Information Policy Country Report:

South Africa

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Executive Summary

South Africa's apartheid system of legal separation ended 15 years ago. Since then, the government has made a concerted effort to engender a more equitable and inclusive society through policy reforms that encourage the employment of disadvantaged South Africans and encourage small business entities to thrive amongst conglomerates and state-run industries.

Still, South Africa, by way of Information Policy has many challenges and opportunities in continuing to create a more equitable and prosperous society both by domestic and international standards. High HIV infection rates, difficulties in accessing copyrighted information, unemployment in urban and rural areas, lack of long-term foreign direct investment, and state-monopolies in telecommunications which make communication expensive and of poor quality have all been amongst the recent challenges faced by South Africa in developing a suitable Information Policy regime.

The telecommunications industry has been led by the state-controlled incumbent, Telkom, and the country's fear of losing innovation and reliability has led competition in the sector to only recently take shape in the last five years. Mobile phone ubiquity and emerging technologies have in part helped to push reform and liberalization, as has the strengthening of government institutions such as regulators and competition overseers.

In Intellectual Property policy, South Africa struggles to create laws that comply with international standards. Yet doing so contradicts their efforts to acquire the medicine and information they need to meet crisis levels of HIV infection and develop as a nation.

In Competition, Industrial and Investment policy, South Africa struggles with gaining the necessary economic conditions which both resolve economic and social inequalities developed throughout the Apartheid era and achieving much needed Foreign Direct Investment, which had fled the country due to the instability caused by apartheid.

Privacy in South Africa is guaranteed as a constitutional right, but the country lacks a decree protecting personal information as required to meet the protocols of the European Union's Data Protection Directive. Guaranteeing the protection of personal data by public and private entities will foster increased opportunities for trade and e-commerce.

South Africa has been the stage for a variety of digital government policies and programs since its democratic reform. The variety of scope and platforms found in these efforts produces a rich history for information policy in a development context. The majority of these efforts have been either transplants of western programs or developed according to western theoretical frameworks. More recent e-gov developments have balanced the hype of modern ICT innovation with the needs of local information infrastructure.

Digital government, Privacy, Telecommunication, and Intellectual Property reform and design will only begin to produce meaningful results if they are developed according to a South African, (rather than western,) theoretical framework; recognizing the diversity of populations and the culture of existing communication networks.

I. Introduction to South Africa

The Republic of South Africa underwent sweeping changes in 1994 as the country put an end to the system of apartheid and moved towards a more open and democratic society. New leadership crafted a new constitution and began creating aggressive new policies in technology and communications. South Africa deals with challenges on a variety of fronts, including high levels of unemployment, the HIV/Aids epidemic, widespread poverty, and lingering issues of racism.

This report will investigate several areas of information access and policy in South Africa that seek to address these economic, social and health related problems including telecommunications policy, competition, investment, and industrial policy, intellectual property policy, privacy, security, and freedom of information, and digital governance. This study focuses on the policies of the post-apartheid era. It identifies key aspects in each area along with the challenges and future opportunities. We will find that these polices struggle to set a balance between developing an internationally competitive nation and establishing a strong domestic economy that addresses the social inequalities developed under Apartheid.

In closing we recommend ways in which current policies and ideas for reform could be leveraged in all areas to develop a strong domestic economy as a vehicle for enhanced foreign investment and international competitiveness.

II. Telecommunications Sector

South Africa's telecommunications dynamic reflects the core policies, politics, and tensions of the country itself. The telecommunications infrastructure of South Africa has been one of the most advanced in Africa, while at the same time failing to live up to industrialized

standards of use and access (Horwitz 2001, p.18). The election of the African National Congress in 1994 and the passing of the 103 Telecommunications Act in 1996 were watershed moments in the telecommunications industry of South Africa (RSA 1996). The infrastructure the passing of the Act established created circumstances and tensions between telecommunications actors that continue to be significant (Horwitz 2007, p.445).

Parastatal Entities

Telecommunications in South Africa began as a state-sponsored entity. The 1958 Post Office Act put the state in charge of telegraph, post, and telephone services (Lewis 2005, p.6). The 1991 Post Office Amendment Act split telecommunications (Telkom) from the Post Office, making Telkom a *parastatal*, or government-owned corporation. The Act then corporatized both entities and retained regulatory functions through the Department of Posts and Communication, a function overseen by the Ministry of Communication (Lewis 2005, p.18). While South Africa led the continent in teledensity (telephone lines per 100 people) into the 1990s, these statistics must be understood in their proper context of an 'unequal society.' Teledensity in South Africa was roughly 10% for businesses in urban areas and White South Africans, but dropped to nearly 1% for primarily black, rural areas, of which only 45% had access to consistent and reliable electricity (Gillwald 2005, p.472).

Telkom entered the Internet fray in 1995 with the South African Internet Exchange (SAIX), an Internet Access Provider (IAP), to take advantage of the emergent ISP and business markets. SAIX had the advantages of greater geographic dispersal and being able to undercut current ISP prices (Lewis 2005, p.10-11). Concurrently, the public incumbent, South Africa Broadcasting Company (SABC), led the country in Television and Radio broadcasting. At this time, there was one private television broadcaster as well, M-net, providing a pay-TV format (Ayogu 2009).

1996 Telecommunications Act

The passing of the 1996 Telecommunications Act outlined the creation of a telecommunications regulator, the South African Telecommunications Regulatory Authority (SATRA, later merged with IBA to form ICASA), as well as reorganizing the Competition Board into the Competition Commission (RSA 1996). The move from the Reconstruction and Development Plan's initial objectives, the subsequent white papers, and the final 1996 Act stifled economic liberalization in the name of government control and exclusivity (**Figure 1**) (Ponelis 2003, p.223).

Figure 1: Differences between the White Paper and the Telecommunications Act of 1996[1]

	White Paper	**Telecommunication Act**
Market Structure	Exclusivity period of 5 years	Determined by Minister in Telkom's license
Management of phased introduction of competition	Regulator and minister	Minister
Licensing of Telkom	Regulator	Minister
Network Extension Goals	Regulator	Minister
Tariffs Setting	Regulator	Minister (for 3 years)

The 1996 Act further privatized Telkom and sold 30% of its shares to a Strategic Equity Partner (SEP), Thintana Communications (itself a 60-40 partnership between American SBC and Telekom Malaysia) and gave Telkom a 5-year exclusivity agreement that allowed the incumbent time to prepare for competition (Howitz 2007, p.450-451). SATRA was charged with monitoring Telkom's license and mandate to roll-out services and lines, maintain quality, enforce price caps on tariffs, and regulate interconnection between Telkom facilities to ISP's and Value Added Network Services (VANS) (Gillwald 2003, p.7). A Universal Service Fund was also

[1] Source: Love 2005, p.34.

established to ensure access to the poor by establishing subsidies for development, and was administered by the Universal Service Agency (an extension of the Department of Communications), which had repercussions of its own:

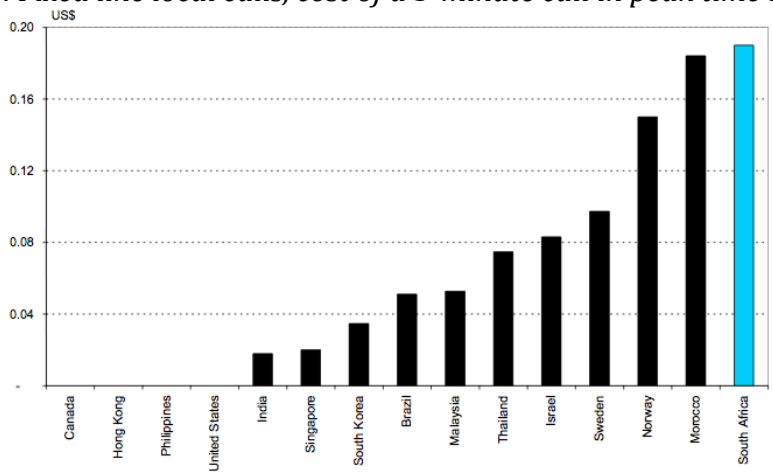
> *"While the main purpose of establishing the USA was to have a dedicated entity to focus on achieving universality, an unfortunate side-effect was the removal of the universal access mandate from the core functions of the regulator, though ICASA does have some enforcement functions in this regard"* (Gillwald 2005, p.475).

With respect to the broadcasting domain, SABC was transformed into a neutral institution as a nonpartisan public broadcaster with responsibility to program in 11 official languages, and is now regulated by the Independent Broadcasting Authority (IBA) (Horwitz 2001, p.18-19).

Emerging Competition

From 1996 to 2006, Telkom rolled out 2.81 million new phone lines, satisfying the explicit goal of the 1996 reorganization, yet with 12.2% of fixed lines disconnected from 2000 to 2004, the implicit objective of line penetration was not met (Horwitz 2007, p.446). Despite customer migration from fixed-line to mobile carriers, Telkom's profits grew from ZAR1.54 billion in 2000 to ZAR9 billion in 2007. Telkom tariffs also rose nearly 50% between 1998 and 2002, making it very expensive to make local calls (as seen in **Figure 2**)(Ponelis 2008, p.221)(Yankee Group 2003).

Figure 2: Fixed line local calls, cost of a 3-minute call in peak time in 2005[2]



In 2006, the government sold off another 30% equity stake in Telkom, as well as clearing the way for a Second National Operator of fixed-lines, Neotel (three years later than expected in 1997) (Sibinda 2008, p.213). As fixed-line subscribers have waned in the last decade, mobile subscribership has greatly increased in South Africa much as in other African countries, going from less than 1 million in 1996 to 19 million by 2006 (Horwitz 2007, p.446). Inexpensive phones and pre-paid billing account for 90% of mobile users in Southern Africa, which has pushed innovation and limited competition among wireless carriers (Gillwald 2005, p.477). There are now three national mobile carriers; Vodacom (pan-African), MTN (Africa and the Middle East), and Cell C (South Africa), with Telkom interested in providing their own mobile services (Reuters 2009a),

Internet use in South Africa increased to 3 million users in 2002 and 4 million in 2007. New technologies such as transnational sea cables and fiber optics, cable broadband and wireless, ADSL and ISDN, as well as 3G and mobile wireless have been pushing for increased Internet access and availability, allowing providers to side-step Telkom's dominant position in fixed-lines (Lewis 2005, p.7). However, there are still many problems with the cost of access

[2] Source: Genesis Analytics 2005

remaining high and with bandwidth at a premium, as one ISP conducted an experiment to show that it was faster to attach a data card to a pigeon and have it fly 80 kilometers than it was to download the same amount of information through Telkom lines (Reuters 2009b).

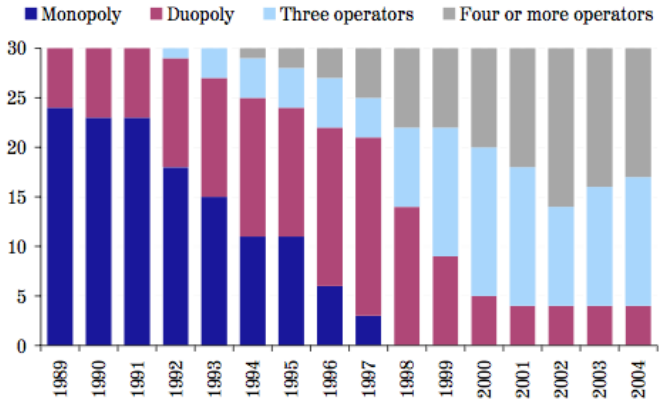
Moving Forward in Telecommunications

South Africa's telecommunications sector can be seen as being pulled in two directions; on the one hand, it has been one of the most innovative sectors of growth in Africa, and has displayed itself as a viable force on the International market. On the other hand, its universal access and communications penetration has reflected that of a developing country and economy, with sectors of growth and innovation not leading to traditionally poor or poverty-stricken areas and people.

> *"While it is true that fixed-line telecommunications growth has slowed in many parts of the world with the substitution of mobile for voice services, few countries have had as dramatic a decline in the number of subscribers on a network as South Africa."* (Gillwald 2005, p.475)

The tools exist for South Africa to both remain a major player of telecommunications in Africa as well as providing access to those outside of affluent city centers. The 1994 ANC elections began the process of liberalizing South Africa's economy and moving towards less state-control in favor of stronger government institutions (regulators) and competition (Horwitz 2001). Although the reform process did not occur overnight, it has been moving in the right direction, as Figure 4 illustrates the shift from monopolies to competitive sectors of four or more operators. In addition, one recent example of the Telkom losing a seven year antitrust case filed with the Competition Commission and ICASA show that government policies and institutional authority outside the ministries are starting to materialize.

Figure 3: Trends in telecommunication competition[3]



III. Intellectual Property

As a former British colony, South Africa has an intellectual property (IP) law framework based in British Law. More recently, South African IP law has been modeled on the European Patent Convention (Wolson 2004). The agency responsible for developing, processing and enforcing IP law for copyright, patents, and trademarks in South Africa is the Companies and Intellectual Property Rights Office (CIPRO). CIPRO, an agency subsumed under the Department of Trade and Industry (DTI), is a registration office only and does not conduct examinations into the suitability of intellectual property protections. The court system is given the responsibility of enforcing intellectual property rights downstream (Wolson, 2004).

In November 2009, CIPRO was joined with the Office of Companies and Intellectual Property Enforcement to form the Companies and Intellectual Properties Commission. This has been part of a larger attempt to establish CIPRO as a stand-alone agency apart from the DTI and give the agency more powers in education, research and enforcement of IP laws (Ensor 2009). Steps to strengthen CIPRO also include making the agency more accessible via the Internet. Through the current e-CIPRO initiative, digitizing CIPRO resources promises to make the

[3] Source: Esselaar 2006, p.3.

development and dissemination of new technologies, the registration of small and medium business enterprises, and education about intellectual property rights more efficient and accessible by the public and business communities (Twum-Darko & Sendwe 2009).

South Africa, in its commitment to being an internationally competitive nation, is a member of the World Intellectual Property Organization (WIPO) and the following international intellectual property treaties: Paris Convention Treaty, Berne Convention, Patent Cooperation Treaty, Budapest Treaty and the Trade-Related Aspects of Intellectual Property Rights (TRIPS) Agreement Treaty (CIPRO Annual Report 2008/09, p.3).

Patents

Patent legislation is regulated under the Patents Act of 1978 and recognizes an invention that is '*novel, involves an inventive step (that is, an 'unobvious' step) and can be used or applied in trade, industry or agriculture*' (Wolson 2004, p.128). Patentable inventions are defined negatively in South Africa, meaning what is patent eligible subject matter is defined by that which is not eligible; namely, '*discoveries, scientific theories, mathematical methods, artistic works, processes for performing a mental task, playing a game or doing business and finally computer programs and the presentation of information.*' Patents are granted for a 20-year term starting with the filing of the application and may be renewed by fee (Wolson 2004, p.128).

Copyright

The Copyright Act of 1978 regulates South African copyright affairs. This act recognizes the following nine categories of works as eligible subject matter: literary works, musical works, artistic works, sound recordings, cinematograph films, broadcasts, program-carrying signals, published editions and computer programs (Tong 2009, p.268). Authors of creative works automatically receive copyright protection that continues through the life of the author plus 50

years after the author's death. An exception to this rule is given to authors of photographs, films and computer programs, which have a 50-year term starting when the work is first released to the public (Wolson 2004, p.141).

Trademarks

Trademarks are regulated under the Trademarks Act of 1993. This act protects the distinction of an individual or organization's goods or services from similar goods or services used by another individual or organization. Registration of a Trademark involves CIPRO making an inquiry to ensure there would be no conflict with existing trademarks. The mark, if accepted, is published in the Patent Journal and other parties have a three-month window to challenge the trademark registration. A trademark is registered for 10 years and can be renewed indefinitely for additional 10-year terms through a renewal fee (Wolson 2004, p.144).

South Africa and International IP Law

Being a member of WIPO and the WTO's TRIPS agreement treaty affords South Africa access to the resources and expertise that allow it to improve its intellectual property regime to meet the international standards necessary to trade and compete internationally (CIPRO Annual Report 2008/09, p.7). However, South Africa's effort to gain international credibility for its IP regime has also been detrimental to its ability to provide affordable HIV medication in a country where an estimated 20% of the adult population is infected with HIV (Halbert 2005, p.88). By contrast, in the US in the same year, the percentage of adults living with HIV was .6% (Elizabeth Glaser Pediatric AIDS Foundation 2007).

In the Intellectual Property Law Amendment of 1997, the South African government sought to implement the Medicine and Related Substances Control Act (Halbert 2005). The Act proposed compulsory licensing and parallel importation to allow South Africa to access generic

forms of HIV medications too expensive to afford in their patented form (Ghosh 2002). In response, 29 international drug companies brought suit against South Africa for violation of the TRIPS agreement and threatening the integrity of the patents for medicines produced in the US and other developed nations (Nevin 2001). Following intense public criticism, the suit was withdrawn in April 2001 and in December 2001 the Doha Declaration permitted South Africa to access the cheaper, generic versions of HIV medicine it needed (Halbert 2005, p.107).

This dynamic also appears in the realm of copyright and South Africa's ability to access affordable ICT innovations by developing them domestically. Again, because of its membership in the International IP community, South Africa faces a predicament when developing software at home, which might conflict with patents in developed countries. Where licensed versions of proprietary software are too expensive, development within the country is the way South Africans can access the software they need to better communicate and conduct business (Lidovho 2006, Tong 2009). As such, this situation is similar to that of HIV medicine described above.

Currently, the DTI is embarking on a five-year plan to engender Intellectual Property reform. This reform is mostly aimed at the recognition and protection of Indigenous Knowledge Systems. (ACA2K 2009). However, groups like the African Copyright and Access to Knowledge Project are using this opportunity to advocate for copyright law that allows more unregulated access to information for African nations (ACA2K 2009). The University of Cape Town Law School also hosts Creative Commons South Africa (Creative Commons South Africa). Thus the current IP policy design climate in South Africa is hopeful for developing future Intellectual Property Rights Regimes that privilege South African needs over international needs, allowing

for South Africans to take control of their own health needs, information access needs, and ability to create knowledge and cultural goods relevant to the local and domestic context.

IV. Competition, Industrial, and Investment Policy

South Africa's information policies regarding competition, industry and investment are largely directed at development and deployment of Information and Communication Technologies (ICTs) throughout its society, and its businesses and government agencies (Roberts 2004, Clark & Bogran 1999, Morris & Robbins 2007, Gillwald 2003). The goal of this policy is to ensure that South Africa can more effectively address domestic concerns such as unemployment and economic productivity so that it might be more competitive internationally (Brenner 2003, Moodley 2003). However, some have analyzed South Africa's situation to be more concerned about its performance in the international sphere at the expense of its own economic and social concerns at home (Magubane, 2002).

Competition Policy

During the Apartheid era, South African industry largely consisted of state-owned monopolies in the mineral resources sector originating from the turn of the 19th century (Hartzenberg 2006, p.668 & Wise 2003, p.9). This, in turn, was accomplished through cheap inputs of steel and electricity, which also came about through state monopoly (Wise 2003, p.8). As the social structure of Apartheid caused the international community to impose economic sanctions and withdraw investment from South Africa, the government further sought protectionist policies of autarky and import substitution industrialization, which intensified state-run monopolies as the chief vehicle of industry (Wise 2003, p.7, Morris & Robbins 2007, p.245).

In post-apartheid South Africa, new government policies focused on breaking up state monopolies and liberalizing the market to attract foreign direct investment (OECD 2003, p.14).

As the stigma and social unrest of apartheid caused foreign investors to flee, the South African government also pursued competition polices that reversed the apartheid society by encouraging the emergence of black-owned small to mid-sized enterprises (Hartzenberg 2006, p.669). Where there is a conflict between developing more equitable social structures and breaking South Africa's dependence on state-controlled industry, South Africa's competition regulators may occasionally overlook concerns of lessened competition if there appears to be a benefit of a rise in employment for economically disadvantaged citizens (Wise 2003, p.32).

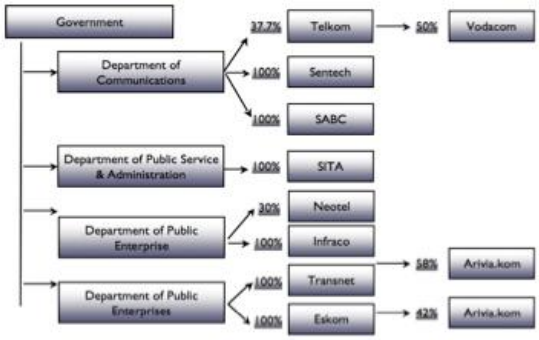
The Competition Act of 1998 established South Africa's current protocol for addressing competition regulation. Prior to 1998, South Africa's competition law had been outlined underneath the 1955 Competition Law, setting the Board of Trade and Industry as the sole regulatory body for competition concerns (Reekie 1999, p.115). The Board had powers to investigate misconduct, prescribe remedies and negotiate the supervision of compliance. However, the board only conducted investigations at the Minster of Trade and Industry decision. In 20 years, from 1955 to 1975, the Board only conducted 18 investigations, and came under inquiry in 1975 due to criticism that it was too cautious and permissive in allowing "monopolistic conditions" (Wise 2003, p.11-16). Following the inquiry, the Competition Board replaced the Board of Trade and Industry.

In 1995, The Department of Trade and Industry restructured the competition regulation system again. In 1998 and 1999, Competition Act no. 89 was adopted. This act implemented the existing tripartite system of Competition Commission, Competition Tribunal and the Competition Appeal Court. The Commission is the investigative and executive body, the Tribunal makes decisions on larger mergers and complaints of dominance abuses and the Appeal

Court is a High Court that hears appeals of final Tribunal decisions with the power to confirm, reverse, amend or remand those decisions (Wise 2003, p.35-27 & Hartzenberg, 2006).

Barriers to entry for competing entities still exist due to the long-standing recourse to state-run industry and conglomeration. As per the telecommunications discussion above, one of the pressing contemporary competition issues in South Africa today is the state-sanctioned monopoly of Telkom for the promotion of universal access (Ponelis & Britz 2008). The South African Telecommunications Act of 1996 gave Telkom a 5-year monopoly to provide land-line communication for the majority of South Africa's disadvantage population (Braman 2001, p.7). The lack of competition, though, resulted in higher tariffs and poor service quality, which acted against the stated goals of the Act (Ponelis & Britz 2008, p.222-223). Compound this with Telkom ultimately focusing its energies on more lucrative business customers during that time period (Ponelis & Britz 2008, p.222-223) and we see how competition in the telecommunications market is necessary for South Africa. As such, the state-backed intercession of Neotel and the emergence of mobile technologies in South Africa are a current trend attempting to reverse the effects of Telkom's market dominance (Sibinda 2008, p.213 & Horwitz 2007, p.446).

Figure 4: Government holdings in the ICT Sector[4]



[4] Source: Esselaar 2006, p.22.

Industrial Policy

South Africa's current industrial policy focuses on multi-stakeholder ventures such as Special Purpose Vehicles and inter-firm clusters for the development of industrial sectors that integrate the contributions of business firms, government agencies and other actors such as officials from provincial departments of economics, development, labor and academia (Kaplan, 2007, 106; Morris & Robbins, 2007).

An example of a government policy that spurs the ICT industry via the establishment of multi-stakeholder programs is the South African Information Technology Industry Strategy (SAITIS) (Benner 2003, p.13-16). Initiated in 1999, SAITIS is a bilateral development project between the Canadian International Development Agency (CIDA) and the South African Department of Trade and Industry (DTI). (Benner 2003, p.14). The mission of SAITIS is to promote research, education, and development of strategies to build ICT sectors as industrial clusters as well as ways that ICTs can make Small and Medium-sized Enterprises (SMEs) and black-owned businesses more successful (Benner 2003, p.13).

As of 2004, South Africa has continued, through the DTI and the Department of Communications (DOC) to promote policy towards integrating ICTs into South African industry, business, and society as a way to employ disadvantaged citizens and make South African industry and commerce more efficient and competitive in the global economy (Moodley 2005). The focus for such efforts has been on enhancing service capacity of small sized business and building more call centers, leading to the creation of more jobs (Kayle 2009). However, as recently as October of 2009, DTI minister Rob Davies has reported that South Africa has not been meeting target goals in ICT research, development and deployment due to the recent economic downturn that has decreased funding for research and development projects and ICT implementation (Mahlong 2009, Kayle 2009).

Investment Policy

South Africa's Investment Policy is currently seeking to attract and sustain domestic private investment as well as foreign direct investment (Ndikumana, 2008). Because of economic sanctions and investment boycotts of Apartheid, as well as its historical legacy of protectionism and long-established conglomerates wary of "foreign intruders," foreign investors have withdrawn from the South African economy (Clark & Bogran, 1999).

With the goal of development in mind, the South African government needs Foreign Direct Investment and in order to achieve that investment, South Africa needs to continue to promote political stability and an open economy (Clark & Bogran 1999, p.11). Post-Apartheid initiatives to acquire Foreign Direct Investment have proven unsuccessful because investors are not committing to long-term investments, instead withdrawing their investment following short-term gains (Magubane 2002, p.98). Domestic investment, too, is crucial for South African development. Through state investment that develops transportation, electricity and ICT infrastructure, South Africa can spur domestic and foreign investment by private firms through lowering the production, transaction, and communication costs of doing business (Ndikumana, 2008 & Kayle, 2009). However, state and private monopolies on existing basic communication services continue to hinder development and innovation of ICT to meet these goals (Gillwald 2003, p.25-26).

V. Privacy, Security, and Freedom of Information

South African Common Law has long upheld the notion that privacy is a part of a person's personality and is in need of protection. The constitution of the Republic of South Africa includes a provision for privacy among the Bill of Rights. Section 14 of the constitution states:

"*Everyone has the right to privacy, which includes the right not to have -*

a. their person or home searched;
b. their property searched;
c. their possessions seized; or
d. *the privacy of their communications infringed.*" (South Africa, 1996)

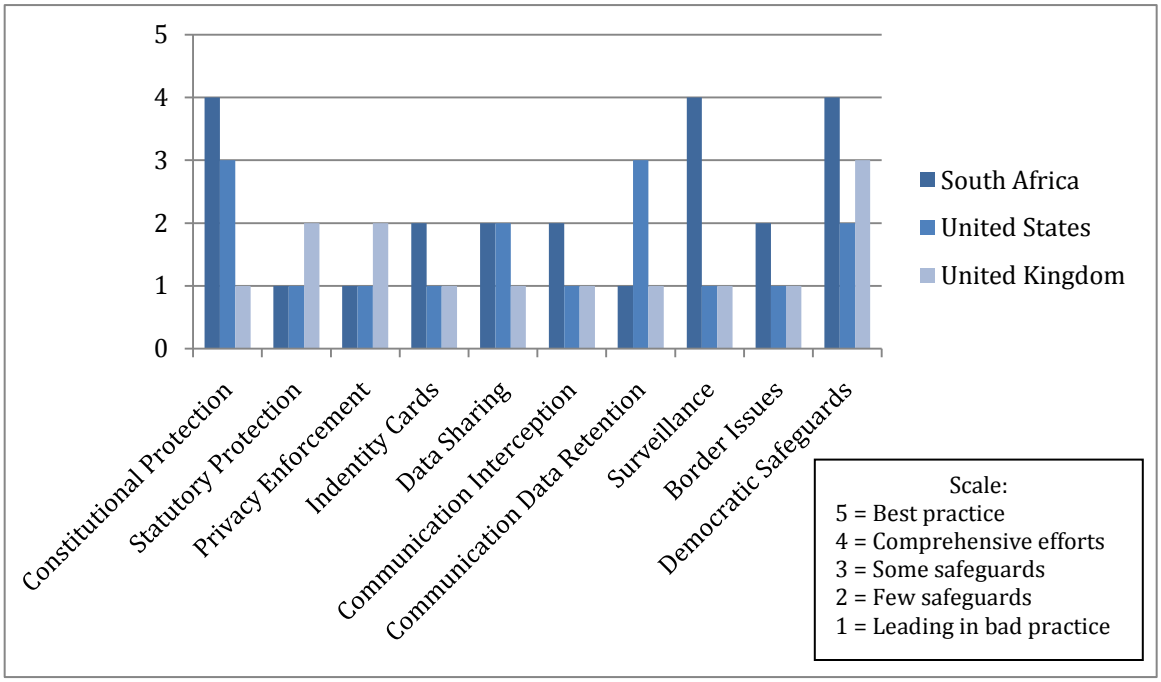
The right to privacy vies with the concept of Ubuntu, which is the philosophy that many South Africans live by. Ubuntu calls for the good of society to come before to needs of the individual, and is often marked by close-knit rural communities where privacy is of low value (Olinger, Britz, & Olivier 2007, p.34).

Privacy Rights

One of the first challenges to the right to privacy was the landmark decision in Case v Minister of Safety and Security (Case v. Minister of Safety and Security, 1995). The plaintiffs, Patrick and Inga Case, had 150 video cassettes containing sexually-explicit material seized during a raid by the South African police. They argued that the Indecent or Obscene Photographic Matter Act of 1965, an apartheid-era law prohibiting the possession of indecent, obscene, or immoral materials, was inconsistent with the constitutional provisions. The constitutional court ruled in their favor and struck down the law, setting the stage for many more rulings in favor of a reasonable right to privacy.

In 2007, the watchdog group Privacy International conducted a survey of privacy and surveillance practices of 48 industrialized countries. South Africa ranked among the middle, and scored higher than the United States, the United Kingdom, France, Australia, and Japan. They received high marks in the area of constitutional protection, protection of medical and financial records, and democratic safeguards. However, they were cited as having one of the worst records in the areas of statutory protection, privacy enforcement, and communication data retention.

Figure 5: Comparison of Privacy Practices in South Africa, the UK, and the USA[5]



South Africa entrenches privacy issues with two other notable laws. The Regulation of Interception of Communications and Provision of Communication-related Information Act ("The Interception Act") prohibits surveillance activity and wiretaps unless they are part of a criminal investigation or other law enforcement purposes. The Interception Act requires anyone offering telecommunication services, including Internet Service Providers, to make their services accessible to interception. They must collect personal data about their users, to be handed over to law enforcement upon request. For example, mobile phone companies must obtain proof of a customer's name, home and business address, and identification number before they can activate the customer's SIM card (South Africa 2002b).

[5] Source: Privacy International 2007.

The second notable law is the Electronic Communication and Transaction Act (ECTA). This law is intended to promote e-commerce by recognizing electronic documents and digital signatures as legally and functionally equivalent to their paper counterparts. In addition, it requires e-commerce websites to publish contact information, terms of agreements, and privacy policies for financial and personal information (South Africa 2002a). ECTA encourages companies to follow the fair information principles, but compliance is voluntary.

Data Security

Despite the constitutional amendment affording privacy, South Africa does not have a specific law protecting personal data. Public outcry lead to an effort to create such legislation after it was revealed that the Post Office was planning sell names, addresses, and other personal data contained in its National Address Database to private companies for marketing purposes (Kalideen & Zeilhofer 2004). The result is the Protection of Personal Information Bill, which has been introduced in the National Assembly. If enacted, the law would define the specific data elements that constitute "personal information", such as race, gender, sexual orientation, age, blood type and biometric information, and even the personal opinions and views of that person (Driver 2009). It requires protection of any information under the definition of "personal information" and requires notification and consent before the information can be used. The law applies to both public and private organizations. It was designed to comply with the mandates of the EU in their Data Protection Directive, which requires all trading partners to provide "*adequate levels of protection when processing personal information of EU citizens*" (Olinger, Britz, & Olivier 2007, p.37). The bill has been met with challenges from the media, with concerns that the bill goes too far in requiring consent prior to using personal information.

Despite the challenges, private companies are beginning efforts to comply with the bill, and it is anticipated that it will be passed soon (Engelbrecht, 2009).

Freedom of Information

South Africa promulgated a freedom of information act in March of 2001. The Promotion of Access to Information Act (PAIA) is based on the FOI law in the United States, by allowing access to government records. It goes much further by allowing access to records held by the private sector as long as the requester can demonstrate that the information requested is "*required for the exercise of protection of any rights*" (SAHRC 2009a). Public agencies and private companies must appoint an information officer who is responsible for responding to requests for information within thirty days. The information officer must compile a manual containing information about the function of the organization and an index of the records held by the organization. The information officer must also submit an annual report indicating the number of requests for information received and the outcomes of those requests.

Figure 6: Sony South Africa manual - rules (left) and records held (right)[6]

SONY SOUTH AFRICA (PROPRIETARY) LIMITED

1996/000734/07

PROMOTION OF ACCESS TO INFORMATION ACT

MANUAL OF A PRIVATE BODY

This manual has been prepared and made available in accordance with section 51 of the Promotion of Access to Information Act (Act 2 of 2000) ("the Act")

Sony South Africa (Pty) Ltd ("Sony SA") is a private company that conducts business as a manufacturer and supplier of electrical and other equipment.

Information held

Sony SA holds information relating to the following subjects:

- Employment records
- Financial records
- Import and export of equipment
- Information technology records
- Insurance documents
- Internal policies and procedures
- Relevant agreements, such as leases and credit agreeme
- Records in respect of customers
- Records relating to legal proceedings

South Africa does not have a commission appointed to oversee PAIA, and governance is split among three different agencies: the South African Human Rights Commission (SAHRC),

[6] *The full manual is available at http://www.sony.co.za/section/accessibility*

the Public Protector, and the courts. The SAHRC is responsible for publicizing the PAIA, collecting manuals, and publishing annual statistics. The Public Protector, South Africa's Ombudsman, handles complaints when requests for information are ignored. In the event that a requestor has been denied access, the requestor can appeal by taking the matter to the courts.

The legislature as written is among the strongest freedom of information acts in the world. However, it suffers from a lack of compliance and lack of awareness of the law by the public (SAHRC 2009b). A commission of Information Officers was formed in 2006 with the goal of addressing issues with PAIA.

Legislative Opportunities

South Africa must enact legislature to address protection of personal information to remain competitive globally in e-commerce and as a trading partner of the EU (Olinger, Britz, & Olivier 2007, 37. With proper enforcement, the Personal Protection of Information bill has the potential to increase business opportunities for South African companies seeking new customers abroad, and allowing those customers to have confidence in their transactions. As the bill pertains to government agencies, it can also serve to increase the public's trust in e-Government initiatives and remove the fear that information collected by agents such as the Post Office will not be disseminated into marketing databases.

VI. Digital Governance

Digital or e-Government initiatives in South Africa have taken a variety of forms and have achieved various levels of success. The fall of apartheid in South Africa coincides roughly with the emergence of modern digital governance, mainly due to the development of computer networks. Revolutions coincided in South Africa and in digital government; government and public groups were being redefined along with their ability to communicate information.

Foundation (1994-2004)

The key focus of e-government policy in South Africa following the democratic reform of 1994 was equal access of information. This is stated explicitly in Section 32 of the Bill of Rights:

> *Everyone has the right of access to (a) any information held by the state; and (b) any information that is held by another person and that is required for the exercise or protection of any rights.*

President Thabo Mbeki created a specific government task force in 1996 known as Comtask to study communication within the government, the interaction between the government and the media, and international communication of the government (Benjamin 1998, p.41). Later in 1996, Comtask issued the influential report Communications 2000: a vision for Government Communications in South Africa. The report highlighted the need to improve communications between the government and its citizens, especially in the largely rural and impoverished areas neglected during apartheid rule. This report also created the new Government Communication and Information System (CGIS) to replace the apartheid legacy South African Communication System. The CGIS was created largely to produce consistency in message and medium of government communications to avoid propaganda information techniques (Strydom 1998, p.5-9). The Government Information Project (GIP) was created in 1997 with the goal to: "to promote and/or facilitate effective information management in the Government in order to enable responsive service delivery and sound administration" (South Africa Department Arts, Culture, Science and Technology 1997, p.13). By 2000, the Promotion of Access to Information Act further formalized transparency and accountability in South Africa's digital government policy (Govender 2001, p.18-25).

In 2001 the Department of Public Service and Administration released South Africa's official E-Government Policy. This plan included a ten-year implementation plan of e-gov services based on world models tested by other governments (DPSA 2001). A highly studied program resulting from this ten year plan is the Cape Gateway project, begun in 2001. Beyond static information, this web offering provides a beginning of interactive information portals for citizens. Although many tangible results have been achieved from this project, overall it showcases the deficiencies of following a theoretical framework developed for Western models of e-government (Maumbe, Owei, and Alexander 2008, p.758). These same concerns can be noticed in South Africa Online, launched in early 2000 (www.gov.za). The site provides online access to a myriad of government documents such as speeches, annual reports, legislation, and policies. However, the breadth of content is lost in challenges of delivery to the general public; largely the result of the digital divide and the large gap in socio-economic standing present in South Africa (Working Group 2002).

Contemporary Developments (2005-Present)

As the hype cycle of Internet access in ICT circles has leveled, new trends in South Africa's digital governance have emerged. The Johannesburg Metropolitan Council e-gov project showcases a success when scope of service is properly managed along technological constraints (Benjamin 2001, p.194). The result was information sources that could effectively be utilized by council members in making policy decisions. By properly aligning dimensions of information, technology, resources, and staff the project has been utilized as an applicable model for other South African city councils. The proliferation of mobile technologies has led to the development of mobile-government (m-gov) solutions for digital governance. Several pilot programs showcase the significant optimism currently found in this field (Patel and White 2005,

p.316-320). The Dozoka project for anti-retro viral therapy presents improved health offerings to citizens, through quicker access to better quality information related to patient health-care. The Mohwiti Technologies program allows citizens to make clinical appointments via their mobile phones through a system called AccessHealth provided by the Department of Health. The Department of Home Affairs has also developed a platform to allow mobile users to access the status of their ID, birth certificate, and travel documents. All of these programs showcase the penetration of mobile solutions into e-government offerings in South Africa which are enviable by Western standards.

Theoretical Model and Critique

A standard theoretical model of digital government evolution is provided by Panagopoulos (Maumbe, Owei, and Alexander 2008, p.765). This five-stage sequence of e-services offered by governments provides a useful framework to conceptualize South Africa's services in this sector of information policy (Jackson 2009, Wk11S10).

1. Emerging: This initial stage is represented by many of South Africa's early online offerings which provide static information on matters of government. A representative example would be the initial offerings of the GIP.
2. Enhanced: The next progression in policy information from stage 1. Later offerings of the GIP.
3. Interactive: This stage reveals an emphasis on convenience and a source for down-loadable forms. The Johannesburg Metropolitan Council project succeeds where the practical offerings of the South Africa Online portal fall short of its stated objectives.
4. Transactional: Two-way interactions are found in the m-gov pilots of the Department of Home Affairs.
5. Connected: Horizontal connectivity is partially found in the Johannesburg Metropolitan Council. Pervasive connectivity with a majority of citizens found in m-gov pilots. Neither of these initiatives is fully available across South Africa.

This hierarchy of digital government services was developed according to the study of almost entirely western practices (Carter and May, 2001). Thus, many questions of applicability arise in this comparison. In the emerging stage, does South Africa meet the criteria if these services are

offered, yet readily unavailable to the majority of its citizens? This transplant of western theory into an African playing field has consequences beyond such difficulties of definition. Pressure to conform to the goals and services implicit in western models puts a tremendous burden on the South African government. Resources spent on developing misguided digital government initiatives may be better served developing information literacy, access infrastructure, or other basic services for the majority of the population (Maumbe, Owei, and Alexander 2008, p.768). Beyond these distinctions of government and infrastructure, there are inherent differences in communication trends between western countries and South Africa. Figure 7 demonstrates communication trends in South Africa.

Figure 7: Percentage communicating frequently or very frequently with these groups, using each communication medium in South Africa[7]

South Africa	Family	Close friends	Others in the community	Others outside of community	Businessmen or tradesmen	Govt services (inc doctors, Teachers	Police or security
Face to face	81%	77%	81%	25%	19%	28%	16%
Using a landline phone	16%	18%	7%	11%	4%	6%	9%
Using a cell phone to call	33%	26%	8%	11%	3%	6%	5%
Using a cell phone to text	13%	13%	4%	4%	1%	2%	2%

Attention must be paid to the stark differences between western and South African norms of communication; notably in the methods and topics by which citizens engage in information exchange. E-government models developed with a western bias must be fundamentally altered

[7] Source: Goodman 2005, p.58.

to take into account these cultural differences. With this disconnect between established e-government theory and the applied African setting in mind, future policy decisions and programs can be appropriately South African.

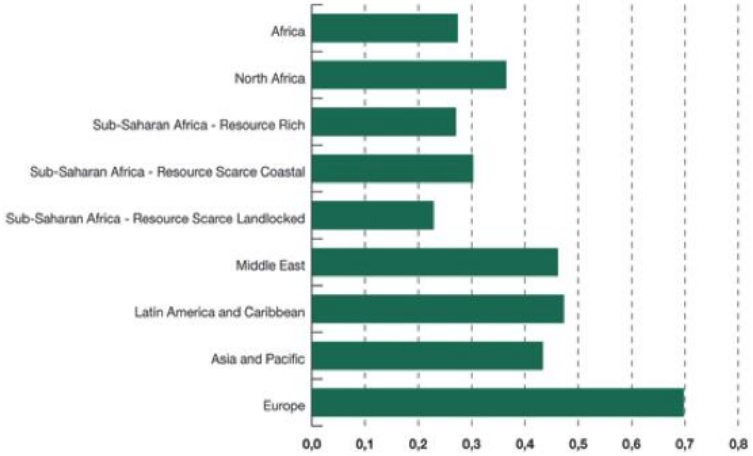
Principle Challenges and Future Opportunities

Looking ahead there are several key trends in the digital government development of South Africa. These realizations come about due to both theoretical refinement and the evolution of ICT technologies. While some of these points may appear as enormous challenges for South Africa's e-government initiatives, coming to terms with these realities is needed for sustainable development across the region. The potential and excitement over technology solutions must be grounded with more caution than in the past, while recognizing the need for developing an African context of utilization.

South African e-government policy has largely been emulation of western programs. Too often donor agencies push proposed public sector solutions such as New Public Management (NPM), which has its roots in Western neo-liberalism (Heeks 2002 p.98). Without properly contextualizing initiatives for South Africa, cycles of failure will continue. Transplanting programs from North to South is a miss-matching of blood types. Representative of this problem is the assumptions made in e-citizenship initiatives (Cabinet Office 2000). Western practice is to assume personal ownership of ICT devices by the majority of citizens. The traditional Africanized transplant of such a program would assume extremely low levels of ICT ownership (Pyramid Research 2000). This is a simplification of the reality in South Africa. Although individual ownership of ICTs is limited, the correct context is to provide for the presence of technological intermediaries. In South Africa, ICT devices are often shared amongst

a large social network of family and friends, and lack of expertise is augmented by human intermediaries between the public and digital services (Wilson and Heeks 2000, p.410).

Figure 8: UN E-Readiness Indicator 2008[8]



Digital governance questions in South Africa are often evaluated in terms of e-readiness. (Figure 8) The six determining factors of e-readiness in this context are the infrastructures of data, legal, institutional, human, technological and leadership (Heeks 2002 p.102). Evaluation of successful national level e-government policy and programs can be judged by these criteria. Failure rates of e-government programs in South Africa are notoriously high due to infrastructure shortcomings. 35% of digital government initiatives in the developing world are categorized as total failures and an additional 50% are partial failures (Heeks 2002b).

While such statistics are daunting, many contemporary e-government initiatives are worthy of skeptical enthusiasm. The m-government pilot programs mentioned earlier are examples of the mobile platform trend found largely in civilian-to-government and civilian-to-civilian e-gov projects. M-gov penetration has been extensive in the past three years, and South Africa's utilization has been exemplary in the African region. A call for public proposals by

[8] Source: United Nations 2008.

South Africa's Centre for Public Service Innovation (CPSI) in 2003 yielded 22 programs in various government sectors, including e-democracy (Patel and White p.315). Four of these programs were implemented and received tangible success in their local communities; however scalability and transferability are untested.

VII. Conclusions and Policy Recommendations

As South Africa moves forward with its Information Policies, it must focus on domestic needs and concerns as a vehicle, rather than in opposition to or a result of success internationally. Further, different levels of autonomy are required to build the social and economic capital that will lend South Africa the stability to compete internationally. In terms of building out telecommunications and ICTs, domestic competition needs to enter the market and remain viable and competitive in these fields and this requires the state to favor liberalization over privatization and to divest its interest in a strong single-provider such as Telkom. Policy decisions and competitive authority also needs to be strengthened on the side of the Regulator and the Competition Commission, with many functions inhibited by Ministerial oversight, thus increasing the likelihood of policy "capture", incompetence in the realm of telecommunications, or even outright corruption.

In the realm of Intellectual Property, South African citizens and companies require the freedom to develop legal protections, medicines and technologies that are affordable and meet the specific domestic needs. They also need an international IP environment that is more tolerant of potential infringement where infringement is the only way South Africans can get what they need to build a healthy and prosperous nation.

In Privacy law, South Africa has enacted strong policies towards personal privacy, surveillance, and access to government information. The government needs to further efforts by passing strong data protection rules to align with international standards to promote trade and e-commerce.

Digital governance policy explorations have yielded creative and promising solutions utilizing a variety of ICT platforms. Rather than attempted transplants of western theory, these exploration areas have succeeded in identifying a local context within South Africa for applying innovation. However, they have also highlighted a need for more robust methods of assessment for e-gov development initiatives. In addition, scalability and transferability remain largely untested.

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