a scarce public resource (<http://www.itweb.co.za>: 2005). In order to overcome these difficulties, Sentech introduced digital broadband for terrestrial transmitters.⁵ Digitization makes it possible to reduce images, sounds and text to a common format and to transport these via a common distribution infrastructure.⁶ The transition into the 'information age' introduces the overlap between broadcasting and conventional media forms. Sentech's vision of promoting 'digital revolution' fits in with the change and transition of technologies around the world. As stated, one of the visions for the group is to become a multimedia and telecom service provider by leading in digital terrestrial broadcasting, with enabled interactive services (*Sentech Annual Report*, 2002).

The advantages of digital technology are also experienced in new analogue transmission equipment which interfaces with digital signal processing and process control to produce medium-wave or television analogue signals (*Sentech Annual Report*, 1999). The service is also available in a digital format to service digital receivers and provide communications channels used by business and public enterprises for corporate communications and others. At the present time, terrestrial broadcast signal distribution is carried out through a mix of analogue and digital means.

Sentech has invested a great deal of resources in the transition towards digitalization within broadcasting technology, believing that not only was that the process inevitable but that it also afforded better quality reception, and would enable Sentech to provide interactive services (*Sentech Annual Report*, 2002). Examples of the move towards digitalization include digital audio radio (DAB) and digital terrestrial television (DTT). Furthermore, Sentech utilizes the latest satellite-based communication tools to provide

⁵ Terrestrial telecommunications take place on planet earth only. This differs from space telecommunications because the signals of terrestrial telecommunications do not exist the earth's atmosphere.

⁶ LINK Centre Policy Research Paper No 4: National Convergence Policy in a Globalised World Preparing South Africa for Next Generation Networks, Services and Regulation

turnkey solutions (planning, implementation and operation) based on customer requirements (www.cto.ict.org: 2000).

Sentech has also invested heavily in wireless transmission (MyWireless) as well as broadband facilities for Internet protocols. These will be discussed later in the thesis. Sentech has subsequently built on this success by initiating a raft of products that provide for digital communications, for example, IP Multicast and IP, also known as Gateway (Sentech *Annual Report*, 1999). The technological platform was based on Second Generation (2G), and subsequently replaced by Third Generation (3G) in line with global standards. The introduction of digitalization has solidified the company's foundations and has accelerated plans to introduce an affordable multimedia platform.

The reason for Sentech 'going digital' was that a digital platform supported the quick deployment of infrastructure, the solution required for bridging the digital divide in South Africa. Customer requirements would be gauged by the number of its clients subscribing for these new networks. People stampeded to get the services offered by Sentech. These developments will be dealt with in greater detail later in this thesis. This part focuses on the market structure. The idea is to make the world a 'global village', hence, to illustrate in practice the ideas that were captured through the concept of spatialization. That is why there is a digital platform which supported the quicker deployment of infrastructure. All these investments were assembled and used in the name of 'bridging the digital divide in South Africa'.

The issue of black empowerment is also addressed of by Sentech. Sentech continues to support black economic empowerment (BEE) through various initiatives aimed at procuring goods from previously disadvantaged suppliers and increasing the pool of world-class black ICT professionals through staff development, training and education (Sentech *Annual Report*, 1999). Part of the reason for the rapid implementation of BEE was due to the lack of technicians. This goes back to those times when black students

were deprived of schooling, especially exposure to technical schools. Recently, there have been a limited number of technicians graduating from technical institutions. Needless to say, the specific nature of technical training and the long lead time to produce the technicians after years of neglect, have resulted in the loss of dynamism in Sentech.

Economically, the convergence of broadcasting with other areas of data delivery has offered Sentech the opportunity to explore alternative revenue streams, thus ensuring that the company remains a sustainable and profitable business. Guy Berger (2001) asserts that the presence of convergence in the technological field costs a great deal; enterprises may have to hire extra people to shepherd information from one media platform to other media platforms. Thus, to maintain the consistency of information accessibility and the standard of services offered, a significant amount of money needs to be invested,

The aim of convergence then needs to be primarily to generate revenues. It's first and foremost a business investment principle, not a savings one, though in time some savings may emerge (Berger, 2001:37).

Sentech vis-à-vis Orbicom

My research focuses on the issues of Sentech's transformation since its separation from SABC. It investigates whether the company has been able to transform itself into something resembling the normative ideals of a signal distributor fulfilling a public service mandate (Teer-Tomaselli, 2004). In tracing the alteration of Sentech, Teer-Tomaselli (2004) declares that it is necessary to consider transformation from a multi-perspective point of view. That is, to compare it to the other signal distributing companies, since all of them seek technological developments. My research, therefore, took me beyond the confines of signal distribution into the realms of government involvement and to have it licensed as a multimedia company. This illustrates the process of liberalization, which is seen as the intervention of the state in the expansion of the number of participants in the market, typically by creating or easing the creation of competition (Fourie 2001: 116).

There are two digitally oriented signal distributors in South Africa, Sentech and Orbicom. Orbicom is a licensed signal distribution operator, which is owned by MultiChoice International Holdings Ltd (MIH). The company offers broadcast signal distribution services to MultiChoice for its popular DSTV services, in addition to serving other important clients in the field such as Global Access, M-web and SABC.⁷ Orbicom provides the satellite distribution of *SABC Africa* on the DSTV bouquet to other countries on the continent. Among other activities in which the company is involved, Orbicom brought pay-television for M-Net and Deukom to South Africa and a growing list of cities in Africa.⁸ Just like Sentech, Orbicom offers its services around the African continent in countries like Nigeria, Egypt, Ghana and Lesotho.

The establishment of Orbicom as a company was a challenge to Sentech since both offer digital technology services. Of all the services that are offered by Orbicom, the study focuses on the broadcast transmission via satellite, since this is the area of direct competition to Sentech. Initially, as mentioned previously, Sentech and the SABC used an analogue satellite platform, while Orbicom 'went digital' from the outset. The two rivals marketing approaches were indeed worlds apart,⁹ as revealed in a seminar hosted at the University of Natal in 1996, entitled "The Great Digital Debate: Sentech versus Orbicom". In the discussion, Jock Anderson, then the managing director of MultiChoice's signal distributor Orbicom, declared "The debate [at this conference] is not whether to go digital, but when...clearly, the world is going digital". He cited an example, which Europe has decided to phase out analogue over ten years...if they could turn back the clock, Europeans would have chosen digital from the start. South Africa would have to conform to world standards in future by going digital.¹⁰

⁷ <http://www.saba.iway.na/orbicom.php>

⁸ <http://www.saba.iway.na/orbicom.php>

⁹ <http://academic.sun.ac.za/journalism/sji>

¹⁰ <http://academic.sun.ac.za/journalism/sji>

The fact that the Orbicom company began as a digital provider has forced other companies to match them. Orbicom's MultiChoice announced in 1996 that it would beam its new bouquet of sound and entertainment channels digitally (DSTV), while transmitting the M-Net domestic channel in analogue.¹¹ The whole idea was for these signal distributors to upgrade technology and implement the digitalization in the country. This process called for a serious challenge because European countries "[had] decided to phase out analogue over ten years". Therefore, any service provider in South Africa was bound to improve and anticipate better distribution of signals.

In the early 1990s, many South Africans had access to M-Net services through analogue transmission. It was a heavy blow to many rural South Africans when MultiChoice announced that all "its analogue transmissions would cease after an initial test phase, forcing these viewers to invest in expensive digital equipment if they wished to watch M-Net via satellite" (www.academic.sun.ac.za/journalism/sji: 1996). As it was discussed in the previous sections, access to digital broadcast benefits the privileged minority. The move to digital can affect the rural based people badly, since for many, there is no possibility of choosing digital distribution, because it is too expensive for the South African 'pocket' (www.btimes.co.za: 2004).

The establishment of Sentech targeted a large opportunity which involves people who don't have access to information. The structure and activities of Sentech raise one question which discussed at the conference held in Durban. At the same conference entitled "Great Digital Debate: Sentech versus Orbicom", Neëls Smuts, the then-managing director of Sentech, justified the decision to remain on an analogue platform by citing the economic considerations for the consumer: "Our aim is to make our services accessible to all people, all over the country, therefore not 'financially excluding' the average citizen. Analogue system gives a reliable, quality image, at a cost of R1 500¹² for the viewer. Digital equipment requires R4 000". The analogue solution seemed to be the

¹¹ <http://academic.sun.ac.za/journalism/sji>

¹² This refers to the cost of satellite an analogue dish at 1996 prices. The R4 00 was the price for digital satellite at that time.

easier way to let the majority of people have access to information. Still pertaining to the expensive satellite services offered, MultiChoice was not silenced. Anderson was of a view that, “In three years, the cost of digital will match that of analogue. Keep in mind the cost curve we have witnessed with computers and the rest. Furthermore, the problem of access is solved by local community viewing habits”.¹³ History has proved him correct since today the price for both digital and analogue equipment is the same.

The question is, meanwhile, how can the poor have access to the benefits of digitalization? Technological developments and advancements are also costly as the discussion shows, but does it mean that we are forced to go backward and ignore the transformation around us, or do we relate to it? Anderson has set an example in that though it is expensive at the outset, digital technology has become increasingly affordable over a short period of time, and has been proved correct that “South Africa [has] to conform to world standards by going digital”. With regards to Sentech, there seems a flaw in of the government’s ambition that everybody should have access to information, unfortunately, Sentech does not aspire to the same goal, and the whole idea fails to be fulfilled. Furthermore, the notion of spatialization is distorted because still some people are deprived of opportunities to information, while others are well provided for.

Encryption Technology

Encryption technology is the manner in which the image is scrambled in the case of both digital and analogue pay channels and provides a potentially profitable ‘Gateway’ to both broadcasting and telecommunication services. The initiation of this network was meant to develop the best technology for the customers.

At the time of its separation from the SABC, Sentech’s business was entirely in the area of free-to-air, unencrypted signal distribution, that is, broadcasting that can be received

¹³ <http://www.academic.sun.ac.za/journalism/sji>

by the consumer without the additional payment of a fee. Orbicom, which began life as an offshoot of MultiChoice, needed a system that would enable the parent company to charge a monthly fee for receiving the transmission. In other words, it needed to build a 'gateway' system that could be switched off if the customer did not pay. The system used to do this is called 'encryption', which means that the signal is transmitted in a scrambled fashion, and then has to be unscrambled, or decoded, at the point of reception. If customers pay every month, their decoder works, if they don't, it can be switched off at a central point.

On the 15th of July 1996, the SABC decided to engage in a subscription television service, AstraSat.¹⁴ Initially, this service carried only the same free to air channels used for the network 'fill-in' (see previously), but the idea was to introduce a subscription network later. At the outset, in July 1998, the Vivid system was used, a free-to-air satellite transmission not requiring a decoder. But a couple of months after the two free channels commenced, they were followed by a pay-to-view bouquet (requiring a decoder) in December 1998. This is when it was announced that the analogue M-Net decoders, using Irdeto encryption technology, could be suitable to decode AstraSat pay channels.¹⁵ By using the same standard of technological innovation, it was hoped that the costly installation of new networks could be avoided.

At the present time, there are only two signal provider companies in South Africa. Other companies have tried to enter the highly technological world of signal distribution, but have failed. One of the companies involved in encryption technology was African Satellite Entertainment Corporation (ASEC) which is now defunct. This company had

¹⁴ <http://www.academic.sun.ac.za/journalism/sji>.

¹⁵ <http://www.academic.sun.ac.za/journalism/sji>.

¹⁶ <http://www.btimes.co.za/survey3.htm>.

¹⁷ <http://www.academic.sun.ac.za/journalism/sji>.

¹⁸ <http://www.academic.sun.ac.za/journalism/sji>

opted from the start for a unique Video-crypt encryption formula not compatible with that of the SABC; both services would broadcast in analogue.¹⁶

When MultiChoice launched DSTV about the same time as ASEC fell by the wayside, their signal provider, Orbicom, made the strategically important move of marketing an inexpensive and user-friendly decoder, an integrated receiver-decoder (IRD) from the outset, a move that saw MultiChoice leap ahead of its only remaining competitor, the SABC.¹⁷ In the process of restructuring the technological network, MultiChoice's IRD "combine[d] the receiving and unscrambling functions usually performed by two appliances. It offer[ed] the viewers an immense variety of international entertainment and information at a cost".¹⁸ Among other efforts, MultiChoice Orbicom contributed to the advancement of technologies that improved the South African's broadcasting platform. But in the mid-1990s, consumers were able to choose between the two systems. Both had their pros and cons but it was clear that digital was the way of the future.¹⁹ This situation assured the eventual transition of all satellite transmission and broadcasting onto a digitalized distribution platform of signals. Thus, while customers could expect costly services offered from newly established networks, there was an expectation that this cost would surely decrease with time. In fact, within a few years, all pay-TV viewers bought digital decoders, simply because the market for older analogue technology had dried up.

Digital satellite systems are at the outset a great deal more expensive than their analogue counterparts. Although they are expensive, digital satellite systems are also cost effective. Most signals in South Africa are broadcast terrestrially. That is they are beamed from a central point to towers that re-distribute the signal to certain areas.²⁰ Now, the problem with terrestrial broadcasts is that they require a tremendous number of relay stations to

¹⁹ <http://www.btimes.co.za/survey3.htm>.

²⁰ <http://www.btimes.co.za/survey3.htm>.

get the signal to remote areas and around obstacles like mountains. *Business Times*, Saturday 14 May 2005, noted that:

This is where economy of scale comes into play. It is workable and even cost-effective to put a relay tower that will get a strong television signal into a densely populated area. But to put up a tower that serves less than 100 people in a rural area and most of South Africa is rural.

The digital satellite distribution seems the winner in terms of technology. Since a great deal of money is invested in new infrastructure, it doesn't make sense to reinvest in aging analogue equipment. This process marks the transformation of technology in South Africa, led by companies that are spear-heading the development and innovation of signal distribution, hence, Sentech wishes to capitalize on the new infrastructure to promote easy digital satellite distribution in South Africa. This is Sentech's market structure.

While Sentech is struggling to provide wider access to consumers at affordable prices, Orbicom is aiming at the top end of the market. Orbicom decided on further investment in decoder development that would allow customers' user-friendly accessibility to information on computers. The convergence of computers, multimedia and broadcasting technologies means decoders are going to get smarter and broadcasters will be enabled to serve up a much wider mix of information and entertainment.²¹ This is explained by Frans Lindeque, Orbicom general manager: "Soon satellite TV viewers will be able to order anything from movies to newspapers via their decoders, using a mix of technologies". Even though the new technology is expensive, it is set to provide more information about "current programming as well as enhancing automatic channel switching which may make viewers' lives easier".

²¹ <http://www.btimes.co.za/survey3.htm>.

Sentech introduces IPWireless Broadband Wireless

Most of Sentech's business activities and its revenue come from broadcast signal distribution – both terrestrial and satellite. However, the granting of the two licences in 2002 – the carrier of carriers and the multimedia licence – has allowed Sentech to branch out into the areas of broadband multimedia and international telephony. The present section of the thesis examines these aspects.

Broadband was one of the initiatives illustrating Sentech's attempt to enter the age of media convergence. It could be understood as a technology that allowed a rapid transmission of large quantities of information. Broadband is the common term for a high bandwidth²² Internet or telecommunications connection, one that could transmit or download information “up to 40 times as fast as a standard telephone and modem” (Mobbs, 2002).

Broadband connections used different systems that made an effective use of greater bandwidth, either using higher audio frequencies down telephone lines, radio frequencies along cable television lines, or using special high—bandwidth cables just for the purpose of data transfer, sometimes referred to as Ethernet cables (Mobbs, 2002). That makes it easier to access information. One could do everything needed online more quickly and more easily with broadband.

Technologically, broadband has two great advantages over regular home Internet connections – it is more powerful and it is always connected. Paul Mobbs (2002) gives examples of how it operates and how it was delivered. Firstly the high bandwidth meant that more information may be downloaded, so one could watch live video-streams or web-casts. Secondly, there is no delay whilst the connection is established (Mobbs,

²² A number of bits per second that can be sent through a given medium, such as fibre optic cable or the air.

2002). Furthermore, since broadband does not have to be connected for each transaction costing for connection is based on a monthly fee, rather than individual per use basis.

MyWireless exemplifies the evolution of broadband as an “‘always-on, anytime, anywhere experience’ that changes the way the people think about being connected”, suggests Chris Gilbert, chief executive of IPWireless (www.ipwireless.com: 2004). This is because unlike a dial-up network through a modem and a telephone line or unlike conventional terrestrial networks, Sentech’s high-powered radio based Internet connectivity does not rely on the terrestrial telephone network that is prone to failure owing to a variety of reasons. Some of the reasons for the improved reliability resulted from the cable theft and cable failure, well as the results of adverse weather conditions and human errors (*Sentalk*, March 2004). Now, in the technological revolution, MyWireless is able to eliminate all these problems by applying centrally managed IP technology with effective coverage to provide permanent Internet connectivity in high-density urban areas (*Sentalk*, March 2004).

There are three technological ways in which broadband can be delivered: through a Digital Subscriber Line (DSL) or Ethernet cable; through existing television cables where these exist; or through a wireless connection. In America and Europe, a popular mode of broadband delivery is the use of cable television connections where such systems exist, “but the new standard being introduced in many countries is the digital subscriber line (DSL)” (Mobbs, 2002). Broadband services may be delivered as well over or across mobile and wireless connections. It transforms the way people and businesses live, work and play together. At this point I want to introduce the uses of digitalization and what broadband meant to Sentech.

As a way of development, Sentech launched a revolutionary new broadband wireless service that it hopes will be available to millions of users across South Africa. MyWireless was launched in January 2004 (www.ipwireless.com: 2004). More or less

the same as WiMAX broadband from Telkom (discussed below). The MyWireless service was implemented using state-of-the-art broadband wireless access technology. At the time of writing, the service covers parts of Johannesburg, Pretoria, Durban and Cape Town (Sentech *Annual Report*, 2004). The first phase of the rollout consisted of 62 base stations of which 35 have been completed in the Gauteng, Durban and Cape Town areas (Sentech *Annual Report*, 2004). MyWireless also came in a variety of offerings; MyWireless 128, 256 and 512, each of them at a fixed monthly cost (The e-Business Handbook, 2004). At the time of writing, these cost R649, R849, and R1449 per month respectively.²³

MyWireless is a new technological platform, which speeds up the process of restructuring or transformation of Sentech. It gave Sentech a different platform from the broadcast signal distribution infrastructure. Utilizing the standards-based IPWireless Mobile Broadband solution, Sentech's new service, 'MyWireless' is the first of its type in Africa. IPWireless is a technology-solution company based in California, USA. It marks the fourth announced national deployment of the IPWireless Mobile Broadband System in the world (www.ipwireless.com: 2004). The full solution may be provided to Sentech through IPWireless's strategic distribution partner Axcera of the USA with their South African agent, Fastcomm, which has the responsibility for providing all equipment and integration services (www.ipwireless.com: 2004).

Highly advanced, MyWireless is an Internet Protocol based multi-media (audio, video, text and data) service provided on the 2.5GHz to 2.7 GHz RF spectrum (Sentalk, March 2004), and can "deliver high-speed Internet connectivity at distances of up to 50km from a base station. It could render fixed-line connections redundant, particularly in the residential market" (www.fm.co.za: 2002). The system offers speeds as fast, or faster than fixed-wire options like Digital Subscriber Line (DSL), and provides an instant, "plug-and-play" Internet connection that is promoted as affordable, reliable and cost effective (www.ipwireless.com: 2004). MyWireless is based on the globally recognized

²³ Winston Smith, Portfolio manager for broadband wireless at Sentech.

Third Generation (3G) Universal Mobile Telecommunications System (UMTS) standard (www.ipwireless.com: 2004). That is, the service brings consumers and business in South Africa a high-speed Internet access service that may work from home, work or on the road, all without wires (www.sentech.co.za: 2004). According to Sentech, it drastically improves the way the people around the world connect and communicate at home or everywhere. Connection to MyWireless is simple. Subscribers connect the small freestanding modem to the computer via USB or an Ethernet port; or alternatively, use a PC card format for complete portability (*Sentalk*, March 2004).

MyWireless is promoted as a mobile broadband solution that provides easy access to information without any inconveniences. The company uses the advantages of convergence to provide a full suite of services. For example, *Sentalk* (March 2004), the in-house magazine of Sentech, enthused:

because Sentech maintains and owns its connections to the global Internet, no additional Internet Service Provider (ISP) charges will be levied. Inbound Internet or e-mail traffic is transmitted via Sentech's satellite facility in London. Outbound traffic is routed to Sentech's teleport hub in Honeydew, Johannesburg, where it is sent to the global Internet via the most appropriate path-satellite or microwave.

Gilbert, CEO of the supplier company IPWireless, is of the opinion that with the commercial nationwide networks underway on four continents, IPWireless has proven it has both the right technology and the ability to execute and scale to meet worldwide demand (www.ipwireless.com: 2004). He believes that the abilities of IPWireless broadband wireless service brought about solutions that would initiate a new generation of broadband applications. These would enable South Africans to be more productive in their business and personal lives. With the introduction of MyWireless, Sentech moved into an exciting new era in telecommunications as well as broadcasting.

MyWireless represents an enormous investment to Sentech, both in terms of financial commitment, and the trained personnel to build the infrastructure. “We have adopted a phased roll-out of MyWireless as there is some considerable investment in the network infrastructure. Much like cellular networks, MyWireless makes use of the base stations positioned at high sites that transmit and receive data over the air within a five kilometre radius”, explains Raath Marcel, the executive marketing and sales at Sentech. (Regional Manager, December 2004), “Sentech promotes the idea that the technological arsenal is the wealth of South Africa, and that the development of the country depends on developing the opportunities for access to information”. To do this, digital services and the infrastructure have to be taken good care of. This means replacing the dilapidated technological tools and installing repairable ones. “We buy technological tools that may mend and rehabilitate the destroyed digital devices. On the other hand, when they are bought we make sure that they are under guarantee” (Regional Manager, December 2004). All of these processes aim at increasing the market competition, in the name of liberalization.

Sentech offers VSTAR and VOIP

Wireless connectivity is dependent on a relatively close proximity to the signal tower. In areas where this is not possible, such as rural areas, or those industrial or mining hubs out of the range of wireless, the alternative technology is based on satellite coverage. In an effort to have a wide-reaching multimedia network to offer quicker services to the clients, Sentech introduced a complementary satellite-delivered broadband wireless platform marketed as VSTAR²⁴ (Sentech *Annual Report*, 2004). As with MyWireless, VSTAR has considerable advantages over dial-up access, including “always-on connection, no capping on usage and fixed month costs – regardless of bandwidth used” (Sentech *Product Overview*, 2004:2). A variation, VSTARCustom, is available to “corporate customers that require secure and customised telecommunication services to connect remote offices and facilities into the corporate Intranet” (Sentech *Product Overview*,

²⁴ The VSTAR service offerings on Sentech’s multimedia VSAT network have been extended to include standard and custom solutions to users throughout South Africa, providing Internet and intranet access via satellite mainly where terrestrial connectivity is not reliable.

2004:2). In the same way as MyWireless, both these satellite-based systems can be interfaced into Sentech's global network, with the advantage that they can be configured to provide bandwidth on demand.

It has become apparent to Sentech [this is also true with Telkom] that the demand for broadband wireless is immense, hence their commitment to rolling out those services sooner rather than later (Sentech *Annual Report*, 2004). Mokone-Matabane comments on the immediacy of use of the broadband, noting that not only does it offer always-on Internet access to customers, but that it has been designed to carry voice traffic too. Speaking in 2004, she announced that "We will be ready to provide voice services to everyone. If it was able to launch by 1 February 2005, Sentech could be the first operator in SA to launch a commercial, 3G-based voice network. MTN and Vodacom were testing the technology" (www.fm.co.za: 2005). The introduction of the wireless networks Voice-Over-Internet Protocol (VOIP) was also planned to be offered by Wireless Internet service providers (WISPs) from February 1, 2005. However, the required licensing provisions have not been issued by ICASA by the time of submitting this thesis. The operation could give Sentech a boost to another level, since the company has an advantage over the other industries due to its two licences that allow it to offer vast services around the globe. Nevertheless, it will depend on whether their plans work accordingly and whether the other industries show much interest in competing - and cooperating - with their technological activities. Mokone-Matabane told the *Financial Mail*: June 2002 that in order to be able to provide VOIP, Sentech hoped to hook into fibre-optic backbone networks owned by Telkom and the Second National Operator (SNO). It could then use wireless technologies as the 'last mile' to link customers to these fibre rings. The phrase, 'last mile', refers to the connection between the end-user and the exchange. Using a wireless application for the last mile enables a wider use of facilities than traditional cable or Ethernet wiring would allow, at a lower price, since there is no infrastructure to be laid. Much of Sentech's plans are dependent on the Independent Communications Authority of South Africa (ICASA)'s ability to force Telkom and the SNO to interconnect with and lease their facilities to Sentech (www.fm.co.za: June 2002).

The licensing delays that prevent Sentech from providing VOIP through cell phone providers (MTN, Vodacom and Cell C), are reminiscent of the delays faced by other players in the telecoms field, most notably the Second National Operator (SNO), where the licensing application process stretches over than four years. This indicates a mismatch between the governments stated desire for liberalization and competition, both in the fields of the Internet provision as well as telecoms, and the ability, or willingness, to speed up the delivery of alternative services. Further, it illustrates the high degree of centralization that remains the available technological alternatives

The intention to provide broadband VOIP shows the importance of broadband wireless competition in South Africa. It will provide Sentech with another challenge, both in terms of potential opportunities as well as competition, and should encourage much innovation in their strategy and plans as they develop the technological field in South Africa.

Problems with MyWireless

Despite the enthusiastic promotion of MyWireless, not all customers have experienced the benefits of Sentech's stated mission of an enhanced Internet experience. Sentech has made large promises to future users of MyWireless:

Internet access in Africa is regarded as among the most expensive and unreliable in the world. Due to bandwidth restrictions, the reality of Internet connectivity in South Africa has long been characterized by low-speed, unreliable connections at an exorbitant and fluctuating price. Now, technological advances and a new regulatory framework have enabled Sentech to launch the first true broadband wireless service offering, capable of delivering unrestricted, high speed, portable, always on Internet access at an affordable monthly cost. (www.sentech.co.za: 2004)

Nevertheless, there were difficulties that prohibited a smooth delivery of services to customers. Firstly, the service is more expensive than it looks at first sight. Not only are the monthly fees higher than competitive DSL services (see discussion below), but the expenditure to connect MyWireless does not only end with subscription: there is also a once-off activation fee of R500 payable when purchasing any of the products (*The e-Business Handbook*, 2004). Even though the services give subscribers “a world-class high speed wireless Internet service”, it is very expensive and can only be afforded by the privileged. Not every person could afford “prices that range between R650 and R1500 per month”.²⁵ Furthermore, MyWireless seemed to be inconsistent in offering services. Although it is claimed to be “an always on time, anytime, anywhere experience”, practically, that is not so. The access of MyWireless offering “always on” Internet, is available to certain areas covered by a tower infrastructure.²⁶ The hiccups that have beset the system arose as a result of transformation undertaken by Sentech.

Notwithstanding the large amount of money spent on connections, many potential customers have not been able to access the Internet using MyWireless. Despite what the Sentech Support Desk insisted about offering services, one subscriber ‘began to complain of rapidly deteriorating services on MyWireless’. Speeds were dropping drastically and the Support desk seemed to have no solutions, and denied that there was a problem.²⁷ That makes it difficult to accept that “the support desk is available anytime, day or night” (*Sentalk*, March 2004).

The question of how convenient MyWireless has been to its subscribers requires critical analysis. The application creates an electronic meeting place, making real time communication between distant parties possible, one of the chief applications of the ‘new media’, as pointed out by Stevenson (1996:119). Nevertheless, some of the customers have been dissatisfied with the way the service operates. The complaint arose when it was found out that their download speed was worse than dial-up:

²⁵ <http://www.poopband.co.za>

²⁶ <http://www.poopband.co.za>

²⁷ <http://www.poopband.co.za>

If you sign up for a MyWireless 128k contract at R649 per month for 24 months you cannot be guaranteed 128k bandwidth, even though they claim to offer “broadband” speeds. They [Sentech] explained that your one’s bandwidth is “shared” with up to 30 other users, presumably in the same area. So, one is effectively only guaranteed $128/30=4.2\text{k}$ bandwidth. It is a bit like sharing 56k modem bandwidth with 15 other users and then calling it “bandwidth”. (<http://www.sentech'smywirelessnot.co.za/broadband>: December, 2004)

These failures could scare off potential customers since their expectations have not been fulfilled. To a certain degree, MyWireless products offered advantages over traditional dial-up, Integrated Services Digital Network (ISDN) and Asymmetrical Digital Subscriber Line (ADSL) access (www.sentech.co.za: 2004). If customers still have a problem with Sentech, believing they acted irresponsibly, then they need to take careful note of the MyWireless Terms and Conditions in the following sections:

7.3 Services are used at the customers’ own risk and Sentech makes no warranty and or guarantee that the service will meet the customers’ requirements, be uninterrupted, complete, timely secure or error free...Although advised that the customer is in a coverage area, there is no guarantee/warranty given against interference and/or in respect of the use of subscribers apparatus;

7.4 Sentech may collect and use the customer’s personal information and or other data for the purposes of business communication, administration and transacting and other reason permitted by law.

15.14 The customer acknowledges having read and accepted the terms and conditions of the Acceptable User Policy on Sentech website as well as these Terms and conditions as set out herein (Draft 27 Promotion.doc).

These are the standard terms and conditions that one ought to be applicable. While they do protect Sentech, it is possible that they allow for a situation of customer dissatisfaction. This is serious, since the customers are the reason for Sentech’s

existence. Further, the signal distributor accidentally sent out a MyWireless customer database to their users. This included private e-mail and residential address details (*Financial Mail*, July 2004). In the event, customers found themselves without privacy personal details had been published; hence, a number of them pulled out of Sentech's system because of discomfort and inconvenience. That situation also reduced a number of clients that the company had, which caused a reduction of revenue to maintain the stability in signal distribution. As a result, Sentech may fail to achieve their goal which is to have a wider coverage to disseminate information in South Africa. The customers will withdraw from Sentech's services, therefore, be deprived of access to information.

The two prominent distributors, Sentech and Telkom work hard for a large customer base. Therefore, it is important to assess the relative amounts of the services they offer.

Telkom vis-à-vis Sentech on services

Telkom's nascent wireless broadband technology: WiMAX

Although Sentech is heavily engaged in the transformation of technology in South Africa, they face a good deal of competition. Other technologically-based companies are working seriously in the hope of beating the standards of Sentech.

Telkom South Africa and Wireless Internet service providers are challenging Sentech through their newly introduced technologies. Wireless Internet Service Providers (WISPS) are gearing up to compete head-on with Telkom and Sentech in supplying broadband Internet access and voice telephony to customers (www.fm.co.za: 2004). Telkom have been aggressive in their marketing efforts: "Telkom will provide mobile connectivity to customers who have a portable and nomadic lifestyle" (www.ictworld.co.za: 2004).

In February 2005, Telkom, the dominant telecommunication company in South Africa, announced a plan to implement the network using a nascent wireless broadband technology called WiMAX (www.fm.co.za: 2004). Telkom and Intel Centrino announced their collaboration with Intel, an international technology company, to trial next-generation WiMAX broadband wireless networks in this country (www.itweb.co.za: 2004). According to Telkom, “this broadband technology would enable a wireless alternative for the ‘last mile’ broadband connectivity for businesses as well as residential customers, and would likely connect many to the Internet for the first time” (www.ictworld.co.za: 2004).

For Telkom to win support from their customers, they have to compete with Sentech. As such, Telkom launched a “standardized” technology, which, they hoped would attract people to their service. Reuben September, Telkom’s chief technical officer explains:

Delivery of last mile access has been, and will continue to be, one of the biggest technical challenges facing the ICT industry. Wireless broadband technology has the potential to satisfy customer demands. In addition, this technology has the potential of opening new market opportunities through filling gaps and complementing the fixed-line networks. (www.itweb.co.za: 2004)

Each of the industries tries to innovate and implement new technologies into ICT. This introduction of new technology is displayed in the name of upgrading market media in South Africa. With Telkom, among other anticipations, the move into a new wireless service has been aimed at fulfilling a demand in the market and solving broadband issues. “We believe this is a big step toward getting over the bandwidth issues we have had in the past which have always been attributed to the slow uptake in certain technologies” September.²⁸

²⁸ <http://www.itweb.co.za/sections/telecoms>.

It is essential to discuss how Telkom's WiMAX broadband operated, and be aware of the expectations from that service. An agreement was reached between Telkom and Intel Centrino on the use of technology (Intel® Centrino™ mobile technology, from California). It outlined 'the companies' plans to deploy the necessary infrastructure in order to take advantages of next generation WiMAX broadband wireless technology, also known as 802.16 (www.itweb.co.za: 2004). Telkom believed that standardization was the driving force for economies of scale and the success of fixed wireless broadband adoption. "We see wireless broadband as being complementary to fixed broadband services, providing a holistic approach to broadband penetration" September.²⁹ Telkom need to win back the customers it lost to Sentech. September expected to be enabled to attract his customers back because "wireless connectivity provider [that is Sentech] has not been popular with its customers recently" (www.itweb.co.za: 2004). Telkom needed to convince their lost customers that their services are the best and convenient at anytime. Nevertheless, Telkom are optimistic, since they believe that broadband wireless networks like WiMAX have particular appeal in emerging segments like SA, where new areas were being developed that today have limited wired infrastructure (John Davies, Intel VP of the Sales and marketing Group). This result responds to the aim that Sentech set from the beginning that they would try to extend their services even to the deprived people in remote areas.

Telkom's ADSL SERVICES

While the experimentation with WiMax continues, Telkom has hastened its introduction of a Digital Subscriber Line service, marketed under the name of HomeDSL384, an ADSL (asymmetric digital subscriber line)³⁰ service that is more economical than the corporate version. Designed specifically for domestic use, it is an always-available connection to the Internet, billed at a flat monthly fee, no matter how much time the clients spend on its connection (www.itweb.co.za: 2004). Nombulelo Moholi, Telkom's Chief Sales and Marketing Officer has said "market research shows that many home

²⁹ <http://www.itweb.co.za/sections/telecoms>.

³⁰ ADSL is a form of DSL, a data communications technology that enables faster data transmission over copper telephone lines than a conventional modem can provide.

users want the convenience of an always-available connection to the Internet at a fixed monthly cost, and would welcome an entry-level ADSL product” (www.itweb.co.za: 2004).

In order to connect to HomeDSL384, customers need to subscribe to an Internet Service Provider (ISP) service. Telkom also offers its own range of ISP services. Home users also have a 512kbps access service available at a higher price, a service that has been renamed as HomeDSL 512³¹ (www.itweb.co.za: 2004). The connection fees and monthly subscription rates for the DSL lines are considerable, and indicate that consumers are willing to pay for quicker access to the Internet services. Sentech also provides fast access to Internet services. Therefore, it is proper that Sentech be compared to other companies offering broadband connectivity.

Sentech has stated that it has approached the stage where it is ready to fully embrace convergence of information and communications technology (ICT) and reduce its reliance on signal distribution to grow its business and meet national priorities (Sentech *Annual Report*, 2003). This leads us to a discussion of their ambitions in the area of international telephony.

International Telephony

Apart from the wireless broadband platform, Sentech has an outstanding advantage over other companies by virtue of its “carrier-of-carrier” licence, which allowed it to route international calls for other operators. However, in terms of profitability, this is a high volume with low-margins business, according to Mokone-Matabane (www.fm.co.za: 2005). Nevertheless, according to Mokone-Matabane, South Africa’s cellular operators are keen to use Sentech as an alternative carrier. By doing so, they would be able to negotiate prices between Sentech, Telkom and the SNO. The international telephony is one of the new competitive strategies used by Sentech.

³¹ At the time of writing, this was R680 a month.

Sentech has long claimed that Telkom enjoys unfair privileges in terms of international routing as a result of its former statutory monopoly. To help counter this, Sentech wants wholesale access to, as well as an opportunity to become a shareholder in the new undersea cable that links South Africa to Europe and the Far East. “The US\$639m project-called SAT3WASC/SAFE-was spearheaded by Telkom at a time when it was the only South African company with an international telecoms licence” (www.fm.co.za: 2004). Telkom is holding onto the project and claims that the US\$85m it has invested into the project gives it control and that no additional funding or shareholders are needed or wanted at this stage. Sentech’s view is that the cable is a strategic national asset. At the time it was initiated, Telkom enjoyed a statutory monopoly, hence, it is the largest investor in the cable and charges other operators high fees to use it, making it impossible for Sentech to compete (www.fm.co.za: 2004).

Since Sentech is effectively cut out of the undersea cable opportunity, they are at a grave disadvantage. That being the case, “we can’t rely on satellites for international services, as these do not provide the same bandwidth or quality that fibre-optic cables do” (Mokone-Matabane).³² Sentech’s ambition is to compete with Telkom head-on, although from a technological point of view, that would not be an easy activity. “[Sentech] is being severely hampered from offering even those services it is entitled to offer because of Telkom” Mokone-Matabane. While it is true that Telkom may lose many of its customers since their charges are exceedingly high, as Mokone-Matabane highlighted earlier on, and that this would give Sentech a chance to offer a competitive alternative, Sentech still relies on Telkom for part of its infrastructure. Sentech needs to hire facilities – such as the undersea cable – in order to transmit international telephony traffic. These facilities are hired at a discounted bulk rate, and then on-sold to other service providers, or value-added-networks (VANs) at a small margin of profit. In this respect, Sentech has complained repeatedly about the high prices charged by Telkom, not only for customers but as a wholesale supplier to other carrier of carriers, for instance, Sentech itself.

³² www.fm.co.za

Gladwin Marumo, Sentech Chief Operating Officer (COO), used the opportunity of appearing before the Parliamentary Portfolio Committee for Communication to attack Telkom in relation to the “high rates harming South Africa as an outsourcing investment destination”. He expressed the opinion “that the government should speed up passing of the long-awaited Convergence Bill in the interests of affordable telephony and bridging the digital divide” (www.fm.co.za: 2004). This situation sees Sentech at a challenge to possess its own infrastructure soon. That could help Sentech to be more productive and generate more income as compared to hiring the facilities from other competitors.

According to Mokone-Matabane, Sentech is taking legal advice over Telkom’s reduction in international charges to overseas carriers. “This could kill off the SNO (Second National Operator) and Sentech’s chances of success. Carrier pre-selection (which allows Telkom or SNO clients to choose Sentech as their international carrier, while remaining with Telkom or the SNO as their domestic provider) must be sorted out urgently”, Mokone-Matabane stated. Telkom claims Sentech has no right to carrier pre-selection. Sentech seems to be forced to depend on Telkom, the company with which they (Sentech) are competing. However, Sentech was established to facilitate greater access to information that is, making sure that the nation has access to information.

Even though Telkom works hard to beat Sentech at offering services, Telkom is one of the most expensive companies in the world. Among other countries like Brazil, India, Malaysia, Morocco and the Philippines, as well as international best-practice countries like Canada and Israel, Telkom South Africa has the most expensive charges³³. Sarah Truen, (the analyst for Genesis analytics, the body that conducted research for the South Africa foundation into telecommunications) said that although Telkom’s prices had come down earlier this year [2005], South Africa had since become less competitive because other countries had cut rates even further.³³ In counter-attack, Telkom alleged, “its ADSL broadband pricing was fair”. Furthermore, “Telkom’s February 24 announcement that it

³³ *The Citizen* Thursday, 21 April 2005.

would be lowering the prices on its broadband digital subscriber line offerings was music to consumers' ears. Upon closer inspection, however, many were left disgruntled by the fact that these prices remain excessively high when compared with similar products offered by telecoms companies overseas" (www.moneyweb.co.za: 2005). Given customers' sensitivity, the number of clients opting for the use of the broadband may be reduced, as the prices are very high, hence, the majority of customers will rush for Sentech's services.

Telkom's prices are actually monitored by how the company is operating itself. Dobek Pater, a telecoms analyst, says that Telkom's HomeDSL 384 product is priced "comparatively well vis-à-vis what the competition is currently offering, but the 512kbps service was priced too high when compared to the Sentech and WBS offering, which achieved download speeds in the region of one megabyte per second (Mbps)".³⁴ Another important item is that shareholders as well have an influence on how the companies operate. Pater has a feeling that Telkom could probably lower its prices further, but that there is a caveat in this as far as meeting shareholders' expectations goes:

As a public company, one of its priorities is to maximize shareholder value and profits, and therefore it is unlikely to lower prices unless it gauges that such a move would offset potential loss revenue through higher subscription rates. (www.moneyweb.co.za: 2005)

Convergence is a practical reality that surrounds us in our daily lives. In the context of the huge divide in South Africa, convergence is a crucial trend in that it may influence customers to accept new technologies. At this juncture, Telkom's services and pricing policies could drive customers away. It is clear that only a few privileged people connect to Telkom's services. One customer complained, "Telkom is an ogre because ADSL access in South Africa is four times more expensive than anywhere else in the known

³⁴ *The Citizen* Thursday, 21 April 2005.

universe. With current charges, it is become a service for the elite, which has to be 2-3% of this population at the most indeed they are much more expensive”.³⁵

³⁵ (www.mybroadband.co.za).

Chapter 4

CONCEPTUAL AND THEORETICAL FRAMEWORK

Political Economy and Technology

Political economy traditionally has given priority to understanding social changes and historical transformation (Mosco, 1996: 27). Furthermore, for critical political economists like Karl Marx, it meant examining the dynamic forces in capitalism responsible for its growth and change. The concept of political economy enables us to understand the transition and transformation of Sentech into being a public and an independent company. This introduces a 'new Sentech' equipped with new changes.

Political economy “tends to concentrate on a specific set of social relations organized around power or the ability to control other people, processes, and things even in the face of resistance” (Mosco, 1996:25). Political economy is concerned with the production, distribution, and consumption of the more general interest in the process of control and survival in social life (Mosco, 1996:17). Political economy thus becomes a useful tool through which to unpack the role of convergence in the communications industries, since this is propelled by technological and economic drivers of digitization and liberalization, all of which are categories in political economy. Convergence is a central concept within the theory of political economy. Convergence refers to the bringing together of two or more kinds of technology. The course that convergence undergoes is technologically and economically based. The process of convergence is made possible by digitization.

Liberalization is also an important concept in this thesis. Developments in the technological sphere are supported by liberalization, which allows for the development of digital communication networks. The paradigm of political economy, therefore, will be useful in analyzing how Sentech transforms from being a service arm within SABC to a fully-fledged, profit- driven, state-owned enterprise.

This analogy helps us to examine Sentech's technological, economic, political and regulatory strategies as well as investigating the implications for the public service broadcasting. Political economy studies also have a significant interest in the expansion of the state as a producer, distributor, consumer and regulator of communication (Mosco, 1996: 75). Political economy has taken up the role of the state in the construction of broadcasting, and information systems and assessed the consequence of a range of public and market based approaches (Mosco, 1996: 75). Since it [political economy] starts from particular aspects of social life, it is also a guide to understanding the relationships that prevail among many aspects of social life. Mosco (1996:30) claims that the entire social arena is the field of analysis for political economy.

Mosco uses three entry levels through which to explore political economy: structuration, commodification and spatialization. It is, therefore, important to subject Sentech's business strategy into these levels.

Commodification

Commodification is the process of transforming use values into exchange values, of transforming products whose value is determined by their ability to meet individual and social needs into products whose value is set by what they can bring in the market place (Mosco 1996: 143-144). Commodification will be discussed in this dissertation owing to the fact that Mosco's levels of political economy go together in every discussion that focuses on businesses which are politically and economically oriented. In the case of Sentech, the company controls the infrastructure which was used to distribute the signals for the other broadcasting stations. The level of commodification fits into this discussion because the discussion investigates the transformation of Sentech: leaving the SABC and becoming an independent company. This move means that the same technological devices that were used before the separation, would still be used after that process of transformation. Nevertheless, their value would have to be supplemented and modified so that they could offer acceptable activities. As it is further explained, "The use of political and economic power holds considerable explanatory value for

understanding the success of commodification” (Mosco 1996: 154). One of the key questions addresses how Sentech is politically and economically affected as a result of this separation.

At this point, commodification will be discussed with regards to Sentech which was once a part of the SABC, and which now transformed into an independent company. “The process [of commodification] reduces the resources, the time, and the space available to alternatives, so that commodification is perceived not as a process of power but as a natural order, common sense, reality of social life” (Mosco, 1996: 154).

Commodification becomes a key element in understanding the transformation of Sentech, since the company sells a service to its customers for a price. While commodities are usually thought of as material ‘things’ that changed for money, the concept can also apply to services that enable customers to undertake their own business. In this instance, the provision of broadband Internet connection, discussed later in this thesis, is a case in point. Broadband access is not a ‘thing’, it has no materiality other than the equipment that enables it, but it is a service that allows the customer to gain access to get another service, the Internet and thus to conduct their business, either for personal satisfaction or for profit. Thus, broadband access can be seen as one level as a quasi-commodity since it has no materiality, but fulfills the definition of commodity, since it is purchased at a price by the client from the supplier, Sentech, with the purpose of Sentech making a profit.

Spatialization

Spatialization is the third level to political economy, and is discussing the business strategy of Sentech at this level. According to Henri Lefebvre (1979), spatialization denotes the process of overcoming the constraints of space and time in social life. “We have passed from the production of things in space to the production of space itself” (Lefebvre 1979: 285). This passage from production *in* space to production *of* space occurred because of the growth of productive forces themselves and of the direct

intervention of knowledge in material production. Even though Lefebvre did not pay special interest to communication processes, he conceptualized space as “permeated with social relations” (Lefebvre 1979: 286). Lefebvre saw spatialization as not only supported by social relations, but also as “producing and produced by social relations” (Mosco 1996: 172).

Through the delivery information-via the various media of Hertzian (air) radio waves, satellite and wireless broadband, Sentech is able to send voice, visual, text and graphic data over vast areas of space, or spatialization, since data (of all kinds) is available, simultaneously, over the whole Sentech’s transmission area.

Spatialization fits in this discussion because Sentech’s aim, among others, is to enhance access to information by all people on a global scale, where the production of good and services frequently happen in parts of the global economy, where labour is cheap; while consumption takes place where standards of living are high. At the same time, similar processes happen within nation-states, as is the case in South Africa. Here, regional differences reproduce global differences. Most information provision as well as access to information occurs in the urban areas, while the rural and far-flung areas are neglected. This is a challenge for an institution such as Sentech, which is premised on public service ideals, since they are required not only to make money, but to contribute to universal access. The whole of South Africa is able to join in the ‘global village’. One of the reasons why spatialization holds special significance for the political economy of communication is that communication processes and technologies are central to the spatialization process throughout the wider political economy.

Karl Marx remarked on the tendency of capitalism to ‘annihilate’ ‘space and time’. “This refers to the growing power of capital to use and improve on the means of transportation and communication, to shrink the time it takes to move goods, people and messages over space thereby decreasing the significance of spatial distance as a constraint on the expansion of capital” (Mosco 1996: 175). Among political economists who developed this theme, Harold Innis (1972) stands out for his sustained effort to

establish the connections among forms of media, time, space and structures of power. Nevertheless, recent work in political economy (Lash and Urray 1987) amends the Marxian view by suggesting that rather than annihilate space, capital transforms it, by restructuring the spatial relationships among people, goods, and messages and, in the process, transforms itself.

Other scholars view spatialization in a different way. Although all of them talk about time and space constraints, each scholar has an amendment to do on the level of spatialization. Anthony Giddens (1990) has made use of the notion of *time-space distancing* in order to examine the decline of time space dependency and to suggest a focus on the growth of time and space as elastic resources. While Giddens (1990) discusses *time-space distancing*, Castells draws attention to the declining significance of physical space relative to what he calls *the space of flows*:

[This is] the deployment of the functional logic of power-holding organizations in asymmetrical networks of exchange which do not depend on the characteristics of any specific locale for the fulfilment of their fundamental goals. (Castells 1989: 348)

While the level of spatialization is discussed differently by various scholars, the discussion suggests that the political economy of communication can benefit by taking up spatialization as a means of understanding the relationship of power-geometries to the process of constituting space, particularly the space through which communication flows (Mosco 1996: 175).

The question is, do we also see this as practised by Sentech? The analysis is, yes, but to a limited degree since they still don't conform to all goals set by ICASA. Some areas in South Africa are still deprived of good access to information. Furthermore, some community stations are neglected though Sentech was directed to help the broadcasting stations. This will be discussed at a later stage where we look at the activities performed by Sentech to meet the needs of the people.

Structuration

Structuration describes a process through which social structures are constituted out of human agency, even as they provide the very 'medium' of that constitution (Mosco 1996: 212). The thesis will also adopt Anthony Giddens' (1991) theory of structuration, as adapted by Vincent Mosco (1996) and John Thompson (1989). With structuration, changes are examined in terms of the consequences they have for other areas of the industry, as well as other industries, and social and political structures associated with them. At the same time, structuration takes account of the role of real people in the processes of change and the choices that are made. "Specifically, structuration balances the tendency in political economic analysis to feature structures, typically business and governmental institutions, by addressing and incorporating the ideas of agency, social relations, social process and social practice" (Mosco, 1996:213). Structuration is therefore an entry point to examine the mutual constitution of structures and agency in political economy (Mosco, 1996: 213).

In the light of structuration, we are able to pose of the question as to who had the influence to establish Sentech as a separate entity, and make it an independent company? Taking into account the power-relations that are "mutually constituted by social action" (Mosco, 1996: 213), we are able to address goal-oriented, reflexive human action.

Liberalization

Liberalization and competition are important theoretical markers in this research. Liberalization is a process of state intervention in the expansion of the number of participants in the market, typically by creating or easing the conditions of competition (Fourie, 2001:116). The introduction of digital communication networks is one of the strategies through which this can be achieved (Fourie, 2001:116). Liberalization can be seen as an important catalyst in building and developing the economy of the

communication sector of the country.³⁵ In the case of Sentech, liberalization was imposed from the top, that is, it was a consequence of government action that it was established as an independent company. As such, the state intervened to promote the number of participants in the broadcasting market. Therefore, a central question remains as to how Sentech, as the dominant provider of the technical communication infrastructure and networks, has been able to make the technical, economic and political (regulatory) transition from being a service department of broadcasting to a profit driven enterprise.

Liberalization also implies a level of competition and a move away from monopoly-based economics. This thesis examines the shifting of institutional arrangements in South Africa's telecommunications' sectors. The competitors that Sentech has to deal with include Orbicom (an encrypted-signal provider), and Telkom. Indeed, the multimedia and carrier of carriers licences granted to Sentech in 2002 were given for the specific reason of opening up the telecoms market and increasing competition in the industry. The process of convergence implies that all three of these companies, initially set up for very different purposes, are expanding their activities and impinging on the traditional territory of the others. All have a head-start in particular areas of expertise and service provision. "Currently Sentech has little or no competition in the wireless broadband market. However, there is a feeling that the window of opportunity may not last long".³⁶ Yet, advantage in a single field only can be a mixed blessing. Frequently, it is not only pricing that constitutes the basis of competitive advantage, but also the array of services that can be offered by a single company. The more comprehensive the range of services, the more likely customers will subscribe to an integrated service package. Sharon Gillett and Ingo Vogelsang (1999:3) claim "[the] monopolist in one market can squeeze the rival of the second market not by making unsustainable threats or by offering below-cost pricing, but by offering a profitable bundled pricing scheme against which the rival can not compete".

³⁵ Creative Commons ©2003 bridges.org.

³⁶ Sentech's CEO Sebileto Mokone-Matabane spoke to ITWeb after the launch of the MyWireless service in Cape Town.

In the present context, the burst of privatization causes a number of effects in the telecommunication industry. The development of new digital and satellite technologies at Sentech was encouraged by its separation from the SABC. Herman and McChesney, (1997:111) state that telecommunication tends to be the most lucrative activity traditionally under the control of the public sector. This being the case, private-capital interests work with the governments of the developed countries, and the institutions of global capitalism, for example, the World Bank and IMF, to push these policies around the world.³⁷ Sentech's separation from the SABC, allowed it to be more competitive, since as part of the SABC, the company was not allowed to provide signals for broadcasters that were competitors of the SABC (see interview Neëls Smuts). After the separation, they were able to expand their business opportunities. With the advent of digitalization, the company was transformed further, allowing them to expand and survive in the competitive environment, ensuring the on-going 'life' of Sentech.

Equally important, Clive Barnett (1999) has suggested that a central policy issue has been whether, and how, liberalization can be regulated and made consistent with the aims of nation building, development, democratization and cultural diversity. All three companies mentioned above struggle with the same dilemma: how to deal with national transformation at the same time as the relentless economic and technical changes to the sector that are being driven at a global level. The concepts of liberalization and competition will help assess what strategies Sentech used to move into the digital era, while pursuing the economic imperatives of the country. For example, alleviating poverty is the cornerstone of the government policy, yet Sebileto Mokone-Matabane, the CEO of Sentech, has expressed the view that while there is an understanding about the importance of telecommunications and technology in economic development, not enough is being done to unlock the true potential within these fields (*Sentech Annual*

³⁷ Roberto Fonseca, 'Nicaranga: Government gets only fair marks on annual IMF exam', Inter Press Service, April, 1995; 'Treasury sets conditions for U.S aid to Mexico, Reuters, Limited, February 9, 1995.

Report, 2004). Against the background of Sentech's separation from SABC, the thesis investigates questions of universal access, as well as the need to expand and maintain the network, all part of its nation-building mandate.

Sentech retained its mandate as a provider of public-access for broadcasting, a role it has to juggle with its new-found commercial character. Therefore, its mission includes the facilitation of easier and broader means of access to information for its clients. The discussion will now focus on the principles of public broadcasting service in order to assess whether Sentech, as a signal provider and distributor, contributes to these ideals.

Public Broadcasting Service

Public service broadcasting is a system that engages the revenue from the public to enable broadcasting. Denis McQuail (2000:156) defines it as "a system that is set up by law and generally financed by public funds (often a compulsory licence paid by households)". Thus, ideally public service broadcasting is operated in a non-profit way in order to meet various public communication needs of all citizens. McQuail (2000:502) notes that these "were originally virtually all needs (that is inclusive of entertainment), and the justification for Public Service Broadcasting (PSB) lay in the 'natural monopoly' character of broadcasting distribution". This recalls John Thompson's insight that the ideology of public broadcasting was premised on the understanding that the broadcasting spectrum was limited and belonged to the nation (Thompson, 1993). As such, early regulation of broadcasting in some countries (such as Britain, large parts of Europe and the British Commonwealth) avoided the commercial exploitation of the airwaves, and mandated one or more national public broadcasters to take care of the broadcasting needs of the nation (Teer-Tomaselli, 2005).

One of the main goals of PSB is that there should be "universality of geographic coverage (reception as well as transmission)" (McQuail, 2000:157), a role that Sentech was mandated to carry out. This is particularly important in respect of rural areas,

which frequently have been under-serviced in terms of broadcasting and telecommunication facilities, as well as for linguistic minorities, such as we would find in the far reaches of South Africa. Thus, the concept of PSB is important for this research because the study includes in its investigation regulatory strategies and their implications for the provision of broadcasting. The state regulatory system, in this case, through the intervention of the Independent Communications Authority of South Africa (ICASA), imposes certain requirements on Sentech, and the company needs to ensure that it has the means available to carry out these requirements. In this way, Sentech remains an integral part of the public service broadcasting system, under the auspices of the same Ministry as the SABC, despite the fact that it is a separate entity.

In South Africa, public service broadcasting is considered a bone of contention in the context of broadcasting. The global media landscape has undergone fundamental changes, experienced in South Africa as well. The state's requirement to have Sentech become a public and independent profit-driven company has meant that it was necessary for Sentech to change. The South African government paved the way for Sentech to embark on a strategic restructuring process. That is, the Ministry (of Posts, Telecommunication and Broadcasting) transferred part of the shares from one state enterprise (the SABC), to another (Sentech), for the purpose of achieving the objectives of the Broadcasting Act of 1999 (Sentech *Annual Report*, 1999). The state anticipated that the provision for universal access to under-serviced and unserved rural areas by Sentech, as stipulated in the Broadcasting Act, would best be achieved through such an arrangement (Sentech *Annual Report*, 1999).

The virtue of having Sentech separating from the SABC, leaves behind the idea that even though Sentech becomes an independent company under the control of the government, as a broadcaster "[it] does not operate in a political or regulatory vacuum: it is deeply intertwined in the wider project of state transformation", (Teer-Tomaselli, 2000: p.14). For example, as a so-called 'State Owned Enterprise' (SOE), the SABC is subject to the same impulses of state-driven initiatives to transform and restructure as

are other state-owned entities [like] Sentech, (Teer-Tomaselli, 2000). Furthermore, to promote and facilitate more efficient service delivery, Castells argues that:

The first element needed for the successful regional development strategy in the global economy is connectivity. Connectivity to networks forms the infrastructure of the economy in the same way that national markets were built along the railways and telegraph system in the 19th century. Connectivity begins with transportation and communication (Castells, 2001: 197).

Digitalization of Technologies

Digitalization is “the reduction of pieces of information to the form of digits in a binary code consisting of zeros and ones” (Doyle, 2002b: 3). Digital technology is an important element in the dissemination of information globally. It is worth considering digital technology in the discussion as Sentech strives towards the digital revolution with regards to the transmission of information. The introduction of digital technology allows media enterprises a better and more advanced means of disseminating information. The application of digital technologies has taken place across the world at different paces and with different scope (Thato Foko, 2000:17). Doyle (2002a) also maintains that the development of digital technology is the great ‘new’ force affecting the media and it has implications for virtually all aspects of the industry. Digital technology allows both traditional and new communication services – whether voice, data, sound or pictures – to be provided over many different networks (Foko, 2000:17).

With the transformed Sentech being a technologically oriented enterprise, the company invested a great deal in new developments including the establishment of digital technology. The adoption of digital communication and the other technological developments creates a distinction between the traditional analogue media industries (terrestrial television and radio stations) and the broader multi-media and communication sectors (Sentech, Orbicom and others). In an analogue world, it was a simple matter to distinguish between newspapers, broadcast television, cable television,

computers, motion pictures and the telephone companies,³⁸ since each form of media operated within a different logic and through a different mode of delivery. With the advent of digitalization, the new universal media provide ways of using information from any media and transmitting it through all other media platforms, thus strengthening and quickening means of transmitting information. Sentech is in the process of becoming a fully digitalised company, moving away from its older analogue roots. This will allow it to send all its information in digital format over the same networks. It hopes, through these means, to put into action any newly introduced network to innovate and develop better access to information, thus contributing to fulfilling its public mandate, while at the same time making it commercially viable.

Guy Berger (2001) examined the view that convergence loomed as a catastrophe for old media (newspapers and analogue television), heralding their closure or collapse. The introduction of convergence promotes a quicker means of broadcasting and transmission of information. The establishment of convergence allows information sources to use a greater number of access points. Newspapers can now upload their printed information onto Internet versions of their news services, thus creating a double source of income. Equally, in the era of digital storage, the manner of preserving the used and previously-broadcast information makes it convenient for future use. Thus, the establishment of convergence stimulates processes like converting content between formats, and does not necessarily mean the end of earlier media transmitters. The power of convergence does not mean the death of divergence (Berger, 2001). "Technological change and convergence provide the opportunity for newspapers, radio and television broadcasters and producers of different kinds of film to apply their expertise [in news gathering] and complimentary areas" (Doyle 2002a:70). This merging of data across platforms has only been possible with the move from analogue to digital transmission technology.

³⁸ Jim Willis, *The Age of Multimedia and Turbonews* (Westport, CT: Praeger, 1994), p. ix.

Sentech is an example of a company that has implemented new digital broadcasting distribution that enables it to perform new tasks over and above its previous competencies, thus demonstrating the momentum that the convergence of technologies allows. Convergence itself is a result of digitalization, which allows Sentech to deliver services on a variety of platforms – terrestrial airwaves (broadcast signal distribution), broadband wireless (MyWireless), optical fibre cables, Ethernet and satellite (VStar) to name a few. It does not matter what the content of the information is, the same content can be delivered in different ways according to the needs of the customers. Convergence has also emerged as a global phenomenon. The global aspect of Sentech's opportunities can be seen in their role as carrier of carriers, which allows them to undertake the opportunity of facilitating international telephony traffic.

What is convergence?

In the period under study, Sentech undertook an aggressive business transformation, from traditional signal distribution to providing a range of international telephony and multimedia service,³⁹ though initially the system was used for narrowcasting and broadcasting. Since much of the impetus for the changes in the company has arisen from convergent technology, it is worth spending some time unpacking the concept.

Convergence is a very complex concept. Within the discipline of media, it implies the combination of two or more kinds of technology. Digitalization, which is the standardization of transmission systems bringing together print and electronic media in a networked form (Doyle, 2002b:3), is the driving force behind convergence. Convergence, then, refers to the power of digital media to combine voice, video, data, text and images across applications, devices and networks (Doyle, 2002b: 3). A more extreme case of digital convergence occurs when a voice signal is converted to digital packets and sent via exactly the same technology as computer data from one end to the other, as occurs in Voice-over-IP (VoIP) technology (<http://www.itweb.co.za>: 2005). It

³⁹ www.cto.ict.org (Commonwealth Telecommunications Organisation).

is seen as the coming together of media technologies, telecommunications and computing at the same time (Doyle, 2002b: 4). The use of the term can also imply the combination of two functions, or the interaction of two firms, where one is a producer and the other a distributor. Describing the phenomenon, Tomaselli and Dunn (2001:1) note that:

Convergence is the current buzzword in telecommunications studies. It is the term applied to the standardization of transmission systems, while digitalization is the common factor in transmitting technologies. This occurs through computerization, which brings together print and electronic media channels. This is the period during which productive forces have shifted from an industrial to an information-based economy. The potential reach of technology in this epoch is global and trans-disciplinary (Tomaselli, and Dunn, 2001:1).

Sentech exemplifies the concept of convergence in two ways: its diversification from providing broadcast signal distribution alone to providing a variety of services, including Internet provision; and its capacity to service SABC together with competing broadcasting stations after its formal separation from SABC.

The concept of convergence focuses on technological changes, “the so-called digital convergence” (<http://www.lboro.ac.uk>: 2000). It results in creation of different genre. Convergence has led to new methods of media production and access, demanding new computer-related skills from media workers. Technologically, convergence denotes greater overlap between broadcasting and older media forms such as newspapers. For example, more homes are now linked into the advanced high capacity communication networks and, through these, are able to receive a range of multimedia, interactive and other ‘new’ media communication services as well as conventional television and telephony (Doyle, 2000b: 3). Digital technologies that first affected convergence in the media, information technology (IT) and telecommunications sectors went on to trigger further convergence in a growing range of communicating consumer electronics devices (<http://www.lboro.ac.uk>: 2000). Sentech, as a multimedia signal distributor,

positioned itself to take advantage of these developments. Sentech, as a signal distributor for television broadcasters and other community radios, distributes the signals in accordance with the clients' expectations.

Convergence provides a powerful new impetus towards greater concentration of media ownership as companies seek to position themselves to best advantage in the new multimedia landscape and to consolidate their hold over well established areas of activity (Murdock, 1990:3). Thus on the economic level, convergence can be seen in the increasingly horizontal concentration of media ownership, with the merging of different media sectors as parts of the same huge media conglomerates and media markets (Murdock, 2000). Graham Murdock sees convergence therefore as different media products often linked to each other, not only intertextually but also more deeply and materially in production, distribution and marketing. Sentech's multimedia licence allows that company to do this without having to acquire other companies; Sentech is a producer, distributor and a marketing enterprise. Therefore, Sentech exemplifies convergence in the South Africa market media. According to Murdock's explanation of convergence applies to Sentech. Since the signal company links the different media products as it has multimedia platform network.

Globalization of Communications

The ability of Sentech to provide good service, to compete and even to survive in the global economy will be determined by the degree to which it is able to optimize technological innovation. The development of countries depends largely on the development of specific industries within those countries. In the infancy of technology, the world was marked by the lack of large quantities of information. With the beginning of large-scale technological developments across the globe, it became possible to talk of a 'global village'. Famously, as far back as the 1970s, Marshall McLuhan (2001) anticipated the world as "A Global Village". While McLuhan's vision was precocious, communication in the modern world does take place on a scale that is increasingly global. Messages are transmitted across large distances with relative ease,

so that individuals have access to information and communication that originate from distant sources (Thompson, 1995: 149).

The concept of the 'global village' means that communication technologies, such as the Internet, eradicate the physical distance between disparate people, creating an electronic meeting, and making real time communication between distant parties possible (Stevenson, 1995:119). John Thompson (1995:149) claims that the proliferations of networks of electronic communication have eclipsed distance. He states that individuals may interact with one another, or can act within frameworks of mediated quasi-interaction, even though they are situated, in terms of the practical contexts of their day-to-day lives, in different parts of the world. Foko (2000: 23) adds that the reconstruction of media into electronic forms of communications has had implications for the reworking of space and time.

According to some scholars, the 'global village' has swept aside the hierarchical, uniform and individualizing culture of print production and replaced it with more tactile culture of simultaneous happenings (Foko, 2000: 23). At the same time, the provision of such information sources is uneven, leading to the so-called 'digital divide', by which is meant that some societies, and even members within the same society, have vastly different access to information technology. Sentech aims to contribute to the bridging of the 'digital divide' by making use of the two licences it has to 'provide an international telecommunication gateway service' Sentech *Annual Report*, 2002). One of the most basic ways in which this can happen is through the maintenance of a good network. Information flow is only possible when the technical links between the production station and the recipient vicinities work well. Breaks in communication can occur through technical faults, especially over large distances. A well-constructed and maintained telecommunication service can lessen the loss of communication.

Chapter 5

PERFORMANCE

Revenue for Sentech

In assessing the separation of Sentech from the SABC, a key question would have to be whether they are doing well financially. In turn, this question means examining their customer base. The issue of clients has to be analyzed because it is through them that the separation from SABC and the revolution of Sentech can be seen to have benefited the company or not. As a state owned enterprise, Sentech is expected to deliver a profit for its shareholder, the state, through the Ministry of Communication, or at the very least, not cost too much in the way of infrastructure. This is the purpose of liberalization.

Sentech sells their broad satellite system to their clients, to people in the industry, in mines, and in the offices. Among their clients they host SABC 1, 2 and 3, e-tv, God Channel and others, as well as 25 radio channels, business television and radio. These fall under 'vivid' (Sentech's direct-to-home broadcasting solution). It is a television solution that caters for the greater population in Southern Africa:

Its carrier-of-carriers licence allows it to offer public switched telecom operators such as the Cellphone firms international telephone links. The multimedia licence allows it to offer broadband communications directly to users. Sentech is restricted to whom it may target as customers. Almost 80% of revenue still comes from broadcasting customers, while just 10% comes from multimedia and carrier-of-carrier customers, with MTN being the only big customer for the latter service. Vodacom relies mainly on its parent, Telkom, and Cell C's mainly lower-end customers do not make many international calls. (*Financial Mail*, October 2004)

Thus Sentech is assured of continuous revenue, at least for their operating expenses. In terms of capital expenditure, the national treasury has promised "the state broadcaster [SABC] R700m in funding over the next six years" (www.financialmail.co.za: 2005). It

will use the money to replace its ageing analogue infrastructure. Sentech also needs R300m in funding from the government to create a digital terrestrial television network. The migration of signal distribution from analogue digital is a precursor to any further development in the long run (www.financialmail.co.za): 2005). All the developments require large investments of capital, which Sentech cannot generate at its present level of business dealings.

Another area of high capital expenditure will be the installation of High-Definition Television (HDTV) facilities in selected areas, in order to service the needs of the mainly foreign broadcasters covering the Soccer World Cup 2010 (www.financialmail.co.za: 2005). HDTV is already available in Japan and United States, though it is not the standard in either country as yet. It is also possible that the SABC will eventually move onto a High Definition platform, and if SABC installs this, then Sentech is going to be a beneficiary in terms of infrastructural development. Some of the reasons for the use of HDTV are that:

The Federation of International Football Associations (FIFA) requires the in-country broadcast partner for the 2010 World Cup-which is likely to be SABC – to provide facilities that allow participating broadcasters to output HDTV. To do this, SA must build a backbone telecommunications network capable of transporting loss less (the highest quality) streams from the estimated 13 media centres that will be set up at soccer stadiums countrywide to a central international broadcast operation. This network must be able to carry up to 40 Gbit/s of video data. At present, South Africa's international Internet bandwidth amounts to less than 1 Gbit/s. (www.financialmail.co.za: 2005)

The installation of this HDTV may benefit Sentech greatly, as it allows up to six times as many television channels to be broadcast on the same frequency that is presently used by one analogue channel. This will allow for more terrestrial television channels to be licensed by the regulator (www.financialmail.co.za: 2005). If this happens, Sentech's revenue could increase, and its dependence on government subsidies could decrease.

Signal distribution is not the only area in which Sentech is able to generate income. Sentech has subsidiaries, which have a great impact in its revenue generation. The company has a 100% stake in Infohold (Pty) Limited. In the 2003 financial period only 70% stake of the later company was held, and the current financial year (2004) the remaining 30% was purchased from the minority shareholder (Sentech *Annual Report*, 2004). InfoSat (Pty) Limited, wholly owned subsidiary of Infohold (Pty) Limited was acquired on 1 January 2000. It is a value-added business solutions services provider of Internet Protocol services mainly to customers in South Africa. It also provides services such as e-mail, Internet security, web hosting and development and integration with legacy systems (Sentech *Annual Report*, 2004). The company also owns all the shares in Vivid Multimedia (Pty) Limited and Sentech International (Pty) Limited (Sentech *Annual Report*, 2004). These are receiving posts for Sentech, providing it with an income as well as integrated services in Multimedia and network provision.

Turning now to the idea of Sentech's independence, liberalization carries with it a number of effects and impacts. It was previously stated that liberalization involves the creation of a private competitor in a state/private monopoly marketplace (Mosco, 1996: 202). Sentech generates the revenue through its clients. Thus, the betterment of technological and signal distribution of content depends on the contribution and inputs in which the clients are involved. One of the concerns in relation to the development and consistency of digital services is whether Sentech uses the profits they make from their private enterprises in order to provide clients with better services. This would be another indication of whether Sentech has succeeded as an entity separate from the SABC:

Technically, the separation enabled a number of changes to be carried out in the 'new Sentech', while at the same time maintaining a high level of quality in signal distribution. Since Sentech had a good deal of reserve capacity, Neëls Smuts argued that this could be better used, and a better scale of economy achieved, through Sentech serving many broadcasters and other applications, (Neëls Smuts, December 2004).

Had Sentech not separated from the SABC, it would have been difficult to have serviced many broadcasting stations. To a larger degree, this source of income answers the key question: how economically does Sentech survive as a separate company from SABC. Neëls Smuts argues that even the SABC has benefited from a commercialized Sentech.

As an independent company, Sentech was better able to develop, and to set itself on an appropriate course in response to technological development and convergence and avoid the threat of becoming obsolete. As part of the SABC, its position would have been limited as it would probably not have been in the interest or mandate of the SABC to allow Sentech to develop in such a way. (Smuts, December 2004)

Expounding more on the issue of constraints faced by companies like Sentech in providing its services on a large scale, Smuts pointed out that it is not easy for the division of one company to operate nationally on its own; hence, in order to expand, Sentech had to separate from the SABC. Smuts (December, 2004) articulated that it is normal for any company owned by another to fit in with the overall objectives of the holding company. Those objectives would have to be focused on the aims and synergies of the parent company's business. Taking the case of Sentech and the SABC, for example, Sentech would not have been able to venture into telecommunications, since the core business of the SABC was (and remains) broadcasting (Smuts, December, 2004). This is one of the requirements to see Sentech operating independently without the SABC.

With regard to the profits used to maintain the technological revolution, Sentech depends on their clients. A practical example is the SABC's plans for digitisation in the future: "The SABC's digitalization plans won't benefit the South Africa public directly until Sentech, which delivers the SABC's programming into people's homes, has also upgraded to a digital platform. All the SABC's content is sent, via Telkom, to Sentech for

distribution to the public” (www.fm.co.za: 2004). This sees Sentech at an advantage to attract a larger percentage of customers.

Sentech has a huge advantage over other companies because of the extent of the infrastructure they already have. This technology is also compatible with some of the broadcasters. Therefore, it is clear that Sentech has generated greater revenue than other signal distribution companies. As their main competitor, MultiChoice is in Sentech’s competitive firing line. “We want MultiChoice to use our infrastructure platform, [because] it does not have a licence to carry interactive, multimedia services for the interactive television to be launched in June 2005” said Mokone-Matabane (www.fm.co.za: 2002). (In fact, the launch of multimedia television has been delayed, and at the time of writing this thesis, June 2005, it is still a future possibility.) The fact that Sentech is the only company to have a multimedia licence is a concern to MultiChoice, Internet and content firms, who fear they could suddenly find the services they offer, or wish to offer, are illegal (www.fm.co.za: 2002).

Sentech’ expenditure

Sentech has faced a number of problems. The original plan was for Sentech to hive off from the SABC. This meant the company had to attract the new customers and offer new services without any constraints from the SABC. The idea was that the company would generate money and be able to invest their profit in infrastructure and maybe even pay a dividend⁴⁰ to the government.

Nevertheless, things have not turned out as planned. As Sentech has worked towards upgrading to a digitalized technological infrastructure, the company has found themselves unable to meet their expenditure level. At this juncture, the *Annual Report*, which forms part of the year that ended 31 March 2004, will be used to investigate what Sentech has invested in, the reasons for the investment and the problems the company has

⁴⁰ Payment made out of a firm’s profits to its owners, either in a form of cash or share.

encountered. This will form the basis of an analysis of Sentech's expenditure. The question is, what went wrong? Was the problem with timing or something fundamental, and should the government still invest in Sentech even though there seem to be problems within Sentech?

Sentech's transition into digital distributor may have looked smooth. However, as with any other company which is implementing new technological devices, Sentech experienced some hiccups. Their expectations were to meet the challenges posed by the government's decision in 2002 when they were awarded their two new licences. One allowed it to offer multimedia services such as Internet, e-commerce and broadband; the other to route international calls for the other operators (Sentech *Annual Report*, 2004).

By the time the two licences were introduced, Telkom was concerned that Sentech would compete head to head with the telecoms giant. After the inception of these licences, Sentech experienced a severe setback. While "Telkom [took] full advantage of its extended monopoly by expanding and modernizing its network, tying up big corporate customers and rebalancing its tariffs, the same cannot be said for Sentech", according to Telkom Chief Executive Officer (CEO), Sizwe Zxasana (www.allafrica.com: 2005). This was preceded by his earlier concern that; "there were a lot of problems ahead". The major reason for the difficulty remains that just ten years previously at that time, Sentech had been a technical department of SABC, and much of its infrastructure was at least 20 years old and needed heavy investment. The multimedia licence called for capital expenditure in new infrastructure and products (www.allafrica.com: 2005). All these had to take place in a broadcasting environment that was still in its infancy compared to many other countries and one that was characterised by a scarcity of skills and expertise. Still importantly, the implementation of the new infrastructure by the multimedia licence highlights that the level of spatialization in political economy is concerned with 'time and space'. The new devices would help to spread the information quickly and many people globally.

In an attempt to answer my earlier question, the major problem was with timing. It would not be easy for Sentech to beat Telkom since Telkom had been in the telecommunications field for many years. Sentech had just received the licences and could not rise to fulfil the great expectations placed on it within a blink of an eye. Furthermore, the company could not do much more than to restore their old infrastructure, which, as mentioned above, was very dilapidated. Changing from the terrestrial broadcasting to digital distribution required a great deal of new technological inputs in order to maintain the consistent services offered by the company. At the same time, Sentech was busy with investments into broadband and MyWireless. While these investments were necessary for the company to grow, and in order to contribute to the growth and development of the country as a whole, they were also very costly, and put great strain on the financial resources of Sentech.

The balance sheet and the income statements

Sentech's expenditure is elaborated further in this section of the thesis. As was pointed out, the multimedia licence enables Sentech to develop a world-class multimedia infrastructure to carry signal for broadcasters and telecommunication companies using hardware and software that is capable of taking full advantage of the technologies currently available (MyWireless and VStar) and those that are emerging (Sentech *Annual Report*, 2004). This means that the combination of the multimedia licence and these technologies will enable businesses and homes more effectively to take advantage of the huge information resource available through the Internet and to connect people, using voice, data and video. The concern is, as Sentech attempts to build the multimedia network infrastructure and fully deploy the multimedia platform, funding will be required (Sentech *Annual Report*, 2004). This is one of the answers why Sentech invested its capital in the new network services. The *Financial Mail* for South Africa investigated Sentech:

Rumours have arisen, perhaps because of Sentech's poor results for the year ended March 2004. Sentech reported an operating loss of R19million (down from a R15, 5million profit last year) [2003], and a headline loss of R47, 8million (R9,

3million) on revenues of R550, 3million (R462, 4million) (www.fm.co.za: October 2004).

The income statements⁴¹ for the year ended 31 March 2004 outline that out of the revenue that the company had, the cost of sales was extremely heavy, hence, the gross profit of R123 658m was far less than expected. This is the profit before tax. Out of this amount, Sentech's overhead expenses were R28 002m, the administration expenses (money spent on office administration) were R29 671m, while further operating expenses were R85 016m. This includes satellite rentals. All this expenditure left the company with the operating loss of R19 031m. (*Sentech Annual Report* 2004: 53). The company's finance costs or overdrafts were R55 495. Mokone-Matabane notes, "The capital expenditure was R94m. This went to upgrading analogue television transmitter equipment, which is an average of 20 years old, and new telecom investments" (www.fm.co.za: October 2004).

Sentech invested in MyWireless, digitalization, Internet Protocol and upgrading of old infrastructure. Mokone-Matabane stated that the capital expenditure, which was R94m, went to upgrading analogue television transmitter equipment, and other network equipment. Investing in the capitalization programme to provide for new broadcasting transmission equipment and for the migration from analogue to digital was essential for future growth (*Sentech Annual Report*, 2004). The installation and upgrading of new technological devices was enabled by the restructuration of Sentech as a separate business enterprise from SABC, which in turn allowed it to become a digitalized company offering network services independently.

Services like Sentech's multimedia are offered on complementary broadband wireless platforms under the brand name MyWireless. To ensure continuity, as Mokone-Matabane mentioned, an integrated terrestrial network was deployed in the Gauteng

⁴¹ Financial statement summarizing a firm's performance over a period of time.

area linking Sentech's main sites, providing connectivity between the core network and aggregation (Sentech *Annual Report*, 2004). The network also provides broadcast linking and backhauling to Sentech's Tele Port at Honeydew as well as linking Sentech's Carrier-of-Carriers network (Sentech *Annual Report*, 2004).

All of these services were costly, without generating much income. In some cases, services had to be doubled up to allow for the smooth transfer from an analogue platform to a digital, or from a cable mode to a wireless mode. The budget for Sentech in 2004 was R862 190m. Nevertheless, for the year ended March 2004, the revenue was below by R329 million due to multimedia and carrier-of-carriers revenue that did not materialize. The reason is that the network roll-out did not occur as planned and there was a lack of capital to establish the network as planned (Sentech *Annual Report*, 2004). The carrier-of-carriers allows Sentech to offer public switched telecom operators (such as the cellphone firms) international telephone links (www.fm.co.za: 2004). This has not been taken up in a big way, except by MTN, since Telkom maintains its dominance over other carriers. Therefore, Sentech incurred R26m net expenses on the Carrier-of-carriers and Multimedia businesses (Sentech *Annual Report*, 2004) and (www.fm.co.za: 2004). Basically, Sentech's expenditure was a result of the expansion of infrastructure, and presumably this will be amortized in future years. Furthermore, the following significant events occurred during the current financial period and affected earnings:

- ❖ Foreign exchange losses incurred owing to the appreciation of the Rand in the 2004 financial year amounted to 32, 26m.
- ❖ Intangible assets were amortized in [2004] resulting in a charge to income statement of R5, 11m.
- ❖ Due to the new multimedia business, Sentech launched its first advertising campaign. The cost of the advertising was R8, 5m.
- ❖ Capital equipment was acquired on operating lease for the new multimedia infrastructure. The cost of the operating leases relating to equipment was R24, 97m.

❖ The company saved costs this year on consulting fees that decreased by R79, 4m and on interest paid that decreased with R14, 5m due to the reduction in the load amount from SABC. (Sentech *Annual Report*, 2004)

This financial review explains and comments on Sentech's financial performance, in order to interpret and understand the losses made by the company. Not all the results were gloomy, however. Under the expenditure items, the total expenditure was R289 million less than the budgeted amount. The main contributors to these were the lower satellite rentals due to the favourable exchange rate, depreciation on planned capital expenditure and legal fees that were not utilised (Sentech *Annual Report*, 2004). R94m capital expenditure was affected, once again, by the investing activities. The budget included the interest of R30m based on expected borrowings that did not materialise. The amount borrowed was much lower resulting in the lower expense of servicing the debt (Sentech *Annual Report*, 2004).

Under the investment income and the capital expenditure respectively, the lower interest received was mostly due to lower cash holding throughout the year (Sentech *Annual Report*, 2004). Similarly, lower capital expenditure was incurred due to projects that did not materialise during the year, as a result in the delay of rollout plans (Sentech *Annual Report*, 2004). Thus, it can be seen that the company did not achieve all it had expected to do, either in terms of expanding its infrastructure, or in terms of generating an income similar to that of the previous year. Figure 1. is the cash flow statement for the year ended 31 March 2004. This draws attention to the activities that Sentech was engaged in, and how the expenditure was operated.

A concern has been expressed as to whether the government should invest more resources in Sentech. In order to produce the outcome that the government anticipates, Sentech needs a huge injection of money to upgrade their infrastructure. Robyn Chalmers, an analyst at *Business Report*, was alarmed and raised an issue that it looked

rather dismal, particularly when the [matter] of Sentech as a “going concern” is raised by both the directors and the independent auditors, “the gist of the directors’ notice is that Sentech needs more money to build its multimedia network infrastructure. That means going to the government, reportedly for R300m” (www.allafrica.co.za: 2005).

Upon analyzing the life of Sentech from its restructuration stage, the government has already invested too much in Sentech to abandon it now. This is notwithstanding that Sentech is about to face far more competition in light with newly liberalized market. The government still needs to make good on the capital that was allocated to Sentech, and the only way to do so, is to go forward. Therefore, the government should still invest in Sentech. Certainly, the company is bearing fruitful results in certain divisions.

Meanwhile, the management ought to be analytical and skilful in budgeting their expenditure. This is in agreement with Chalmers, who is eager to see Sentech carry on with its mission under the auspices of the government,

Any such loan must go to with a proviso that management sticks to a clear business plan, and that the board is sufficiently empowered to perform its oversight role. The transition on the scale that is being undertaken by Sentech is incredibly difficult, and can be achieved only with a skilled management team, overseen by a strong board (www.allafrica.co.za: 2005).

Apart from that opinion, the financial manager has to be concerned with managing of the company’s expenditure. S/he should consider the capital budgeting (process of planning and managing a firm’s long-term investments). Stephen Ross argues that in capital budgeting, the financial manager tries to identify investment opportunities that are worth more to the firm than they cost to acquire. “Loosely speaking, this means that the value of the cash flow generated by an asset exceeds the cost of that asset” (Ross et al, 2003: 4). The types of investment opportunities that would typically be considered depend in part on the nature of Sentech’s business. For example, for a large signal distributor like

Sentech, deciding whether or not to accommodate the idea of using the multimedia licence and upgrade new infrastructure would be an important capital budgeting decision.

Much of the infrastructure costs fall under investing activities, these include property, plant and equipment acquired. These are buildings, improvements to leasehold premises, motor vehicles, computer and network equipment, office equipment, monitoring equipment and technical equipment (Sentech *Annual Report*, 2004). The cost of these assets manufactured or assembled “includes all direct expenditure and own personnel costs incurred. These are reflected as capital work in progress until brought into use” (Sentech *Annual Report*, 2004).

The Impact of globalisation on Sentech

Globalization is a core factor affecting the founding of Sentech as a multimedia and signal distributor. Sentech “carrier of carriers licence” constitutes a basis for its new international telephony business. The licence allows Sentech to carry telephone calls and other telecommunication services to and from international destinations on behalf of its customers (Sentech *Annual Report*, 2002).

The reordering of space and time brought about by the development of the media is part of a broader set of processes that have transformed (and are still transforming) the modern world (Thompson, 1995:149). The processes that include the transformation in the modern world are commonly described as ‘globalization’. This notion within ‘media in the global world’ parameters involves more than the expansion of activities beyond the boundaries of particular nation-states. Globalization may be seen in practice and existing through certain degrees. Thompson (1995:150) mentions:

technology arises only when activities take place in an arena which is global/nearly so (rather than merely regional, for example); activities are organized, planned or coordinated on a global scale and when activities involve

some degree of reciprocity and interdependency, such that localized activities situated in different parts of the world are shaped by one another.

John Thompson (1995:152) provides a list of features of communication companies that may be considered to be global. These include economic, political and military considerations. Furthermore, in order to be considered as an international player, companies should have global partners, and be part of the International Telecommunication Union (ITU) that determines their spheres of operation and the allocation of the electromagnetic spectrum (Thompson, 1995:152). Like Telkom, Sentech has its own electromagnetic spectrum, allocated directly by the ITU. It does not 'rent' spectrum, indicating that it is considered as a primary player by the ITU. Sentech also maintains partnerships with international companies such as Cambridge Broadband in the United Kingdom, who manufacture the VectaStar fixed wireless access system; and IPWireless of California, the manufacturers of the Mobile Broadband system, marketed by Sentech in South Africa as 'VStar' and 'MyWireless' respectively (www.cambridgebroadband.com; www.wi-fi-technology.com: 2005).

The introduction of new technologies has played a vital role in the globalization of communication "both in conjunction with the activities of communication conglomerates and independently of them" (Thompson, 1995:152). Among other interrelated developments, the deployment of more extensive and sophisticated cable systems, both copper-based and now more commonly fibre-optic, provide much greater facility for the transmission of electronically encoded information. Furthermore, the increasing use of satellites for the purposes of long distance communication augments land-based cable systems. Thompson (1995:161) stipulates that satellite increases the use of digital methods of information processing, storage and retrieval. Sentech has introduced new technologies, including digital satellite platforms and multimedia services (www.sentech.co.za: 2004). Sentech has clear ambitions to extend its services into the African continent, although it has not done so yet. These ambitions are clear from the *Annual Report* (2002) that comments:

Sentech is on the edge to play a significant role in linking the African continent into the global ICT revolution, by connecting under-resourced African ICT operators and providing affordable services to the continent (Sentech *Annual Report*, 2002).

It is part of Sentech's public service mandate to diffuse information to its customers, locally and globally (within the African continent). Nevertheless, this is debatable as the discussion carries on. Empirically, some people especially those in the rural areas are not given the opportunity to access information. The analysis of this investigation indicates that the rich are the mostly the ones who are privileged. Part of the reasons for restructuring Sentech was to enable the company to fulfil this mandate. That is, a central feature of the globalization of communication, which Sentech should strive for, is the fact that media products circulate in an international arena (Sentech *Annual Report*, 2002).

The present thesis analyses the transformation of South African broadcasting and the telecommunications sector in the light of the impact of the neo-liberal agendas of the South African government of the 'structuring of state-owned enterprises' (Teer-Tomaselli, 2004: 9). For Manuel Castells, the state remains the central protagonist of the movement towards globalization in the information era. The effective state enables national technological development and innovation, in order to ensure that the country is able to survive in the "networked society" (Castells, 1996). Sentech, owned by the state, must contribute to this process, and the success of the state in its project of globalization can be measured, in part, by the success of Sentech.

Sentech's activities may also be evaluated through the establishment of certain broadcasting stations which were not granted the opportunity to demonstrate how capable they were, for example the Greater Durban Television (GDTV). The GDTV was initiated in the mid-1990s at what was then the University of Natal, Durban (now the University of KwaZulu Natal). The broadcast took place under the banner of the Visual Voice Confest in 1995. This conference-cum-festival was oriented around the subject of community

access media, with the central theme ‘The Role of Community Access Media in Reconstruction and Development’. The event was aimed at the broader public, media practitioners, the NGO sector and ‘the great majority of people who have never had access to media in the past’ (Adrian Hadland, Mike Aldridge and Joshua Ogada, October 2005). It also provided an opportunity to put theory into practice by establishing an experimental community access television station to broadcast in conjunction with the confest (Aldridge: 1996).

Even though Sentech had the capacities to help develop and maintain the GDTV to broadcast its signals, it was deprived of those services because of the codes set down by the “carrier of carries” licence. ICASA as well has the mandate to ensure that “the community broadcasting must be informational, educational and entertaining. It is intended to focus on the provision of programmes that highlight grassroots community issues, including developmental issues, health care, basic information and general education, environmental affairs, local interest matters and the reflection of local culture” (Aldridge, July 2005). This rule by ICASA does not favour stations like the GDTV, as a result Sentech fails to enact political economy level of spatialisation that focuses on ‘time and space’. It also fails to distribute information to the communities, especially that which is educational. The GDTV’s biggest difficulty in its two broadcast events in 2004-05 has been covering its broadcast signal distribution payments to Sentech. Sentech has long maintained, in its dealings with community radio and community TV, that its “common carrier” licence does not allow it to engage in “discriminatory” pricing (i.e. charging community broadcasters less for signal distribution than it charges public or commercial broadcasters), (Chris Armstrong, January 2005). This basically answers the question posed earlier in this discussion; does Sentech, ICASA and the government promote social relations that Mosco refers to under the level of commodification?

Chapter 6

CONCLUSION

Findings and conclusion

South Africa, as part of the global world, has seen the beginning of the transition of analogue broadcasting into digital technologies in telecommunications and broadcasting. This digital revolution has created ‘intelligent user interfaces in fixed as well as mobile environments’ (www.fm.co.za: 2004). After Sentech’s new position as an independent company, the state gave the South African signal distributor two licences; one to carry international traffic on behalf of other licensed telecom operators, and the other a Multimedia licence for multimedia network. It has been the aim of the study to investigate the implications for the public services of the restructuring of Sentech. In this thesis, Sentech has been used as example of a wider set of processes within the political economy of information industries. The objectives of the study were to examine: (i) how/why Sentech negotiated its separation from the SABC to become an independent company, (ii) the advantages or disadvantages and requirements of operating independently of SABC, as well as Sentech’s technological, economic opportunities, and (iii) the mechanisms through which Sentech has positioned itself to move from broadcast signal distribution alone, to a mix of signal distribution and telecommunication and Internet access provision.

The study was informed by the theories of political economy which illustrate “social relations, particularly the power relations, that mutually constitute the production, distribution, and consumption of resources” (Mosco, 1996: 24). The concepts of liberalization, convergence and public service broadcasting helped in analyzing the restructuring of Sentech in the revolution of digital technologies in South Africa.

The concepts of structuration, commodification and spatialization balances the tendency in political economic analysis to privilege structures, typically business and governmental institutions, by addressing and incorporating the ideas of agency, social relations, social process and social practice (Mosco, 1996:213). This is an entry point to examine the

mutual constitution of structure and agency⁴² in political economy. From this vantage point, Sentech is a state-owned company which was just a division of SABC. It made the transition into a new company still concentrating on 'social relations' with SABC and 'power relations, which compose the production, distribution and consumption of resources'. In this regard, the clients are subjected to be concerned as they get the networks services from Sentech as well as the state from which the signal distributor gets some revenue.

The separation of Sentech from SABC had been a bone of contention for a long time in the technologically developing South Africa. Neëls Smuts remarks that the development and separation from SABC was an evolutionary process that extended over many years from 1990 until 1997 when the shares were transferred to the state:

Following the trends, in respect of media and communications restructuring and developments in the South African media industry, a vision emerged in which a broadcasting signal distribution entity would be established to serve the South African broadcasters on an independent, impartial and self-supporting basis. As part of the SABC it had already started to serve other broadcasting entities, firstly in the former Transkei; Bophuthatswana; Venda and Ciskei (TBVC) states and secondly M-Net when it started operations in 1986. (Neëls Smuts, December 2004)

The state, through legislative and financial interventions, has been greatly involved in the innovation of digital technology. It was during the 1994-1995 period that a significant change took place in South Africa with respect to the broadcasting industry with the establishment of the Independent Broadcasting Authority (IBA) and the Triple Inquiry conducted by them. Thus, the Inquiry included a dedicated public hearing on the position of Sentech. The Report published in August 1995 included a recommendation that Sentech be separated from the SABC and be converted to a public company in which the shares were transferred from the SABC to the Government (Neëls Smuts, December,

⁴² Agency is a fundamentally social conception that refers to individuals as social actors whose behaviour is constituted out of their matrix of social relations and positionings, including class, race, and gender.

2004). Smuts reported that the National Assembly adopted this recommendation together with the other Triple Inquiry Report recommendation in 1996. The new Sentech in this period started its own cash management and were then also paid in cash by the SABC. Among other reasons why the state should still invest in Sentech, is because it is a wholly-owned state enterprise in which the government has invested heavily.

Agency, according to scholars like Vincent Mosco (1996), is explained as a fundamentally social conception that refers to individuals as social actors whose behaviour is constituted out of their matrix of social relations and positionings. On one hand, Poulantzas (1978) refers agency in structuration to the practice redefining social actors, capital and labour particularly as individual expression, the individual subjects whose value is connected to individual rights. On the other hand, structuration balances the tendency in political economic analysis to feature structures, typically business and governmental institutions (Garnham Nicholas, 1990). On the contrary, Nicholas argues that one can't analyze agency in the absence of structure. From the discussion that Poulantzas (1978) and Nicholas (1990) have, the interpretations that Sentech has the elements of structure and agency which promote the 'mutual constitution'. The structuration here pertains to collaboration of Sentech and the government, which anticipated the existence and the independency of Sentech as the broadcasting and the signal distributor.

The impact of convergence on telecommunications and broadcasting in South Africa has been influenced by Sentech's existence. The effectiveness of the company was realized after the separation. The advantages of Sentech working independently outside SABC can be seen in the fact that the established signal distribution infrastructure and expertise, with reserve capacity, has been used to better effect with Sentech serving many broadcasters and other applications, thus achieving enhanced scale of economy. Furthermore, Sentech has been able to develop itself in an appropriate way in response to technological development and convergence and avoid the threat of becoming obsolete. As part of the SABC, its position would have been limited as it would probably not have been in the interest or mandate of the SABC to allow Sentech to develop in such a way.

Sentech has knuckled down to become the biggest broadcasting signal distributor in Africa. Nevertheless, the investigation illustrates that the transition was not a smooth one. There were technological challenges that faced the company. As was discussed earlier on, in order to offer better services, Sentech had to upgrade outdated infrastructure, no matter how expensive it was. Convergence was a 'buzz word' in South Africa, therefore, technologically oriented companies wanted to demonstrate their abilities to improve the network and technology in this country.

Sentech's mission to move into the digital world required specific revenue from the state. Lynda Loxton, a senior journalist with a special interest in telecommunications, reported that Mr. Gladwin Marumo, the Sentech chief operating officer (COO), "has warned that unless Sentech was able to invest R300 million in the infrastructure needed to shift rapidly from analogue to digital transmission, maintenance costs would remain high and the country stood the danger of becoming a 'technological dumpsite' for outdated equipment" (www.busrep.co.za/general: 2004). Their eagerness to become the mother of 'multimedia network' was a notion that could cost them dearly. The lack of up-to-date equipment, he told the national assembly's portfolio committee on communications, would make it even more difficult to promote the new services that would help the country bridge the digital divide and gear itself technologically for the media demands of the 2010 soccer World Cup. The restructuring of Sentech has not been, nor will be in the future, an easy transition owing to the network devices that need to be innovated.

The analysis indicates that Sentech imposes high charges on the new services that they offer. The exorbitant charges and installation fees for their devices are an impediment to the rapid expansion of the multimedia network in South Africa, and the new services offered by Sentech are available to the privileged elite only. The situation limits the effectiveness of Sentech's Mission, Vision and Values statement, in which they promise "quality customer service is the cornerstone of the success of our company and we endeavour to make every customer contact a pleasant experience". While the findings clearly confirm that to be connected to technological platforms like MyWireless is

efficient, it is also very expensive, hence the majority of people cannot opt for it, and hence they are unable to have quick access to information.

One of the results of the establishment of Sentech has been to contribute to the compression of the world and make it 'a global village'. One of the advantages that resulted from the digital revolution is the creation of more job opportunities. Technicians were needed to operate the new conversion of technological devices. Gugulakhe Masango points that "although fewer people would be needed to maintain the digital transmitters, thus, reducing maintenance costs, they would allow broadcasters of all kinds to develop more services and create jobs" (www.busrep.co.za/general: 2004).

On the same issue of economic empowerment, the telecommunications services may contribute to the development of the country if considered positive. It is important that the customers and other people know more about ICTs, 'the provision of universal access and the opening of new economic opportunities'. These may make the necessary impact in pushing back the frontiers of poverty. The Ministry of Communications, Ivy Matsepe-Casaburri proposed "The cumulative effect of provision of telecommunications services is the empowerment of our people with knowledge and information technology that will allow them to participate meaningfully in the socio-economic life of the country and their local areas in particular" (www.info.gov.za/speeches: 2004).

Besides innovating signal distribution in South Africa, it was the regulatory body ICASA, which initiated the birth of Sentech as a state-owned enterprise. As a result, some of the company's values which pertain to broadcasting are actually an outcome of ICASA's expectations. This condition supports the observation by George Gerbner et al (1993: 22), who argue "Thus, one finds countries rushing to introduce satellite communications or telecommunications infrastructure, making a wholesale concession to particular political interests". Part of Sentech's motivations has been to carry out the state's functions and ambitions. In this sense, the company is state-oriented. Therefore, this discussion will help to address what impact politics have on Sentech. Sentech's Regional Manager affirmed that politics had a great impact on Sentech:

It had some impact. Any movement in the politics had a burden on us. Those were some of the burdens we have to endure. We had a few changing structures, like people running the company. One can see a pattern coming. We had somebody long ago, now we have Dr. Sebileto Mokone-Matabane. We also had Neëls Smuts, who was not involved in politics. From him it went straight into the hands of politicians. Another element is the regulatory aspect of it, in terms of politics dictating what you should be. We don't decide, everything is decided for you. When the government has a mandate, this comes as a challenge to that company. We want to give professional services to the clients but then, there are other things that need to be done. (Regional Manager, personal interview, December 2004)

The Head Competitor Business Intelligence Marketing and Sales, attempted the similar question from a different angle. "We also want to play our part in answering the government's vision to provide access to universal issues", he said (see transcript appendix 3). In fact we are already doing that through signal distribution. People receive everything by putting [up] a dish and so they pay for this. All of these things, [including drawing up] our plans, we do free of charge. With community radios, we do a lot of planning, we've got assistance from SABC. With community radios again, you apply to ICASA, then we come and assist you", (Appendix 3).

Legally, Sentech gets a mandate from the ICASA. Therefore, it is urged to put into practise the mandate given to it through the legislative process. Although this interview affirms Sentech provides plans free of charge, the government has a set of goals which Sentech should fulfil. This indicates that politics still has an impact in the company. Furthermore, as is illustrated by the long-standing delay in the consideration of a licence for Sentech to provide Voice Over Internet Protocol services (VOIP) on behalf of mobile telecoms operators such as MTN, Vodacom, inter-governmental department rivalries still bedevil Sentech's business. The example of Sentech's exclusion from a shareholding in the proposed undersea fibre-optic cable connecting the countries or the African Eastern

seaboard with Europe and Asia, discussed earlier in this chapter, is yet another example of all the way in which politics interferes with Sentech's autonomy.

The discussion under the concept of liberalization analyses the association that Sentech had with the regulatory body. With its 'state-of-the-art' Internet Protocol (IP) based network system, and other new technological developments, Sentech pushed the state's technological policy forward. Among other goals, Sentech carried international traffic on behalf of other licensed telecom operators. As such, Sentech was obliged to follow the government's mandate. "We also want to play our part in answering the government's vision to provide access to universal issues. We are already doing that through signal distribution", said the Head of Competitive Business Intelligence Marketing and Sales (Personal interview, January 2005).

The connection charges have led to the new digital infrastructure being a tool for a select few rich people in South Africa. It was important that the state policy should focus on reducing the costs that include the connection to MyWireless, and other network devices to Sentech's clients. Although some measures were taken to regulate the telecommunications and broadcasting, this activity should be scrutinized critically. The authority should provide enabling legislative framework which could protect the poverty-stricken people from being exploited by MyWireless and other new technological devices. ICASA had provided Sentech with an International Telecommunication Gateway Service enabling it to operate as a carrier of carriers Company. The technological innovation seen in South Africa enabled the clients to access information conveniently and easily. That situation should be experienced widely in South Africa and elsewhere.

In the last analysis Sentech is a state-owned company. The state has invested in it, and should the company want to 'upgrade their infrastructure' the state has always been ready to finance these improvements, even if there has to be a struggle to motivate the full amount needed. Pieter Fourie provides an example of the collaboration between the state and the signal distributing company. "Liberalization is a process of state intervention; this

involves establishing a private competitor in a public market” (Fourie, 2003: 116). Thus, government has to continue to support the efforts of Sentech, which at the same time, is pursuing the ideals of the government to bridge the digital divide, and being South Africa into the global world of converged and powerful Information and Communication Technology.

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APPENDICES

Appendix 1. Related questions for the study

1. How did Sentech negotiate its separation from the SABC to become an independent company?

2. What are the advantages and requirements of operating independently of SABC?

3. What are the challenges that the company is facing, that is:

What are Sentech's

(A) Technological,

(B) Economic

(C) Political

(D) And regulatory strategies and

(4) What are the implications for the public service broadcasting?

5. What was the need for the Sentech to come to existence?

6. Why did it prefer to merge with SABC, not being independent from the first take off?

7. Why did it prefer to be independent now?

8. What is it actually engaged in? Does it have its own programmes?

9. How did separating from SABC benefit Sentech?

10. Did it have its own CEO when it was with SABC? That is, what is your organisational structure?

11. What are your future plans?

12. With rapid technological changes and developments, how prepared are you for those changes?

13. What competitions do you face with competing companies like Telkom and the others?

14. What are your aims and objectives?

15. Who are your clients?

16. Apart from the traditional province spectrum, what other business are you concerned?

Appendix 2 Interview with Portfolio Manager (PM): Product Development Marketing Sales

Portfolio Manager: I've been in the company for a while, but not long enough to know the details of SABC and Sentech separation. So what I'll do is to go down the list and where possible I'll be able to answer.

Question: What are the challenges that the company is facing?

Portfolio Manager: Well, the obvious one is competition. We are starting to move to the environment where competition is very aggressive... The challenges that we are facing are that customers, to have customers is challenging. They bring problems and their own idiosyncrasies. It's something to have 3 to 4 customers, like we'd a few years ago. But now, there are thousands of customers. It is a different environment, different customer care, everything is different, and we've got many instead of a few. I would say to a lesser degree, these days we can't install radio, television stations if they don't have necessary licences from ICASA. As such, we are unable to quickly help a lot of radio stations out there. They need to get a necessary approval from ICASA. At this juncture, regulatory environment is also very important.

In capital, you can't make money if you don't have money; fact of life. You have to have money in order to have money and to be able to build one large network. Without large network, you can't make money. That is, if you don't have money, you can't have customers.

Q: Is this in relation to the company?

PM: Well, it's for the company. It's capital or let's say service/product expansion. To expand my service goods to many customers, I need capital, and it is difficult to get it.

Q. What was the need for Sentech to come to existence?

MS: That question will flow out of question 1 and 2.

Q. Why did it prefer to merge with SABC, not being independent from the first take off?

PM: Remember, Sentech was part and parcel of SABC. The government decided to separate us from SABC. Sentech was not an individual company, then merged with SABC and then went out of SABC. It was first and foremost, a division of SABC, not even a company with a board of directors. We never we separate from the SABC before our separation.

Q. Why did it prefer to be independent now?

PM: This question will come out of this discussion, which the government decided that we separate from SABC.

Q. What is it actually engaged in? Does it have its own programmes?

PM: Sentech is fully integrated, I mean, selling, providing services, operating, maintaining *telkoms* operations in SA and the rest of the African continent. So we do provide services in the RSA, but we also started to provide services to the rest of African countries. So, we are fully integrated *telkoms* operator. We do everything that is required to provide *telkoms* service. We build it, we maintain, we sell it, we use it, we do everything.

Q. How did separating from SABC benefit Sentech?

PM: That was the opportunity to engage the market because now, the separation from SABC gave us an opportunity to go to the SABC competitive and offer them services.

Q. With rapid technological changes and developments, how prepared are you for those changes?

PM: You are never prepared. We strive to prepare ourselves with strategy (we have strategy, which is, focusing to what it is going to happen in the future) as well as new products. We collect the products for a long time so as to keep up with technology and these changes so that we are at the forefront with the developments.

Q. What competitions do you face when competing with companies like Telkom and others?

PM: Plenty! Telkom, SNO, WBS, gray operators (people who operate illegally with certain loopholes in the law) fro example, they separate on 2.4 KHz, spectrum

frequencies referred to as ISP, where there is a loophole in ICASA regulations. These are serious competitions of the future. Cellular, why they have got deep pockets, they have got money, they have got customers for 15-16-20 million customers already. You are the customer of a cellular phone now (referring to me). They have got your name, banking details. So it is easy to sell to you because we don't have them.

Q. What are your aims and objectives?

PM: Sentech's mission and vision, it is its services.

Q. Who are your clients?

PM: Our customers, mass consumer, is the government, it is the services, industry, agriculture, banking. We have got customers everywhere from the man on the street to the government. Others are SME (small medium enterprise) and SOHO (small office...). These are the customers.

Q: How does agriculture fall under your clients?

PM: For example, we sell satellite system to farmers. We sell to people in the industry, in mining, to the man on the street, in the offices, to small industries, we also serve the government. We don't have mesh markets, thought our products may be indeed mesh markets, Sentech as a whole, sells to everybody.

Appendix 3 Interview with Head Competitive Business Intelligence Marketing and Sales

HC: To understand a little bit of background, Sentech used to be a technical division of SABC, installing transmitters. It was a division internal part of SABC. What I understand is that in 1991, I think it was by SABC itself; they set it up as a company- a wholly owned and subsidiary of SABC—100% owned by SABC. They were not only doing it for SABC but for the other parties. They split from SABC. So, those are the genesis of Sentech, it was just a division.

By 1996, when the Sentech ACT was passed, and when now the shares of Sentech moved away from SABC to the state, the state then, under the Ministry of Communications. When you say: how did it negotiate its separation from the SABC...At the moment, it is 100% owned by the state, not the government because the government changes anytime. When you say: how did it become independent? It's a company; Sentech limited before that it was Sentech Pty Ltd.

Q: What is the difference between Pty Ltd and Limited?

HC: If you are raising funding and you are Pty Limited, there are some restrictions. You can offer the public whatever, if the company is traded on the stock exchange...So when you say: how did it become independent? It is not Sentech, which decided, I think it is the government division. This is because the government has Sentech, which carries technologically work that other companies can't do. In order to encourage winning voices, multiple voices, as a community radio station, you might do all these things on your own. So if it is able to go to Sentech, which specializes in this, they will do it, even for SABC. Sentech is their broadcaster. The initial set up of Sentech of common carriers concepts, the government's vision of Sentech for common carriers are very important. They drove Sentech to where it is now.

Q: What are the advantages and requirements of operating independently of SABC?

HC: One must qualify that, we are operating independently of SABC, though we also get income from SABC. Because of the nature, SABC is the biggest broadcasting

company. This is only the preface to answer the question. As the largest company, you are still somehow though you may be independent but your customer may also become independent. Now, we have to fulfil our company, you can't relax. That is not an advantage, but the good thing is that it is one of the positives that you have to look into your business, without having other additional businesses; even though they may conflict with your parent company. Like in the case of 1991, when Sentech tried to help other broadcasters, probably SABC would say, "Please don't help those people, we own you, you are therefore us, we take the first priority...for example, we are now able to help e-tv. Now, there are opportunities, we are able to explore other areas. Our vision is to be the leading broadband company in the Telkom place. We are also committed to look into the development of broadcasting industry. We are able to provide services over 80% of radio stations. We provide services to commercial radios.

HC: You see, there are some changes from the Telkom side; as such there is much of competition. It's the government vision to see to it that we beat other competitors who are offering the same services, and to align ourselves with the developments. So, competition is really a disruptive environment. The company itself and internally, must know what it needs to do. It has to be skilled because it has to be broadcasting, so some of the skills are not necessarily the same. And for you to take other challenges, you need funding.

Q. What are the challenges that the company is facing, that is:

Technologically?

HC: Simply, we have a radio network, television network. We do data, wireless to provide services (with different) technologies. We use terrestrial network transmitters satellite. We are also doing various strategies. With the opportunity of getting the new licence, to International voice traffic network, we need a switch, to be able to do IP (voice). In fact, we have VoIP network to do wireless Internet. The latest products for Sentech, bring about good platforms.

We are a unified platform offering broadband solutions and services. Everything runs over one network, this is easy for the customer and it is also a way to work for the future. They also use an MPLS/IPLS network (Internet Protocol/Multiple Protocol

network). With this network, you are able to build an air everything without disturbing any modular. It's flexible.

Economic?

HC: Economy may relate to marketing. We wanted to ensure business. Ask Maxine to show you six imperatives of Sentech. Now, growth, one should ensure that business grows in areas of operations. With growth, you get more revenue with sustainable net profit. When you say you need sustainable net profit, you grow revenue. This is because we need to take strategic part. Currently, the situation is that, since we use our own money, our debt is very high. Well, we need money to make these things balance. If the state allows and gives us money, which is not likely, we may buy the second share like Telkom's situation.

Political?

We also want to play our part in answering the government's vision to provide access to universal issues. We also need to play our role in that; in fact we are already doing that through signal distribution. People receive everything by putting a dish and so they pay for this. All of these things, we do our plans free of charge. With community radios, we do a lot of planning, we've got assistance from SABC. With community radios again, you apply to ICASA, then we come and assist you.

And regulatory strategies?

We were not regulated but now we are, as part of telkoms and it's very contesting. In our case our aim is to educate the regulator, which is ICASA, on issues that are anti-competitive. If they are to hear from the other side, then, there should be balance. Now, you should focus your efforts on educating system. The regulator has got limited companies to do research and things around, a number of people on the ground. Now, you should have good relations with ICASA and your clients so that there is a good balanced input inquiry in relation to the industry.

Q. What are the implications for the public service broadcasting?

HC: Though the network is old, we need to keep it upon the air and provide good service to them. For political issues, if we don't do our work, just imagine, the

President won't be happy. Currently the SABC with broadcasting part plays an important role in our revenue. Strategically, we have to be close to the public service broadcasting. People receive some channels from Isidingo and others. That is, we offer different channels that may be received on air. These are so much again in digital platform.

Q. What was the need for Sentech to come to existence?

HC: It was the same need for SABC. As a state broadcaster; why do we need a public broadcaster? We have education, environment and other things. So to do all things, we need something like Sentech, a division that was doing a technical work. For Sentech to come to existence, from point of view from 1996, it was due to provide other people, to encourage them. Otherwise, each broadcaster would have to get into a new business/new voices would have to set up their own network. It's like having five Telkom's all of them digging cables all around. So, from environmental point of view, it is not good to have so many signal distribution companies. It will also result in duplication of resources. Due to its strategy, it can block other voices out. We had to move out of SABC as such.

Well, if you want to take it further and say, why did you come to existence, well, its signal distribution function. You can't do away without signal distributor.

Q. Why did it prefer to merge with SABC, not being independent from the first take off?

HC: We did not merge because SABC had a technical division for marketing and advertising, while we had to work on broadcasting. We would do everything in the studio to the people. It must go to the place where it would be transformed and distributed around the country. So, the division was turned into a company so that it could do some of the works in order that the other people may receive signal and that we could get money from SABC. We are a company working under the company's Act but we are an independent company.

HC. Now, we are talking about technology? How prepared are we with technology? I think that there are challenges all over. First of all, we concentrate on the type of the

network that we use. The network we use should be suitable for new development. It should not be like traditional networks where if you have got a cable, you have got everything, like you can't move to anything. This one can interface with other software that is IT related. There are more applications driven there.

The issue of skills that we have to do is a challenge to everybody, because it is new. For more skilled people in our company, we have to train our own people. This means that there is a challenge to get more skilled labour. This is because older people did not do IT. People who are good engineers from Universities who graduated long back, are good at their respective fields but not on IT. This is a challenge to everybody. We have school of technology where we groom these people for more and better skills on newly improved technology.

Appendix 4 Interview with Portfolio Manager: Signal Distribution (PM 2)

Q. How did Sentech negotiate its separation from the SABC to become an independent company?

PM 2: The government wanted to free the airwaves and have more players into the market. They established the IBA Act. Sentech Act, Sentech was established as an Act of the government in order to accommodate not only the signal distribution of SABC, but any other company as well. As a part of SABC, we started doing signal transmissions for MultiChoice and M-Net stations. That was the forerunner. Sentech was then fully-fledged and independent, and we could provide services to other parties as well. In the IBA Act, it allows for the three...Sentech has a lot of infrastructure; we have got some 225 transmitting sites. Sentech was classified in terms of IBA Act as the common carrier of broadcasting due to its sustainable footprint. The second one is for people to do their own, that is private, and we have community broadcasters.

The main idea was to have an independent entity, to provide equitable services to all the people and broadcasters. We use the common infrastructure. Its benefits are that you cost to render the service that come down substantially. If everybody has to establish his own buildings, roads, antenna, it will become really expensive in terms of natural consolation where environmental impact assessment is difficult to obtain these days.

When SABC and Sentech were together they comprised of two levels: one was the broadcasting and making of programmes, combining programmes' schedule. The other was signal distribution. In terms of the IBA Act, they clearly define between the broadcasters and signal distributors. The advantage for Sentech is that we can provide services not only to SABC, to all the commercial televisions: e-tv and MultiChoice, M-Net programme, all the commercial broadcasters. That is, Kaya, Y-fm, Durban's P4. We provide to all commercial radio stations. This takes about 50% of community broadcasting services.

Q. What are your future plans?

PM 2: Since signal distribution is such a difficult issue, ICASA is not issuing/distributing new licences for broadcasting. The strong focus has been followed for couple of years to the establishment, of VSAT network, for multi areas to provide connectivity. In line with signal distribution, new developments on the new horizon are the establishment of digital idea and digital television. In digital idea, it is termed DAB (digital audio broadcasting). This allows additional broadcasters to broadcast a digital format in any given area. The problem why ICASA has not been issuing frequencies/new licence is because there is a scarce of frequencies official in Durban, Cape Town and Johannesburg. Now, digital radio opens up the waves because when allocating one radio, it is possible to push DAB transmitter. The other development/DTT (digital terrestrial television) with their one transmitter, they can run to five/six television services simultaneously. So those are the graph areas Sentech has tasted for the past couple of years, DAB as well as DTT to ensure that they are familiar with technology. So as soon as licensing prices come through we will focus on our infrastructure.

Appendix 5 Interview-Regional Manager (RM)

RM. Sentech was the maintenance department of SABC and was looking after the equipment of SABC. Because they could not use that infrastructure without SABC's concern, they were then forced to pull out of SABC to be enabled to serve MultiChoice and other stations. For them to be user-friendly industry establishment, they had to pull out of the SABC.

Q. What are the advantages and requirements of operating independently of SABC?

RM. One would not entirely be on only one organization. It also broadened the opportunity to a number of clients and other opportunities because different channels expect different expectations.

- To be exposed to different environments as the clients were actually coming from different environments. One would actually learn to adjust in the operation to suit them.

Requirements?

-The major one is the licencing. One has to have a licence.

-The other one is the mandate from ICASA and from the government, there is a social responsibility. This is because they own Sentech and they have got their own expectations. So we have to fulfil them.

Q. What are the challenges that the company is facing?

RM. Currently, the major challenges that we are facing are that, having operated in a much dominated environment Sentech was a monopoly. This is because they were the ones who provided the services. But now, we have a huge influx of other smaller operators; we are talking about people who are given licences by ICASA to operate their own institutions. In the past everybody wanted to operate with us. But now, smaller operators may have one transmitter. They don't have to come to us. We've got a lot of community broadcasters if they don't have we see a shift where they are now given their own transmitters to get their own licences. These are some of the dynamics we see in a position of a monopoly. All of a sudden you are faced with a lot of competitions from the market.

Q: Isn't Telkom somehow challenging?

RM: Well, I think with ICASA's announcements, one gets the impression that the licences are going to be open. So, Telkom may actually come in as another player, because it is a big operator. Eskom is also getting into the picture.

Q. What are the challenges that the company is facing, that is:

Technologically?

RM. Technically, we have a few challenges especially because we are moving from analogue set up into digital set up. We have a skilled arsenal of analogue system, which is now very old, and we turn to migrate into digital technology, and that is not very easy. Now, our concentration is on the younger technicians and we should take them into digital platform. We take them for six months, where we cook them.

Economically?

RM. Though the environment has changed, a lot of players have come into business, in a way, we are like players and referees at the same time. We set our own terrace. There are other players and the regulators also regulated our price systems that actually affected our economic dynamic.

Politically?

RM. It had some impact! Any movement in the politics has a burden on us. Those are some of the burdens we have to endure. We had a few changing structure, like people running the company. One can see a pattern coming. We had somebody long ago, now we have Dr. Sebiletso Mokone-Matabane. We also had Neëls Smuts, a good person, who wasn't involved in politics. From him, it went straight into the hands of politicians. Another element is the regulatory aspect of it, in terms of politics dictating what you should be. We don't decide, everything is decided for you.

RM. When the government has a mandate, this comes as a challenge to that company. We want to give professional services to the clients but then, there are other things that need to be done.

Q. What was the need for the Sentech to come to existence?

RM. Sentech had to be established because it was a vacuum that needed to be filled. Somebody has to provide the expertise of signal distribution, to serve the public interest and to provide information, education and many dynamics that come up with. This was therefore to fill the vacuum. They were also responsible not only for the radio, but also for the television.

Q. Why did it prefer to merge with SABC, not being independent from the first take off?

RM. It wasn't a matter of choice in SABC, because it was just one company, and it was just a little department, a technical department within SABC.

Q. Why did it prefer to be independent now?

RM. Sentech doesn't provide programme. It distributes whatever programme has been provided by the clients. To be our client, one must have programme. We have our own rules of broadcasting.

Q. Did it have its own CEO when it was with SABC? That is, what is your organizational structure?

RM. No, it was only a departmental head. It was only when it became independent that it had its own CEO. Structurally, it has CEO, COO, these form the top structure that governs Sentech. It reports to the board.

Q. What are future plans?

RM. They are to expand the company into the digital world, and be a major player.

Q. With rapid technological changes and developments, how prepared are you for those changes?

RM. We have almost overcome this with our school of technology. This is because if you don't have competent technicians there may be problems with a good provision of services. The clients as well have love for your skilled labour. No one provides this, it's only us and we look into keeping the standard.

Q. Who are your clients?

RM. That is, anybody from the community broadcasting who needs our services, commercial broadcasters like East Coast radio, people who actually don't have a network.

Q. Apart from the traditional province spectrum, what other business are concerned with?

RM. We don't have too much on the spectrum, apart from helping ICASA. If there is any need from us, we are willing to provide the services.

BEE, is to try and bring a lot of black owned companies into the main stream and providing services to Sentech.

Appendix 6 Questionnaire: Neëls Smuts

Question: How did Sentech negotiate its separation from the SABC to become an independent company?

Smuts: The development and separation from the SABC was an evolutionary process that extended over many years from 1990 until 1997 when the shares were transferred to the State. Following global trends, in respect of media and communications restructuring and developments in the South African media industry, a vision emerged in which a broadcasting signal distribution entity would be established to serve the South African broadcasters on an independent, impartial and self-supporting basis. As a part of the SABC it had already started to serve other broadcasting entities, firstly in the former TBVC states and secondly M-Net when it started operations in 1986. The steps taken and processes that took place in the development and separation period can be summarised as follows:

1.1 1990 – A divisional business unit for signal distribution was established within the SABC that served the SABC broadcasting services divisions and external entities on a business footing.

1.2 1992 – A wholly SABC owned private company, Sentech (Pty) Ltd, was established and the SABC signal distribution business was ‘sold’ and transferred as a going concern to the company against a loan agreement entered into with the SABC. Staff were given the opportunity to decide to transfer or not, but the response was a 100% for transfer. All signal distribution operational and capital assets were included. Although now a separate company, Sentech was still fully controlled by the SABC and was still a part of its inter-business financial management system. Commercially speaking and to the outside world Sentech was now in a quite different position and traded in its own name... The problem was credibility and a marketing issue. One must consider that the SABC had dominated broadcasting up to that point in time and was still the most powerful broadcaster. Any other broadcaster who had to compete with them and needed signal distribution services was very apprehensive to deal with the SABC. They feared that they would not be treated fairly, would financially help to

support the SABC and could be compromised by the knowledge that the SABC would gain of their plans and that their requirements would only be attended to on a secondary basis after that of the SABC had been satisfied. In due course it also established itself on its own premises in Honeydew and moved out of Auckland Park.

1.3 1994 – 1995 – In this period very significant change took place in South Africa with respect to the broadcasting industry with the establishment of the IBA and the Triple Inquiry conducted by them. The Inquiry included a dedicated public hearing on the position of Sentech. The Report published in August 1995, included a recommendation that Sentech be separated from the SABC and be converted to a public company in which the shares are transferred from the SABC to the Government. The National Assembly adopted this recommendation together with the other Triple Inquiry Report recommendations in 1996. No, Sentech was not a separated entity or rather an independent entity at that point in time. It was still fully owned and controlled by the SABC. In practice it was still a division of the SABC. All the directors on the Sentech board were SABC executives. An outflow of this was the adoption of the Sentech Act in 1996. In this period Sentech started its own cash management and were then also paid in cash by the SABC.

1.4 1998 – The implementation of the Sentech took a while so it was only in March 1998 that the shares were transferred and that the Board of Directors appointed by the Minister of Posts, Telecommunications and Broadcasting, took over control.

Q. What are the advantages and requirements of operating independently of SABC?

SMUTS. The advantages and requirements are provided in the following bullet points:

- The established signal distribution infrastructure and expertise, with reserve capacity, could be better used in Sentech serving many broadcasters and other applications, and a better scale of economy achieved.

Firstly, reserve capacity relates to the potential use of supporting infrastructure and common facilities. Supporting facilities involve the access road, electrical power supply

(power line to the site which is at remote locations specially built), standby electrical power generator (because power to remote sites are often interrupted for considerable periods) a building and a high mast, usually from 150 to 250 meters which may cost up to R5 million Rand. All these together may cost 10 to 15 million Rand for each station. Secondly, the common facilities involve transmitting antenna and telemetry (remote control and information system). The infrastructure and the common facilities can accommodate many broadcasting transmitters and telecommunication facilities. If the usage of a station is restricted to one entity, such as the SABC, then there would be a lower use on this capacity and the SABC would have to carry the burden of all the costs. With more users, the cost is divided between them and lower prices are charged – thus a better scale of economy. It would improve the financial survival of Sentech and provide for a better financial base to maintain and upgrade the facilities over time.

When e-TV arrived in the late nineties, their distribution was created by installing the required transmitters and only marginally, where required, upgrading common facilities. If e-TV had to build their own distribution infrastructure, they probably would not have been viable. The same applies to the private radio stations.

- The SABC does not have to have and pay for its own signal distribution infrastructure which may be under used. This point continues on and was already touched on in the previous item with the added explanation. One should consider that the SANC is an electronic media publisher that would like to use any platform to distribute its services. Not owning any one of them with the burden that goes with it would give them the freedom to spread their services. The future trends and the convergence of broadcasting, computers and telecommunications are leading to a broad base of electronic media with different distribution platforms, such as conventional broadcasting transmitters, the internet, cellular telecommunications and digital subscriber lines.

- The SABC, as a content provider and publisher, has the freedom to use any distribution platform, particularly in the evolving electronic media world. It has the

position because it is no longer responsible for Sentech or the need to build its own distribution infrastructure. Being Government property has nothing to do with it. What is critical for the SABC is that it has to survive in a competitive environment. If it loses too much market share (audience) then even government would lose interest to pay for it and it would lose its advertising and sponsorship income. Even the public would eventually object to have to pay for TV licences if the services are not in demand.

- The new broadcasters in South Africa, who were licensed since the IBA Act was promulgated, could get access to existing signal distribution infrastructure and mature quality operations, on equitable terms, like the SABC and other existing broadcasters, without the risk of being compromised financially or through an insight into their development plans. This significantly improved their viability.
- Sentech could develop itself on an appropriate course in response to technological development and convergence and avoid the threat of becoming obsolete. As part of the SABC, its position would have been limited as it would probably not have been in the interest or mandate of the SABC to allow Sentech to develop in such a way. It is normal for any company owned by another that the subsidiary company must fit in with the overall objectives of the holding company. Those objectives would be focussed on the aims and synergies of the parent company business. Those of the SABC and what Sentech is evolving into now are not compatible. For example, Sentech's venture into telecommunications.
- To ensure that the public broadcaster and other broadcasters would be adequately served, a common carrier broadcasting signal distribution licence as defined in the IBA Act in terms of its obligations was issued to Sentech. Furthermore, an evergreen contract was concluded with the SABC which ensured that the SABC would be provided with signal distribution services on an ongoing basis.

Q. What are the challenges that the company is facing?

SMUTS. This question should be dealt with by the current executive management.

Q. What are Sentech's (1) technological, (2) economic, (3) political and regulatory strategies and (4) what are the implications for the public service broadcasting?

SMUTS. This question should be dealt with by the current executive management.

Q. What was the need for the Sentech to come to existence?

SMUTS. To facilitate the opening up of the South African broadcasting industry which was then being dominated by the SABC?

- To serve an expanding broadcasting market on an equitable, non-preferential and non-discriminatory basis.
- To increase the use and efficiency of its infrastructure.
- To ensure development into a converged communication industry.

Q. Why did it prefer to merge with SABC, not being independent from the first take off?

SMUTS. There was never any situation or an opportunity for a choice on this point. The origin of signal distribution was part of the historical public broadcasting scenario that dominated most of the world except the USA. The SABC, established in 1938, was modelled on the British Broadcasting Corporation (BBC) that included the operation of its own transmitters. It is a case of a common and integrated past which evolved into separate futures. The BBC has also, recently, after the formation of Sentech, completely divested itself from its transmitter operations and sold it to a private consortium – now known as Castle Towers. This trend has been followed in most countries, even in the USA.

Q. Why did it prefer to be independent now?

SMUTS. The reasons why it preferred to be independent now has been covered in the foregoing items.

Q. What is it actually engaged in? Does it have its own programmes?

SMUTS. What it is presently engaged in and whether it has its own programmes should be dealt with by the current executive management. Previously, it was its policy not to make its own programmes but only to relay the programmes of other entities, mostly its customers. It could of course consider offering programme bouquets such as MultiChoice does which still falls within the distribution activity. In the MultiChoice case, they do not make their own programmes. The programmes are made by M-Net or other separate entities. The MultiChoice operation is a very large integrated and sophisticated broadcasting signal distribution operation and is geared to deal with a converged and multimedia future.

Q. How did separating from SABC benefit Sentech? This question has been dealt with in the foregoing questions, particularly questions 2 and 5.

SMUTS. Did it have its own CEO when it was with SABC? That is, what is your organisational structure?

When the signal distribution division was established in 1990, a chief executive was appointed to head the division and to form part of the SABC Group Executive controlling all the divisions. When the division was converted into Sentech in 1992, a managing director was appointed and a self-sufficient organisational structure established. The structure included an engineering division, an operations division, finance and administration division and marketing and communications division.

The current structure has changed and should be determined in consultation with the current executive management.

Q. What are your future plans?

SMUTS. This question should be answered by the current executive management.

Q. With rapid technological changes and developments, how prepared are you for those changes?

SMUTS. This question should be answered by the current executive management.

Q. What competitions do you face with competing companies like Telkom and the others?

SMUTS. This question should be answered by the current executive management.

Q. What are your aims and objectives?

SMUTS. This question should be answered by the current executive management.

Income statements

for the year ended 31 March 2004

		Group		Company	
		2004	2003	2004	2003
	Notes	R'000	R'000	R'000	R'000
Revenue	16	550 329	462 362	530 317	437 542
Cost of sales		(426 671)	(354 256)	(401 952)	(331 506)
Gross profit		123 658	108 106	128 365	106 036
Selling expenses		(28 002)	(12 524)	(27 715)	(11 297)
Administration expenses		(29 671)	(24 500)	(29 671)	(24 500)
Other operating expenses		(85 016)	(55 606)	(93 864)	(50 253)
Operating (loss)/profit	17	(19 031)	15 476	(22 885)	19 986
Interest received		1 176	10 749	1 166	10 743
Finance costs	18	(55 495)	(40 004)	(55 447)	(39 906)
Loss before taxation		(73 350)	(13 779)	(77 166)	(9 177)
Taxation	19	24 460	9 020	24 460	9 020
Net loss for the year		(48 890)	(4 759)	(52 706)	(157)
Losses per share (rands per share)	20	(24 445)	(2 380)	(26 353)	(79)
Headline losses per share (rands per share)	20	(23 873)	(4 633)	(25 781)	(2 268)