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GOVERNMENT NOTICE

DEPARTMENT OF COMMUNICATIONS

No. 308

13 April 2012

ICT POLICY COLLOQUIUM DISCUSSION DOCUMENT

I, Dina Pule, Minister of Communications, hereby publish a discussion document titled 'Defining a new era in ICTs for all South Africans' to facilitate discussions at the National ICT Policy Colloquium to be held on the 19th and 20th of April 2012.

The discussion document can also be found on the Department's website at www.doc.gov.za

MS DINA PULE, MP
MINISTER OF COMMUNICATIONS

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DEPARTMENT:
COMMUNICATIONS
REPUBLIC OF SOUTH AFRICA

Defining a new era in ICTs for all South Africans

The path to creating a National Integrated ICT Policy for South Africa

Department of Communications

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1. OBJECTIVE

1.1. The purpose of this discussion document is to demonstrate the need to review Government's existing ICT policies in South Africa as well as to present recommendations and a way forward. The Department of Communications (DoC) is embarking on a comprehensive full policy review process of all policy documents post 1994 which will culminate in an integrated National ICT policy for South Africa.

1.2. This document's purpose is to highlight key areas which will help with preparation for participation in an important Colloquium driven process where the DoC plans to develop an integrated National ICT policy to usher in a new era in ICTs for all South Africans. At the outset, it is vitally important for all stakeholders reading this document to understand that the DoC is not articulating an internal vision but rather building a national integrated vision which needs to find expression in a pragmatic policy to advance an ICT industry and profile in South Africa which is tightly geared with the country's economic engine. The implementation of this vision therefore will require a constructive critique of past and current ICT policy construct and require a fresh look at the way forward.

1.3. Content contained in this document will provide a high level overview of the policy landscape and to describe the next steps which will lead to policy formulation in the new era. Thus it is not intended to be a comprehensive document in keeping with the phase of the process to follow.

1.4. ICT policy architecture post-apartheid focused on addressing the imbalances and consisted of a well formulated draft policy and discussion paper led process which then informed the legal context for promulgation of the various Acts. However the effectiveness of policy design especially in the last decade shows evidence of an

evolutionary policy development and not necessarily that of strategic ICT policy design to promote and catalyse economic growth in South Africa.

1.5. Characteristics inherent of an integrated policy need to reinforce the socio-economic transformation objectives of South Africa by accelerating access, affordability, uptake and usage of secure ICT infrastructure and services whilst addressing the competitiveness of the ICT industry as a whole. An integrated policy approach will also address some of the key issues which started to become segmented over the last decade. An integrated approach to building the new policy will therefore also serve as an important connecting bridge to the initial and more recently developed ICT policies in broadcasting, telecommunications, e-commerce and the postal services.

> *Content presented in this paper will illustrate an apparent disconnect in policy and economic stimulus initiatives and thus motivate the requirement for a transparent and participative process involving the public and private sector to develop a National integrated ICT policy for South Africa. This paper will also highlight a critical success factor dependency for implementation of an integrated ICT policy being inter-governmental cohesion and ongoing private-public partnering support of the national ICT goals.*

1.6. Thus the process going forward will embrace an approach which incorporates a review of ICT policy effectiveness, take past learning's into account and through use of a participative engagement model, build a National integrated ICT policy for South Africa. Following this model of engagement with all stakeholders including end users of ICT systems and services in South Africa, the DoC plans to submit a National integrated ICT policy for cabinet approval in the first quarter of 2013.

2. THE DEPARTMENT OF COMMUNICATIONS

2.1 Mandate of the Department of Communications

The Department of Communications (DoC) mandate which is derived from relevant legislation is: "*To create a vibrant ICT Sector that ensures that all South Africans have access to secure, affordable and accessible ICT services in order to advance socio-economic development goals and support of the African Agenda and contribute to building a better world*"[1].

2.1.1 In order to fulfill this mandate, the DoC's core functions include that of developing ICT policies and accompanying legislation which create the conditions for an accelerated and shared growth of the South African economy. The DoC is also required to strengthen the ICT regulator in order to enable it to regulate the sector which ensures growth and stability in the sector as well as to also regulate the sector in the public interest.

2.1.2 Additionally the DoC has to ensure the development of secure, robust, reliable and affordable ICT infrastructure which enables the uptake and usage of ICT solutions and services to meet the needs of the country and its people.

2.1.3 The DoC has prioritised the building of an inclusive information society. This coordinated development of an inclusive information society is aimed at establishing South Africa as an advanced knowledge society in which information and ICT tools are key drivers of economic and societal development.

2.1.4 In order to fulfill its mandate, the DoC acknowledges the need for e-skilling the nation to achieve equitable prosperity and global competitiveness[2]. In this regard,

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[1] www.doc.gov.za
[2] DoC 2010: National e-Skills plan of action

the DoC has started with an initiative to establish the e-Skills Institute as a national catalytic collaborative agency to:

- coordinate efforts across key stakeholder groups in Business, Government, Education and Civil Society in our country, with other countries of like mind and with the relevant international agencies and global businesses;

- identify any duplications and gaps in a coordinated approach across all stakeholder groups;

- build collaborative approaches to addressing the needs; and

- develop processes that can evaluate the impact on the country's national goals as expressed in the Medium Term Strategic Framework (MTSF).

2.1.5 Lastly, the DoC is required to enhance the capacity of state owned entities as well as to exercise oversight over the operations and proper governance of the respective State owned Companies (SOC).

2.2 The DoC's State Owned Companies and Agencies

2.2.1 The DoC is responsible for the following state owned companies and agencies viz., the South African Broadcasting Corporation (SABC), Sentech, National Media Electronic Institute of South Africa (NEMISA), the South African Post Office (SAPO), Postbank which is a subsidiary of the South African Post Office (SAPO), the za Domain Name Authority (.zadna) and the Universal Service and Access Agency of South Africa (USAASA).

Figure 1: The DoC: State owned Companies and key portfolio organisations

2.2.2   Additional information on each of these entities is presented later on in the document within the respective sections dealing with broadcasting, telecommunications and the postal services.

2.2.3   Independent Communications Authority of South Africa

The Independent Communications Authority of South Africa (ICASA) arose out a merger of then Independent Broadcasting Authority (IBA) and the South African Telecommunications Regulatory Authority (SATRA). This merger was enacted by the Independent Communications Authority of South Africa Act No.13 of 2000. In addition to developing ICT regulations, ICASA is also responsible for the issuing of Electronic Communications Network Services (ECNS), Electronic Communications Services (ECS) as well as Broadcasting Services (BS) licenses to service providers. The regulator is further required to enforce compliance with rules and regulations as well as act in the public interest protecting consumers from unfair business practices and poor quality services. Lastly, ICASA has to manage the effective use of radio frequency spectrum in South Africa.

Additional information on ICASA is presented later on in the document within the sections dealing with broadcasting, telecommunications and the postal services.

2.3 Other key government entities tasked with ICT mandate

2.3.1 The State Information Technology Agency (SITA) was established in 1999 in provision of the State Information Technology Agency Act No. 88 of 1998. SITA provides mandatory and non-mandatory ICT services to Government and reports into the Department of Public Service and Administration (DPSA). The primary objectives of SITA include;

- Consolidation of the State's Information Technology resources
- Deliver cost efficiencies through solutions which leverage procurement scale;
- Enhanced system interconnectivity;
- Increased delivery capabilities; and to
- Support the delivery of e-Government

2.3.2 Broadband Infraco is a licenced SOC in the telecommunications sector which reports into the Department of Public Enterprises (DPE). It was established under the Broadband Infraco Act No.33 of 2007 with the aim of expanding the availability and affordability of access to electronic communications.

Broadband Infraco is required to make available long distance telecommunications network infrastructure capacity mainly to licensed private sector partners in order to unlock economic growth especially in the underdeveloped and underserviced areas. The company is required to expand the availability as well as affordability of access to the national and international wholesale broadcast telecommunications connectivity based infrastructure.

2.3.3 The Media Development and Diversity Agency Act No.14 of 2002 was published by Government in order to establish the Media Development and Diversity Agency (MDDA).   The main aim of the MDDA is to help create an enabling environment for media development and diversity that is conducive to public debate and discussion and which reflects the needs and aspirations of all South Africans.   The MDDA was also required to promote media development and diversity by providing support mainly to community and small commercial media projects in South Africa where this included encouraging ownership and control of access to media by historically disadvantaged groups.

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public enterprises
Department
Public Enterprises
REPUBLIC OF SOUTH AFRICA

government
communications
Department
Government Communication and Information System
REPUBLIC OF SOUTH AFRICA

SITA

Broadband Infraco

mdda
MEDIA DEVELOPMENT & DIVERSITY AGENCY
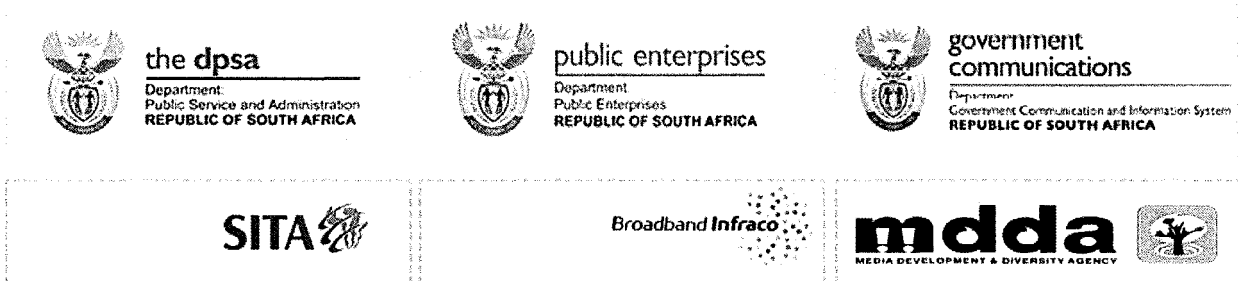
Figure 2: The DPSA - SITA, DPE - Broadband Infraco and Government Communications and Information System (GCIS) - MDDA

Reference is made to Broadband Infraco, SITA and the MDDA later in the document in the sections dealing with telecommunications, e-Government, digitising government and broadcasting respectively.

3. OVERVIEW: ICT LANDSCAPE IN SOUTH AFRICA

3.1 Policy history and developments

3.1.1 In the period post 1994, the DoC and its predecessor department known as the Department for Posts, Telecommunications and Broadcasting developed well-researched and thorough policies for ICT's, comprehensively dealing with broadcasting, telecommunications, the postal services, ICT skills development, universal service and e-commerce.

3.1.2 An analysis of the strategy formulation and policy intervention as early as 1997 by the then Ministry for Posts, Telecommunications and Broadcasting shows intent to address ICTs relative position in the overall economy. The ICT sector which at that stage contributed to approximately 4% of South Africa's Gross Domestic Product (GDP) was already recognised as being one of the fastest growth areas which would contribute to job creation and overall economic growth in South Africa. Government at the time cited a need for investment into the industry by both government and the private sector to successfully grow the ICT industry. Due to this and congruent with the global shift away from an industrial goods and services based economy towards that of a knowledge based economy, the strategy and subsequent policy position by the DoC was already addressing key success drivers to transform the industry.

3.1.3 Towards government's own use of ICTs, the directional policy stance taken by the DoC at the time addressed the hitherto fragmented approach by Government's own spending and use of ICTs as an enabler of effective government operations. ICT enabled transformation of government was identified as a catalyst to drive growth and progress in the overall ICT industry in South Africa. It was similarly recognised at this stage that government as a key user of ICTs would not only improve its own overall operational effectiveness but had an obligation to provide and make available electronic based services to South Africa's citizens as well.

Thus the policy and regulatory regime at the time emerged from specific themes, prominent and relevant to a country entering into the democratic dispensation. The diagram below highlights major inflection points which informed these themes and the key Government interventions in response to these themes.
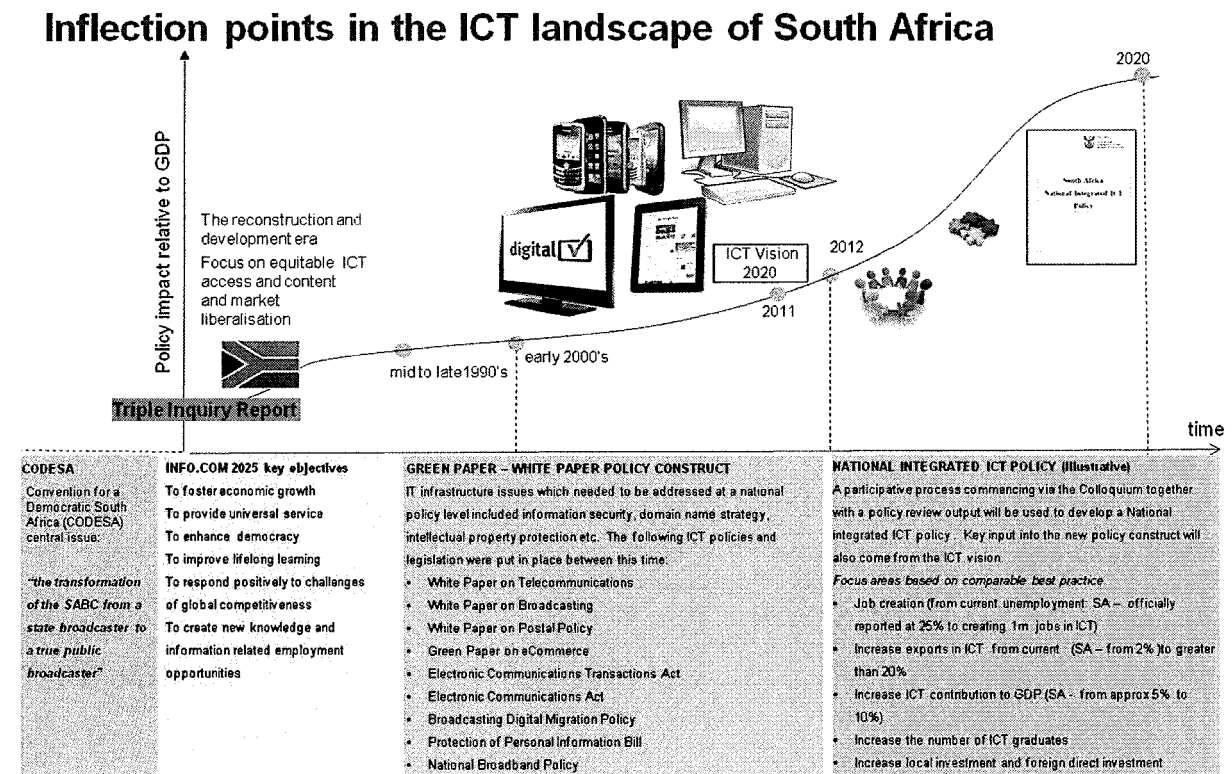
Figure 3: Inflection points in the ICT landscape of South Africa

3.1.4 Immediately following post-apartheid South Africa, the ICT policy design construct was aimed at shaping market liberalisation, universal service and millennium development oriented ICT goals which addressed the Digital Divide in society. It becomes evident that the policy immediately post 1994 and which even carried through to the early 21st Century took on an almost utility based approach where ICT policy focused on the provision of basic needs. This approach was also in keeping with government's priority attention given to the reconstruction and development mandate post-apartheid and where for ICTs this then implied universal service and access delivery priorities for telecommunications, the postal services as well as broadcasting.

In a democratic country emerging out of the imbalances created by apartheid, key imperatives which needed immediate attention included broadcasting sound and television content in the eleven official languages, the genre of content as well as a requirement to develop skills and improve the racial representation of these skills in the more technical areas of ICTs.

3.1.5   **Figure 3** also clearly shows a participative driven policy process undertaken by the DoC through a green and white paper process which then led to the formulation of the various acts governing the ICT industry. Preceding this, transformation was informed by various political developments taking place in the country before 1994 as South Africa was preparing for a democratic government. Thus the Convention for a Democratic South Africa (CODESA) driven process had a priority focus on broadcasting in order to enshrine and cultivate an expression of democracy through the media.

3.1.6   Important outcomes and stated intent from a very visionary policy era in the late 1990's to the early 2000s by the DoC included the creation of Community Information Centres, Cyber cities, the Institute for Satellite and Software Applications (ISSA) software training programme with a focus on telecommunications and satellite software applications, telemedicine, a global satellite and cable strategy, government IT policy including online government and distance learning. This outlined a project based approach which would create measurable and visible outcomes of policy implementation.

3.1.7   At inception and as illustrated in **Figure 3**, the Triple Inquiry Report was mandated by the Independent Broadcasting Authority Act No. 153 of 1993 to conduct an inquiry into the viability of public broadcasting services with particular reference to funding, the limitations on cross-media control of private broadcasting services and the conditions regarding local television content and South African music.

3.1.8 A cornerstone of all ICT policies was the recognition that South Africa is a newly formed democracy and therefore in a state of transition. Thus, the policies developed by the DoC at the time had specific principles which formed fundamental building blocks to address universal service and access, local content, capacity building, a need to establish an independent regulator, commence market liberalisation in the telco and broadcasting sectors and to address funding requirements. A review of the policies subsequently developed for broadcasting, telecommunications and the postal sector clearly evidence robust objectives to steer the industry towards a regulated environment which addressed these key priority areas.

3.1.9 However the ICT policy design and intervention from the early 21st Century onwards to present day reflect an evolutionary approach to policy, an approach which is characterised as being mainly reactive to technology advancements and changes. At the time in global comparative terms, the regulatory environment even in developed countries could not keep pace with the fast changing advancements in ICT based engineering and technology solutions, increased mobility of people using telecommunications services and global access to information by users from different parts of the world across different legal jurisdiction and boundaries. Like most countries at the time, South Africa was focusing its policy in the right areas of ICT but found it challenging to deal with the convergences aspects of ICT. This together with other factors pertaining to the macro-economic environment had a direct bearing on the effectiveness of policy design and implementation.

3.1.10 Various attempts were made to reinforce the socio-economic policy imperatives into policy in the last decade, but a disconnect started to emerge between these national imperatives and ICT polices during this era. ICT policy started to look and feel evolutionary as it reacted to changes in convergence between telecommunications and broadcasting and national imperatives started to lose focus as a priority area. Policy design entered into a new phase of complexity

and needed to factor in socio-economic millennium development oriented goals reform on the one extreme and on the other extreme deal with market liberalisation and demands of a highly competitive market applying pressure for change. Another observation is that the policies tended to be broadly relevant versus directionally specific to guide industry growth and access to ICT services across all user groupings.

ICT Policy and Regulatory Environment
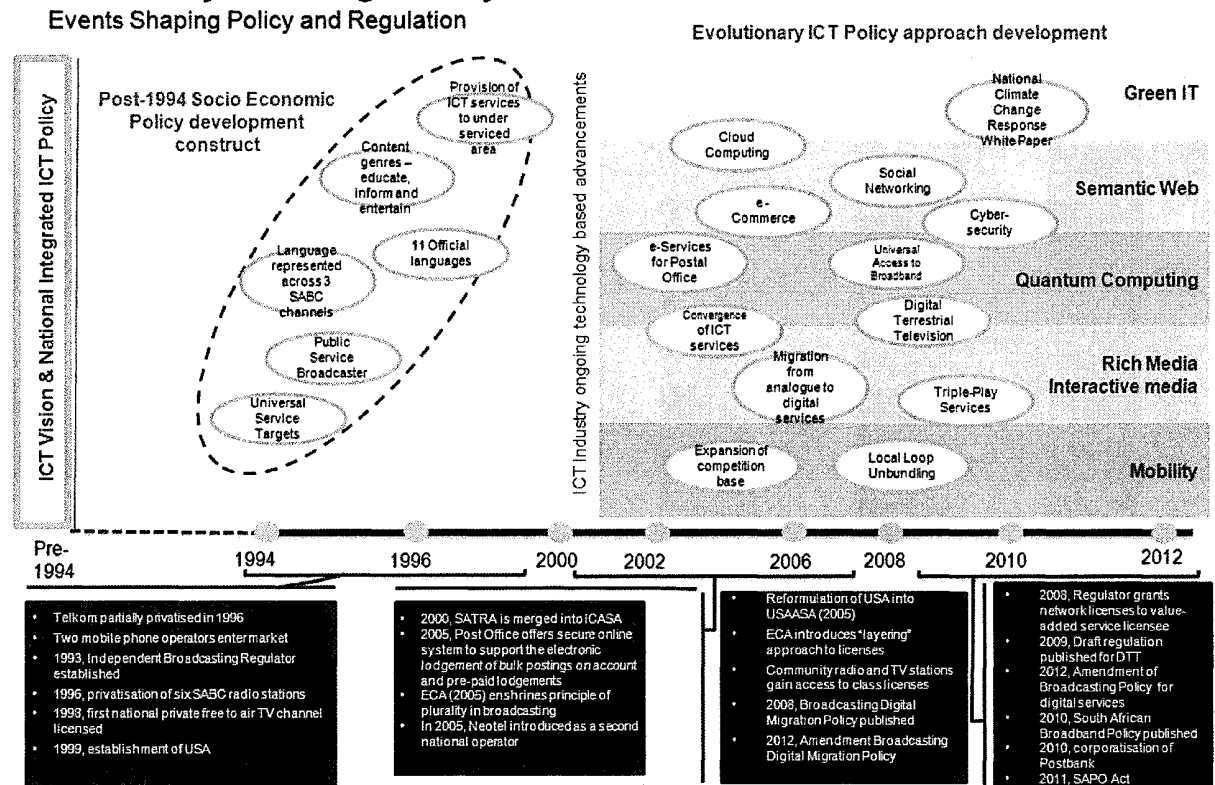
Figure 4: ICT Policy and regulatory environment - events shaping policy and regulation

3.1.11 As the DoC enters into a more integrated policy design approach for ICT policy, it is expected that the dynamically changing technology landscape as illustrated in **Figure 4** will not be completely ignored, but rather where there will be a deliberate shift towards GDP linked initiatives. Technology trends both at a local and global level will continue to change course dynamically as demand for ICT services and systems increase and change. Whilst the DoC needs to constantly keep this on its policy radar, a tendency to become technology driven should be

avoided. An effective National integrated ICT policy regime should drive outcomes relevant to industry and citizens in order to improve gearing with the country's economic engine.

3.2 Developments in broadcasting industry

3.2.1 A major deliverable produced by the then IBA in 1994 was the Triple Inquiry Report. Given that South Africa was a new democracy and understanding the major influential role the media plays in nation building and in addressing diversity across the full economic spectrum of South Africa's population groupings, only interim broadcasting licences were granted by the IBA until more informed decisions could be taken based on the findings of the Triple Inquiry Report. A three tier broadcasting model consisting of public, commercial and community broadcasting was introduced.

3.2.2 The DoC released a White Paper on Broadcasting in 1998 which sought to address the lack of a specific policy framework which the IBA Act did not set out. The scope of this policy process included setting up a broadcasting system which addressed universal access, diversity, national building, education and strengthening the moral fibre of South Africa society. Key issues raised in the White Paper included the need to restructure the SABC and the need for a single regulator to provide seamless regulation of telecommunications and broadcasting, an imposition of local content quotas and the introduction of community television broadcasting in South Africa. The Broadcasting White Paper also addressed the multi-channel broadcasting environment that would come about with the introduction of digital broadcasting.

3.2.3 The development of human resources and capacity building within the broadcasting sector amongst historically disadvantaged groups formed an important tenet of the Broadcasting Act No. 4 of 1999. Thus NEMISA was established as an institution of learning to mainly teach broadcast production skills for radio and TV. In addressing the objective to increase racial

representation in technical areas of broadcasting, NEMISA's prime focus was to train previously disadvantaged individuals and particularly women with broadcasting skills. Hence skills development together with ownership formed key transformation objectives of policy.

3.2.4 In preparation for the transition to digital broadcasting, the DoC released a digital broadcasting policy in August 2008. Using the same family of Digital Video Broadcast (DVB) standards viz. Digital Video Broadcasting Handheld (DVB-H), eTV and Multichoice were granted mobile broadcasting licences in 2010. A mobile broadcasting licence was also granted to Mobile TV, a new consortium who indicated that they would be trialing the Digital Multimedia Broadcasting (DMB) standard.

3.2.5 Broadcasting in South Africa, with a few exceptions is now a vibrant industry consisting of public service, commercial and community radio and television broadcasters operating across the country and providing content via satellite and terrestrial platforms. Sentech and the SABC play a key role in the fulfillment of the public services broadcasting mandate. eTV, Multichoice and Top TV are classified as private (commercial) broadcasters and the Kagiso and Primedia Groups own and operate television, multimedia and radio station assets in the country respectively.

3.2.6 After a delayed start for various reasons, the transition to digital broadcasting is a key focus area for broadcasters and other players within the ICT industry at present.

3.3 Developments in telecommunications industry

3.3.1 A Green Paper on Telecommunications Policy was launched in July 1995 by the then Minister for Posts, Telecommunications and Broadcasting inviting public comment. This was followed by a white paper which sought to address universal service, market structure and the need for an independent regulator. Integrating

the rural and under-serviced historically disadvantaged groups received key focus and led to the formulation of the then Universal Service Agency (USA) which later became USAASA.

3.3.2 Congruent with recommendations by the World Trade Organisation (WTO) in that period to liberalise the telco market, the DoC then embarked upon the partial privatisation of Telkom as well as prepared for a second network operator to enter the market. Market liberalisation and especially all related activities pertaining to the partial privatisation of Telkom was not a simple task. Prior to 1994, Telkom was a parastatal and thereby providing a multitude of services within monopolistic market conditions.

3.3.3 Policy protection of the incumbent making a transition to a commercial market required comprehensive consideration. Whilst various protection measures were put into place to ease the transition of the incumbent into a competitive telco market giving the incumbent an opportunity to adjust to this new environment, the incumbent had to nevertheless also fulfill universal access obligations which were not met.

3.3.4 In order to promote universal service and access and reduce barriers to entry in the telecommunications sector, government took a decision to introduce the Universal Service Area Licences (USAL). These were to be licenced to build telecommunications infrastructure in areas declared as underserviced (i.e. areas with less than 5% teledensity). Although government provided financial support to the licences USALs, many could not sustain themselves beyond this support.

3.3.5 Skills development in the telecommunications sector was driven by policy intervention and also led to the establishment of the space program as South Africa proudly participated in satellite technology initiatives. This program was especially targeted at the learning and development of skills within the Historically Disadvantaged Individuals (HDI) groupings. Looking back today, this

initiative was undoubtedly one of the aspects which enhanced South Africa's bid to host the Square Kilometre Array (SKA) project.

3.3.6   Ongoing market liberalisation together with the award of mobile operator licences to MTN, Vodacom and Cell C transformed the telco landscape of South Africa. South Africa like most developing countries is characterised by a large base of prepaid mobile subscribers where many of whom may have not previously had access to fixed line telco services.   The promulgation of the Electronic Communications Act No. 36 of 2005 (ECA) gave rise to convergence based IT and telco services being offered in the market and more recently fixed mobile convergence based solutions are also being offered.   The customer base of mobile operators therefore consists of both the consumer and business segments and where these products and services are sold via retail and wholesale distribution.   The value chain of telcos operating in the converged technology space has also introduced various process changes which impact both internally to the operators as well as externally to the industry and market.

3.3.7   Sentech and Broadband Infraco are also significant players in the telecommunications sector currently offering backhaul and connectivity solutions to specific market segments.   Government's support of the undersea cable projects and more especially the role the DoC plays in regional African programs to increase connectivity across the continent has provided a good foundation to drive down prices and increase access to secure and affordable ICT services.

3.3.8   Some of the complexities telecommunications policy and regulation had to deal with include that of effectively catering for facilities leasing, co-location, wholesale products and fair pricing as well as the separation of infrastructure and services whilst also continually trying to effect changes in pricing and affordability to the business and consumer segments.

3.4 Convergence

3.4.1 Convergence came about in broadcasting and telecommunications mainly through the introduction and increased usage of digital based systems. Prior to the use of software driven broadcasting and telecommunications systems, equipment was designed and manufactured using electronic circuitry otherwise mainly referred to as analogue systems.

3.4.2 However from the 1990s to present day a few technology trends which introduced quantum change to the domain of broadcasting, telecommunications and Information Technology (IT) are: solid state storage, compression technologies, embedded software and component miniaturisation, the Internet, operating system capability and fibre optic network connectivity.

3.4.3 Increased usage of digital systems in the design and manufacture of professional broadcasting and telecommunications systems brought about a fundamentally changed operational environment. In broadcasting, radio and television production and post-production systems underwent a complete overhaul as media took on a file based format and transformed the manner in which content was acquired, produced, stored and played out for transmission purposes. For telecommunications, networks offered more capacity, could be managed and configured remotely and the Internet Protocol (IP) protocol was introduced to carry traffic which did not require real time network response times. For broadcasting similarly it became possible to transmit more channels within the same bandwidth taken up by one analogue TV channel and this delivered spectrum efficiencies.

3.4.4 Later on and especially in the last decade, mobile telecommunications systems introduced a further aspect of convergence whereby fixed mobile convergence solutions became possible as fixed line network systems migrated to Next Generation Network capability at the core. It also became possible to deploy broadcasting and telecommunications systems together to offer bidirectional

interactive media products and services. Mobile broadcasting also became possible with advancements in orthogonal frequency division multiplexing introducing a robust method to transmit media whilst in motion.

3.4.5 The increasing use of IT based systems in broadcasting and telecommunications operations also carried through to changes on the business and consumer side. Smartphones and tablet devices offering increased capability to serve as both business tools and portable multimedia systems grew market share significantly in the last two years. With the functionality of computer based systems and network capabilities ever advancing, convergence is now starting to evolve to a completing different paradigm viz. where financial services e.g. banking may be conducted on non-smartphone mobile devices and mobile telecommunications based solutions are being adopted as tools of trade in healthcare and agriculture etc.

3.4.6 Thus convergence of technologies through the change to digital systems introduced change across the value chain of broadcasting, telecommunications and where different industries are now colliding in an intersection of IT systems and network connectivity.

3.5 Impact of convergence in broadcasting, telecommunications and postal services

3.5.1 Through earlier policy intervention, the merging of the regulator in anticipation of a converged environment helped to a certain extent to deal with regulatory complexities. The issue of licences in distinct telecommunications, broadcasting and electronic media (e.g. broadband content) categories was becoming blurred and addressed at first via the Convergence Bill which subsequently became the Electronic Communications Act in order to address Section 192 of the Constitution. The ECA specifically caters for a converged telecoms,

broadcasting and information technology operations. In 2006, the Postal Regulator was incorporated into ICASA with the publishing of the ICASA Amendment Act No.3 of 2006. This was reflective of the growing requirement to provide policy direction and regulation to a fast converging ICT industry.

3.5.2 The ECA made significant progress towards a legislative framework to enable and promote convergence and technology-neutrality. The DoC released the Digital Broadcasting Migration Policy in 2008 and National Broadband Policy in 2010. In the future, policies in this area and more especially the interdependency between these policies and effecting regulation will be of paramount significance to guide an accelerated growth in broadband access.

3.6 Developments in postal services industry

3.6.1 Following on the work of a specially appointed technical task team via a green paper led process to review postal services; a white paper on postal policy was developed in 1998. This provided a modernised framework for the postal services sector to provide relevant electronic services in the new millennium and subsequently led to the establishment of the SAPO via the amendment of the Post Office Act No. 44 of 1958. It is important to distinguish that not all parties providing postal and courier services in South Africa fall under the ambit of a regulated environment at this stage.

3.6.2 SAPO plays a key role in addressing and fulfilling universal service in the country with operations in small towns to large cities. Additionally, the plans to further transform SAPO through the corporatisation initiative as well as the application for a banking licence demonstrates an advanced and modernised policy construct. The banking licence will equip Postbank to provide banking services which will address the under banked and unbanked population in South Africa thereby integrating these segments into the economic mainstream.

3.7 Parallel timeline comparison view of global ICT developments

3.7.1 In the same timeline of the last decade to fifteen years, elsewhere in the world similar policy intervention was being applied to deregulate the telecommunications market as well as to cater for the impact of convergence and digitisation. There are multiple instances of incumbents privatising and transitioning to fixed mobile operators in a competitive marketplace. In particular, the European Union (EU) and International Telecommunication Union (ITU) were actively addressing the broadcasting and telecommunications sectors through policy and regulation dealing with convergence technology based solutions and services.

3.7.2 **Figure 5** illustrates comparative policy and legislative milestones for developed countries as well as the events structured to deal with developing country groupings at a global level of agreement.

Parallel timeline view: South Africa – Global
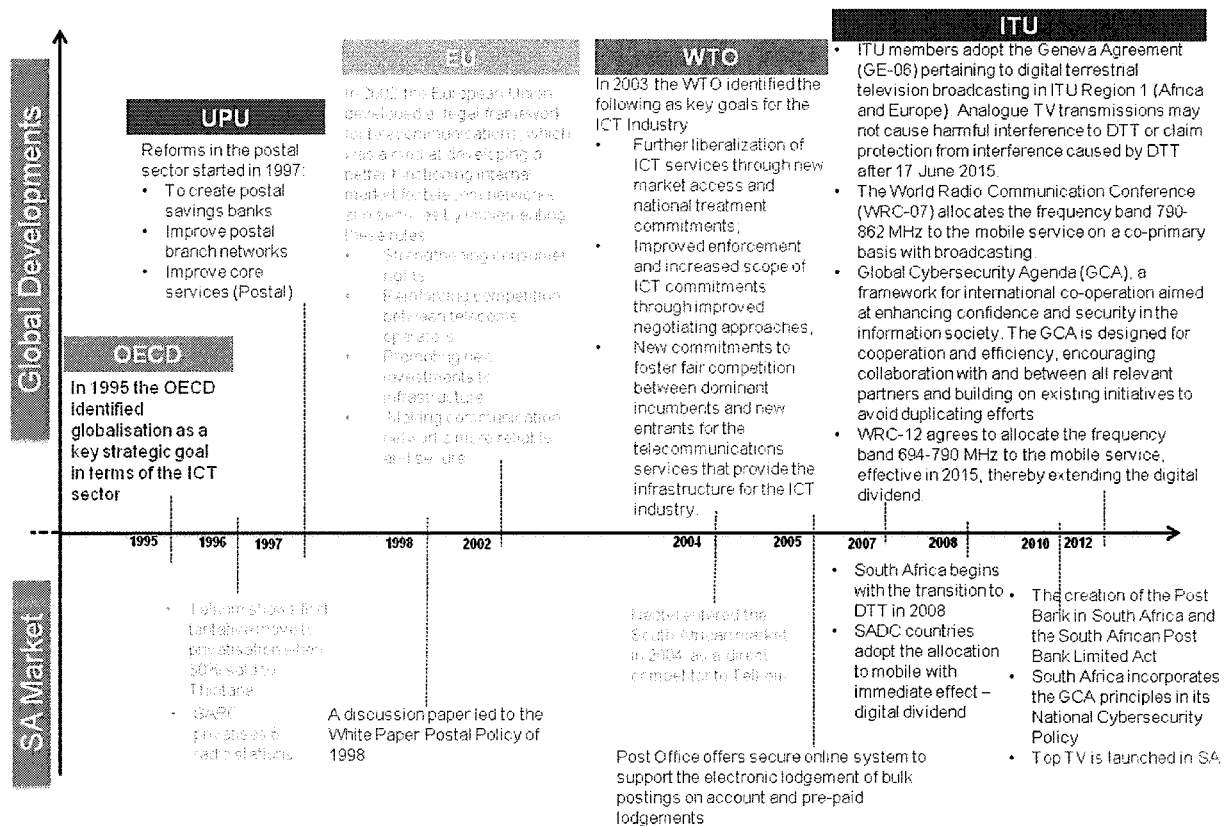
Figure 5: South Africa – Global, a parallel time view

3.7.3 It is also important to observe a growing focus on the implications of information confidentiality pertaining to consumers and in an ever increasing online world, the issue of cybersecurity also started to receive attention at a globally co-ordinated level.

3.7.4 South Africa is a signatory of the ITU Agreement (regional agreement on digital broadcasting Geneva Agreement - 2006 (GE-06)) focusing on the development of a frequency plan for digital broadcasting. In terms of this Agreement, analogue television transmissions shall not cause harmful interference to digital transmissions nor claim protection from harmful interference caused by digital transmissions after June 2015. Matters pertaining to spectrum will become a major focal point in shaping wireless broadband growth in South Africa. An economic perspective of the Digital Dividend is illustrated in **Figure 6**. As spectrum becomes available post the analogue switch off for broadcasting services, and together with frequency allocation in other frequency bands, the opportunity to establish and expand broadband services needs to be addressed as a priority.

Figure 6: An economic driven perspective of the Digital Dividend

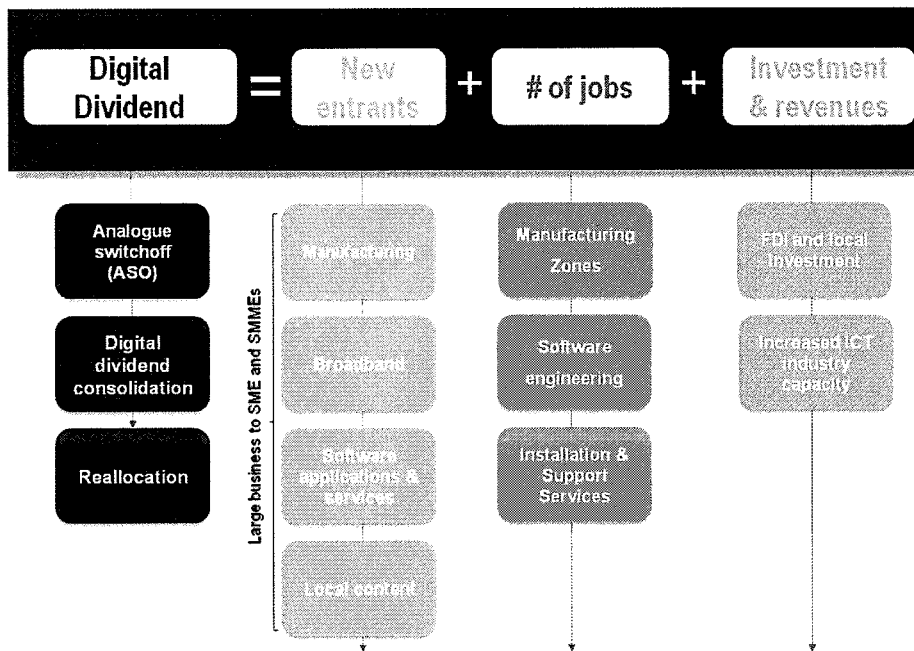3.7.5 Radio Frequency Spectrum is a limited natural virtual resource, essential to the operation of many essential communication services in society. In March 2010, the South African National Spectrum Policy was approved by Cabinet.

3.7.6 The Minister of Communications is the custodian of the spectrum on behalf of the people of South Africa. Management of the radio-frequency spectrum is subject to Government authority and spectrum must be managed efficiently so as to be of greatest benefit to the entire population.

3.7.7 The objective of the spectrum policy is to ensure a co-ordinated national (and regional) approach to spectrum usage, set conditions for the availability and efficient use of radio spectrum by various services to support specific national objectives, and to establish the framework for the development of the national frequency plan. The Policy:

- provides guidance on issues related to the radio frequency spectrum and the establishment and review of the national frequency plan;
- establishes principles for spectrum management;
- contributes to the promotion of national interests within the framework of Government strategic objectives;
- provides for the allocation of spectrum for safety of life services;
- provides for the allocation of spectrum for government services; and
- provides for the allocation of spectrum for scientific research.

3.7.8 The global landscape in the mid 2000's was defined by the auctioning of spectrum to telecommunication players as well as the commencement of broadcasters migrating to digital broadcasting platforms thereby releasing additional spectrum for intended telecommunication-driven broadband expansion. Excessive prices paid for spectrum at these auctions constrained the rollout of the envisaged 3G services. No spectrum has been auctioned in South Africa to date.

3.7.9   Whilst South Africa's policy landscape during this timeframe shows a high congruence with global activities in multiple areas, at a local level the disconnect from the national ICT policy objectives post-apartheid started to become apparent.   This disconnect had and continues to have a direct impact on the growth of the ICT industry including job creation, accelerated access and uptake of secure ICT services and skills development.

3.8 South Africa at the ICT Crossroads

3.8.1   The implementation of various policies, papers leading through to legislation and regulatory instruments yielded mixed successes.   Accordingly, against a background of weakened international competitiveness in the South African ICT industry and a rapidly changing world of technology, the need to relook policy design and approach creates a significant decision making juncture for the DoC and users of ICT based solutions and services.
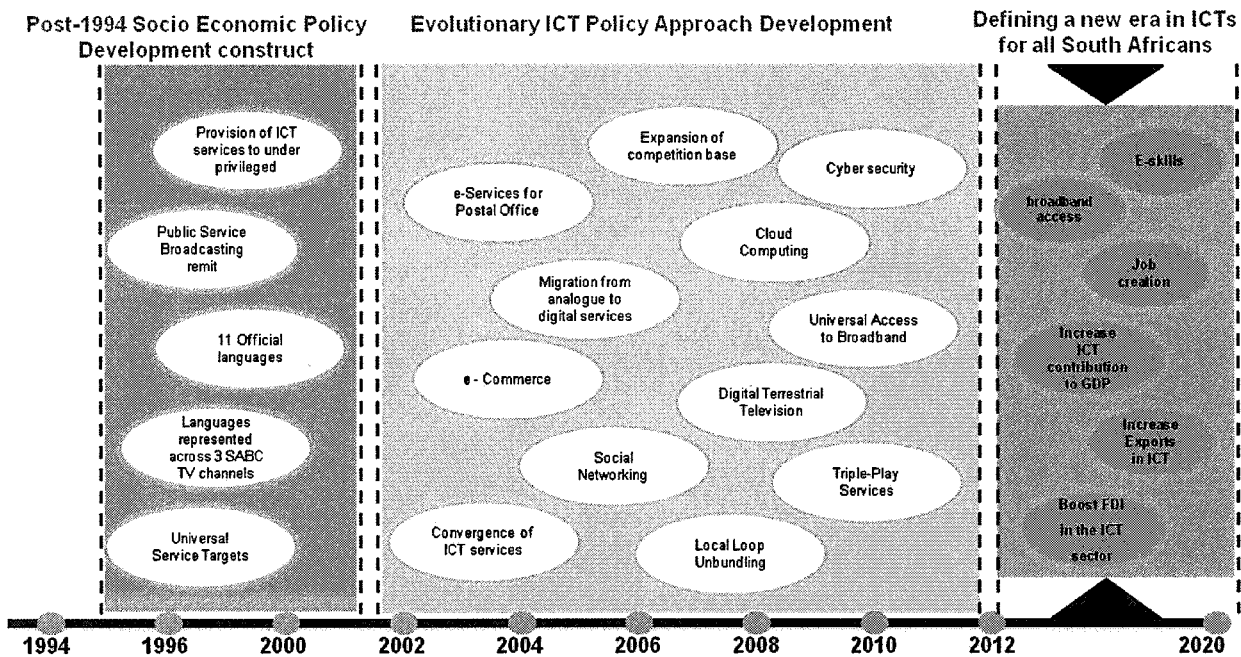

Figure 7: Entering into the new ICT policy era

3.8.2   The historical timeline view presented above in **Figure 7** of the themed policy approach shows that much has been done to create a platform for economic stimulus, yet much more can be done and needs to be done.   This is therefore a

critical juncture and one which provides a bold opportunity for the DoC to reassess its policy position in order to make strategic design intervention to introduce policy objectives which stimulate industry growth through increasing high quality, secure and affordable broadband services with a resultant increase in uptake of these solutions and services, creating jobs in the ICT industry as well as establishing a globally competitive ICT industry in South Africa.

3.9 The role of government in accelerating broadband growth

3.9.1 Government investment into broadband networks in many countries including Australia, Malaysia, South Korea, Germany and the US have not only substantially increased public funding to invest in the building of national broadband networks but more significantly have done this because of a growing recognition that broadband is a form of national economic investment similar to building highways, hospitals and schools[3].

3.9.2 Governments around the world have taken different approaches to broadband investment. Leading Organisation for Economic Development (OECD) countries with the highest access to broadband and uptake of services include Denmark, the Netherlands, Norway, Korea, Sweden and Finland with coherent national broadband strategies. Where the stance of governments in the US and UK were more of a distanced approach, this too changed as the UK issued the "Digital Britain' report and the US announced the development of a National Broadband plan shortly after falling from 2nd position to 15th position in the OECD broadband rankings[4].

3.9.3 Policy makers globally are increasingly acknowledging and responding to action on the need to take ownership of national broadband strategy and investment. A national broadband network and connectivity is a strategic asset and must be viewed as a long term economic investment which is intrinsically linked to the

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[3] Digital Highways: The Role of Government In 21st-Century Infrastructure: Booz & Company
[4] Policy coherence for ICT in development: Tim Kelly, Victor Mulas, Siddhartha Raja et al

overall progress and growth of a nation. Policy makers should therefore not only play in the typical domain of licencing, market liberalisation and facilitating access to spectrum but rather take a leadership role in defining and implementing a National Broadband Plan the same as for the ownership of roads and rail infrastructure and services as provided for by the Ministry of Transport.

3.10 Future policy direction

3.10.1 ICT policy and regulatory reform in South Africa coupled with an increase in competition and at times, regulatory intervention has meant that prices of some services have dropped and the quality of some services has improved providing benefit to certain customer segments only. In turn while this may have led to higher take-up of services and more Small Medium and Micro Enterprises (SMMEs) and entrepreneurs entering the sector, there is still a need to address affordability of telecommunications services to the greater market base.

3.10.2 There is evidence of lowering of regulatory barriers to entry including licensing through the conversion of Value Added Network Services (VANS) licences to ECNS and ECS licences, and the introduction of class licensing and licence exemptions. In line with broadcaster goals of using spectrum efficiently, measures are required to avail spectrum and infrastructure to the smaller players.

3.10.3 The SOCs established to fulfill universal service and other policy driven imperatives however in dealing with multiple challenges ranging from losing skills to commercial start-up companies in broadcasting and telecommunications and in the latter years becoming further encumbered through slow and ineffective decision making processes impeded overall progress in the ICT industry. This impacted negatively on the achievement against plans for digital migration, broadband, overall lowering of costs for telecommunications as well as universal access and universal service targets.

3.10.4 Moreover as a result of convergence and attempts to distinguish between infrastructure and service driven components there are examples where the mandate of state owned entities and state owned enterprises as well as universal service obligations attached to commercial ICT companies are either conflicting or showing duplication. Together with this, the independent regulator in the form of ICASA has been continually resource challenged to enable it to fulfill its intended purpose and now needs priority attention to refocus its role and to be given the requisite support to build capacity.

3.10.5 Whilst policy has been addressing technology, infrastructure and services from the multiple perspectives of convergence, wholesale, retail as well as from a market liberalisation perspective, what could be overlooked are other opportunities within the full value chain of broadcasting and especially telecommunications. As South Africa evolves towards a superdigitised market place, voice will continue to have a place and further market liberalisation opportunities may be contained within physical and virtual distribution of airtime and sales of goods and services online versus that directly linked to unbundling access to infrastructure or facilities leasing.

3.10.6 Similarly the various skills development programmes tend to appear scattered and need to be streamlined to provide ICT skills relevant to the requirements which fuel the growth of South Africa's ICT industry. Harmonising skills development to become a reliable feeder supply into the ICT industry pipeline will only partly address the skills requirement.

3.10.7 Thus ICT policy which was undoubtedly on par and even more advanced than some countries in Africa and other countries in the world started to lose focus on the developmental objectives both at a society and industry level in South Africa. Other tell-tale signs of this are in the form of South African ICT indices dropping where South Africa started to lose ranking position to Senegal and Egypt as

leaders in the rollout of ICT infrastructure[5]. Similarly South Africa lags significantly behind other (Brazil, Russia, India, China and South Africa) BRICS countries in multiple areas of the ICT value chain e.g., software development, ICT manufacturing and exports, research and development etc[6].

3.10.8 To note as well and especially with comparison to BRICS peers, while the focus of policy in the last few years in South Africa has been highly cognisant of convergence based technology changes, the important linkages of these advancements particularly in the intersecting ICT areas of health, agriculture and banking were not given due attention from a strategic design perspective. A critique of the policy design and approach also shows a high broadcasting and telecommunications focus with unequal attention to ICT manufacturing and Information Technology as major drivers in the ICT industry eco-system. Similarly policy aimed at modernising SAPO and the Postbank show good intention but will not yield success if implementation is pedestrian.

3.10.9 It is time for the DoC to shift gear to move away from an evolutionary policy design which could relegate it to a facilitator stance towards that of taking leadership on a National integrated ICT policy which is underpinned by short and long term economic rationale.

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[5] World Economic Forum: Global Information Technology Report 2010-2011
[6] Gartner predicts 2012: emerging markets are changing the world of IT – November 2011

4. OVERVIEW OF THE BROADCASTING INDUSTRY

4.1 High level overview

4.1.1 Change in the broadcasting sector was mainly driven through policy and regulatory reforms in the early 1990's in the form of the IBA Act and the Triple Inquiry Report which was mandated to investigate the issues pertaining to the viability of the public broadcaster, limitations on cross-media control of private broadcasting services and the setting of minimum quotas for regarding local television content and South African music.

4.1.2 Areas which were not addressed in the scope of the inquiry were dealt with in the White Paper on Broadcasting of 1998 which later on informed the Broadcasting Act No.4 of 1999.   The objectives of the policy process was to set up a broadcasting system that would serve to achieve public policy oriented goals such as universal service, diversity, nation building, education and strengthening the moral fibre of society.   Additionally the paper looked at the various implications of convergence between broadcasting and telecommunications on public interest matters and also contemplated the complementary role the various participants in the regulatory space regarding policy making and the mandate of the regulator needed to fulfill.   The results of these reforms led to the creation of a public broadcaster (SABC) with three television channels and 19 public sound broadcasting services.

4.1.3 Broadcasting is widely understood to be an important and wide-reaching tool with which to inform public opinion.   The need to regulate broadcasting is paramount and in South Africa is enshrined in Section 192 of the Constitution.   The introduction of a regulator, with constitutionally guaranteed independence, was a significant step forward for the country and industry.

4.1.4 In South Africa, broadcasting regulation originates from pre-democracy establishment of CODESA, a group of governmental, political and civil society

organisations which led to the establishment of the IBA in 1993. Broadcasting operations in a newly formed democracy were considered so critical that the IBA was not permitted to grant any new broadcasting licences until the finalisation of the Triple Inquiry Report.

4.1.5   The design construct of initial policy in broadcasting followed a clear rationale in that it specifically sought to address a number of factors facing a newly formed government in providing broadcasting services within a young democracy. The most significant objective of the act was to address past imbalances regarding universal access, plurality of information provided, the development of local content and skills development and transformation. The achievement of these objectives was reliant on the ability of creating drivers for change in the country.

4.1.6   Areas of investigation in the Triple Inquiry Report were later on expanded upon in the White Paper on Broadcasting in 1998 which sought to address specific policy driven objectives which the IBA did not set out. The lack of policy in between the CODESA driven process, the establishment of the IBA and the Broadcasting Act created a vacuum and also made the point of the significant role policy plays in providing strategic guidance to key institutions as well as the industry at large.

4.1.7   A significant aspect of the White Paper was the call for regulatory and policy alignment and complementarities between telecommunication and broadcasting in South Africa. It also set forth a strong policy position that regardless of the tier of broadcasting model, namely public, commercial or community broadcasting, South Africa's broadcasting system should operate primarily in the public interest and thereby be supportive of delivering universal service objectives, educational objectives and nation building content through the democratisation of the airwaves. Chapter one of the White Paper on broadcasting policy specifically provided for the formulation of new broadcasting legislation to guide national broadcasting operations in the newly founded democracy in South Africa.

4.1.8   This in turn led to the promulgation of the Broadcasting Act No. 4 of 1999 which followed a clear rationale in that it specifically sought to address a number of factors facing the government in providing broadcasting services within a young democracy.   The most significant objective of the Act was to address past imbalances regarding universal access, plurality of information provided and the development of local content.

4.1.9   The IBA merged with the SATRA to form ICASA in July 2000.   ICASA was constituted under the ICASA Act of 2000 to regulate telecommunications and broadcasting.

4.1.10 On 17 March 2003, the Broadcasting Amendment Act No. 64 of 2002 was promulgated.   At this point, the operating framework for satellite and subscription broadcasters was still not settled, although various entities had already begun to transmit broadcast content using satellite technologies as early as 1996.   This amendment effected changes in relation to the application of certain sections to "broadcasting services carrying more than one channel" otherwise known as multi-channel broadcasters.

4.1.11 In November 2010, the Minister of Communications called for a Broadcasting Policy review process.   This policy review process which included a due diligence analysis on the White Paper on Broadcasting of 1998 also called for a review of funding options for the SABC and community radio.   The Minister furthermore asked for an economic modeling exercise to be undertaken to determine projected costs linked to the upcoming digital migration.   The Minister subsequently withdrew the Public Service Broadcasting Bill.

> This marked a significant point in the broadcasting policy landscape whereby the policy review was assessing funding and sustainability of the SABC to fulfill its public service broadcasting remit   as well as a due diligence exercise to determine performance against original policy intentions.

4.1.12 The Broadcasting Digital Migration Policy which was approved by Cabinet in 2008 set out the parameters for migrating the country's broadcasting from analogue to digital. The policy called for the establishment of Digital Content Generation Hubs (DCGHs) aimed at generating local digital content together with a special skills development programme. Aside from citing the benefit of upgrading aging broadcasting infrastructure, other key benefits included;

- the potential of a multiple channel broadcasting capability to enhance the diversity of broadcast content
- provide for access to broadcasting services to people with disabilities
- the ability to provide e-government services to be seen as a fulfillment of government's contract with citizens relating to the provision of services
- creating jobs through local manufacture of Set Top Boxes (STBs) and which would reinvigorate the country's electronic industry

To aid with implementation of the migration, the policy provided for the establishment of the Digital Dzonga consisting of representatives from the public, government, industry, organised labour and consumer groups. The broadcasting Digital Migration Policy was subsequently amended during February 2012.

4.2 Public service broadcasting

4.2.1 <u>SABC</u>

The SABC was relicensed in June 2005 and in line with Section 10 of the Broadcasting Act, the new licenses reflected a reorganisation of the corporation along the lines of a commercial and a public services broadcaster which was previously created via the Broadcasting Act of 1999.

As one of the first goals to create a national public broadcaster, the SABC had to integrate the former TVBC state broadcasting operations including the assets to