

Chapter 4

Towards South Africa

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1. Introduction

The concept of electronic commerce is certainly not new.¹ Business to business e-commerce has been an enabler for competitiveness for a number of years. EDI was the predominant standard that allowed business to business e-commerce. However, it can probably be argued that two drivers have contributed significantly to the exponential growth of e-commerce world-wide: convergence and the Internet.

With the convergence of telecommunications, broadcasting and information technologies, the infrastructure capable of handling electronic commerce has become almost ubiquitous in developed countries. This has afforded a critical mass of businesses and consumers access to communications infrastructure.

Probably more important was the emergence of the Internet as the preferred networking protocol. This allowed open standards to be developed where transactions could take place between parties that have not developed proprietary protocols or have developed set agreements on transactions. This has allowed anybody who has access to the Internet to transact with an entity selling services or goods over the Internet.

It has been argued that e-commerce is likely to be a factor in the emergence of the information society. Mansell and Wehn argue that "countries that do not implement electronic business networks will almost certainly find themselves disadvantaged in the conduct of trade and in their financial affairs".² There is a real risk that developing countries will enter into a "neo-apartheid" era, in that the world community will be split between the advantaged who have access to information and can engage in the information society, and those who do not. South Africa can, by developing appropriate and supporting policy and regulatory infrastructures, promote access to the information society and – more important – allow its people to benefit economically from emerging technologies.

- South Africa has strong First World and developing world components. The banking sector has some of the most sophisticated information technology infrastructures world-wide, whereas the majority of small, medium and micro-enterprises have little or no access to IT systems. In civil society conditions are worse. Access to telecommunications facilities in rural areas is very limited.
- The South African government has realised that access to the information society will be key in the upliftment of its people. In the Science and Technology White Paper,³ the development of policies in support of the information society is considered a high priority. Unfortunately, little progress has been made in terms of the development of policy and regulatory frameworks since the White Paper was issued.
- One of the national priorities in South Africa is achieving a better life for all citizens. The objective articulated in the Science and Technology process is to establish policy frameworks that can tap into the potential of e-commerce as an enabler in improving life for South Africa's citizens. This chapter describes the initiative in terms of international events and drivers that led up to the e-commerce policy process, and the process of working towards an e-commerce policy for South Africa.

2. Background

On the international front, e-commerce has been high on the agenda of several countries and international organisations.

- The United Nations Commission on International Trade Law (UNCITRAL), the UN body most concerned with e-commerce, has for some time been working on the legal consequences of the development of e-commerce. In 1996 the Model Law on Electronic Commerce was finalised. It comprises model provisions for legislators to adopt when considering how to ensure that e-commerce is legally recognised. The Model Law covers, for example, the legal recognition of electronic writing and signatures.
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Get the Model Law on Electronic Commerce at

During the mid-1990s three predominant positions emerged globally:

- Japan, through its Ministry of Trade and Industry (MITI), in May 1997 released *Towards the Age of the Digital Economy - For Rapid Progress in the Japanese Economy and World Economic Growth in the 21st Century*.
The European Union released *A European Initiative in Electronic Commerce*, on 12 April 1997.
- The United States released *A Framework for Global Electronic Commerce*, on 1 July 1997.

Get *Towards the Age of the Digital Economy - For Rapid Progress in the Japanese Economy and World Economic Growth in the 21st Century* at
<http://www.mit.edu/~mitpress/ageofthedigital/>



Get *A European Initiative in Electronic Commerce* at
<http://www.europa.eu.int/comm/infocentre/infocentre.htm>

Get *A Framework for Global Electronic Commerce* at
<http://www.fda.gov/oc/21stcentury.htm>



There were some key differences between these positions. These differences as compared by the Global Information Infrastructure Commission (GIIC homepage at <http://www.giic.org>) can be found on the GIIC site at
<http://www.giic.org/infocentre/infocentre.htm>



The United States and the European Union released a joint statement on e-commerce in December 1997.

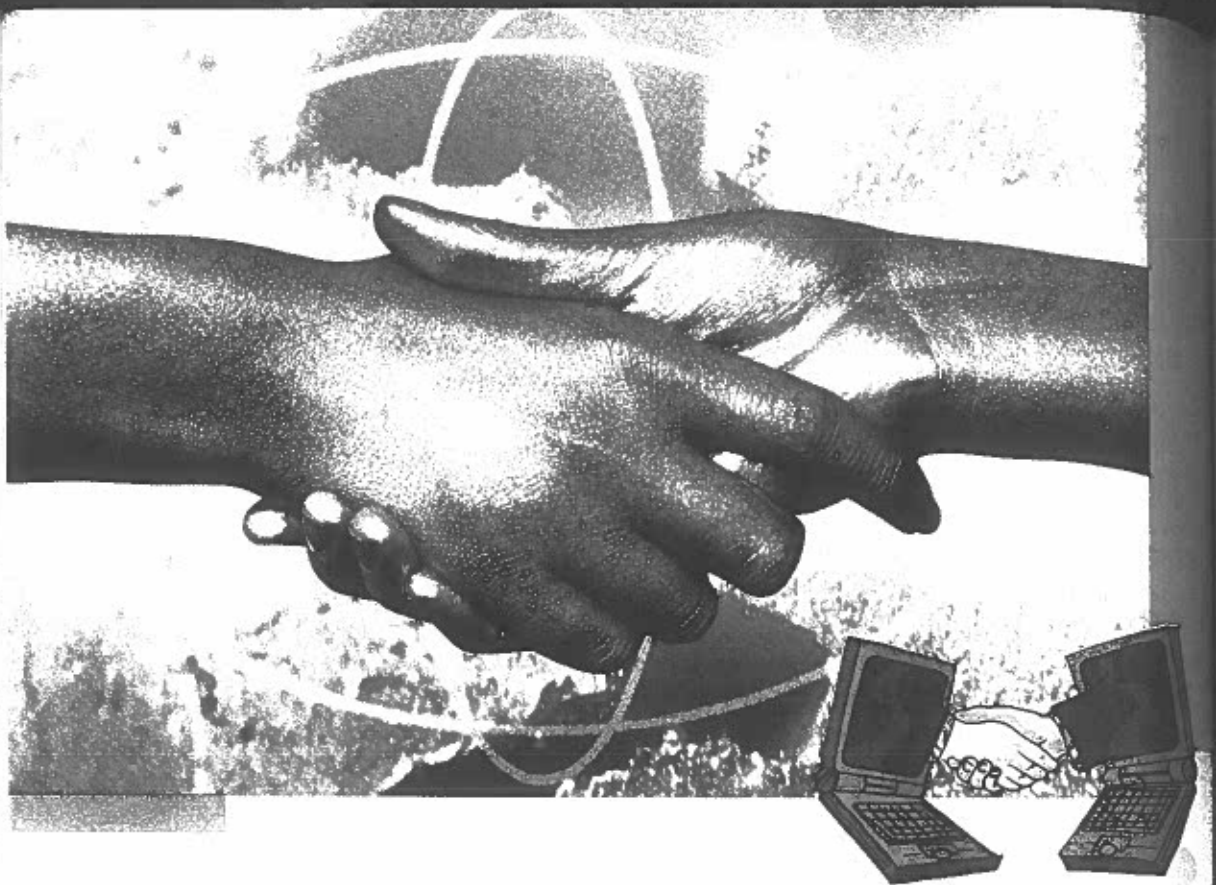
Get the joint *US-EU statement on e-commerce* at
<http://www.usa-eu.org/infocentre/infocentre.htm>



In May 1998 the World Trade Organization declared its intention to establish a WTO work programme for e-commerce. This work programme will examine all trade-related issues relating to global e-commerce, including the issues identified by members of the WTO. It is likely that the WTO will then develop international e-commerce trade agreements and rules.



Business leaders from the US and Japan issued a joint statement on e-commerce in July 1998.



Get the joint *US-Japan statement on e-commerce* at

✓ In October 1998, the Organization for Economic Co-operation and Development (OECD) convened a conference with the theme "A Borderless World: Realising the potential of Global Electronic Commerce", in Ottawa, Canada.



Get the homepage of the *OECD Conference* at



The conference reflected growing recognition of the need to create the right global framework to harness the enormous economic potential of e-commerce and to ensure its continued growth in a socially responsible manner. Building on the results of a previous OECD conference held in Turku, Finland, in November 1997 and on the European Ministerial Conference in Bonn, Germany in July 1997, governments, the private sector and social interests met in Ottawa to advance their common commitment to create a certain, secure and predictable international environment for the conduct of e-commerce.⁴

✓ The Ottawa Conference took specific steps to establish the cornerstones for the future growth of trans-national electronic commerce. Government representa-

tives, business, and labour and NGO leaders considered the economic and social potential of e-commerce, the barriers that currently limit this potential, and solutions that may be employed. Participants identified the following elements towards a shared vision for global e-commerce:

Building trust for users and consumers. Ensuring that the frameworks and safeguards which provide confidence in the physical marketplace are adjusted to instil equivalent confidence in the digital marketplace for users and consumers.

Establishing ground rules for the digital marketplace. Providing protection for governments, industry and consumers as they venture onto this new platform, which is as effective as that provided by legal and commercial frameworks in the physical world, and addressing barriers to e-commerce.

Enhancing the information infrastructure for electronic commerce. Creating effective competition in telecommunications markets can ensure a sustained, long-term trend towards lower costs, increased quality and thus expanded access to information infrastructures and services. The growth of global e-commerce relies on universal and affordable access to the information infrastructure.

Maximising the benefits. Understanding the social and economic impacts of e-commerce is critical to successfully making the transition to a digital economy and the broader movement towards a global information society. All players must contribute to understanding and addressing the impacts on growth, productivity, and employment, and needs of business, including small and medium-sized enterprises, organisations and consumers in both developing and developed countries.

The Conference identified the challenges implied by maximising the benefits of global e-commerce and clarified roles, responsibilities and commitments in terms of an action plan for global e-commerce. Delegates agreed:

It is among the roles of *governments* to meet the public interest, and create an environment for global e-commerce in which the ground rules are appropriate, clear and predictable, and where co-operation among all players is facilitated globally.

The role of the *private sector* is to stimulate the growth of global e-commerce through investment and dynamic innovation in products and services, and a partnership is necessary between government and the private sector to assure consumer confidence and acceptance.

The full range of *social interests* must be included and engaged in efforts to facilitate the growth of global electronic commerce and maximise its potential in social, civic and community development.

Participants also acknowledged that partnership among all parties is a cornerstone of the fulfilment of this vision, and sets the stage for the development of solutions to problems that confront e-commerce.

- ✓ The OECD Ottawa Ministerial Conference on electronic commerce broke new ground for the OECD and the global community in creating new working partnerships between governments, the private sector, consumer and social interest groups, and among international organisations. Continuing efforts to enhance and develop these partnerships will be critical to the growth of global e-commerce and the contribution of the OECD. Having said this, the OECD is still a body representative of the 29 most economically developed countries. In the words of Jay Naidoo:

The "Conference Conclusions" were significant in that conference participants – ministers, business representatives, labour, and social interest groups – came to agreement on the formal outcome of the Ottawa Ministerial. The conclusions outline a shared vision for global e-commerce, the commitments and priorities of each party to implement that vision, and the next steps.

Three action-oriented documents, which outline for the first time who is doing what to solve these various problems, were tabled:

The OECD Action Plan for Electronic Commerce
Report on International and Regional Bodies: Activities and
Initiatives in Electronic Commerce
Global Action Plan for Electronic Commerce prepared by Business
with Recommendations from Governments

✓ Together, the reports highlight the potential and value of co-operative efforts while, at the same time, exploiting the relative strengths of the various organisations involved. Ministerial Declarations to establish baseline principles and goals and provide guidance regarding the OECD's further work on privacy, consumer

protection, and authentication were adopted, and several agreements and a work plan for taxation issues were reached.

Under these broad themes, several issues were discussed, as listed below.

2.2.1 Building trust among users and consumers

- Protection of personal information: privacy and cross-border flows of information; Internet privacy; consumer empowerment/marketing and advertising ethics
- Confidentiality and lawful access to information: promotion of technology development to ensure security; cryptography for confidentiality; access to corporate information by government authorities; access to public sector information; legal government interception of telecommunications; legal interception of telecommunications by business
- Digital signatures and certification authorities: legal validity of digital signatures; interoperability of certificates and digital signatures; common framework of rules for certification practice; availability of certification practice statements; accreditation

2.2.2 Establishing the ground rules for the digital marketplace

- Contractual and other legal issues: removing legal/regulatory obstacles; creating a new uniform legal framework; incorporation by reference; transparency and availability of proprietary and best practice legal terms, model contracts etc.; dispute settlement; fraud and other commercial crime; liability
- Taxation and tariffs: customs duties; taxation
- Trade facilitation and customs modernisation: private/public sector interface; customs modernisation
- Intellectual property: copyright and neighbouring rights; trademarks; data bases

2.2.3 Enhancing the information infrastructure for electronic commerce

- Competition and trade-related issues: telecommunications competition; IT equipment; trade-related issues relating to e-commerce; convergence; payment systems
- Standards
- Internet governance
- Domain name issues

2.2.4 Maximising benefits

Economic and social impact: impact within and between businesses; changes in employment and skills requirements; government service delivery; government as model user

Small and medium-sized enterprises: critical issues affecting SMEs; obstacles and barriers to greater participation

Educational software and multimedia: creating a successful educational market; funding models; educational content and policy/regulatory issues

The outcomes of the OECD conference represent a synthesis of the different positions developed by the US, EU and MITI. More importantly, according to Donald Johnson, OECD Secretary General, "This conference has been a major launching pad to establish an international framework for the evolution of electronic commerce in all its various dimensions."

Although the OECD positions cannot be enforced, it is likely that the conference will significantly influence the WTO's deliberations on e-commerce.

From the South African perspective, it is thus key that careful consideration should be given to the outcomes of this conference.

Various issues were discussed at the conference, much of which remained unresolved. However, two matters that are relevant to South Africa should be noted. First, OECD countries' business people argued strongly for self-regulatory structures for e-commerce. Second, although some developing countries were invited as observers, the positions developed are from a predominantly First World perspective. "How do we harness this Internet to empower our people, to constitute... the most powerful democratising medium in the world that can empower and liberate our people from the shackles of poverty, ignorance and of dictatorships?" was a question posed by South Africa's then Telecommunications and Broadcasting Minister, Jay Naidoo, at the conference. The answers are not simple, and this is in part why a process has been established to tackle the issues of e-commerce and create an appropriate framework for finding answers.

The current legal and regulatory framework in South Africa poses significant problems for legally transacting via electronic means. A typical example is the purchasing of goods or services via the Internet with credit cards.

In South Africa, various national departments have responsibility for the development of policies related to the information society and, by implication, for e-commerce. These departments are:

The Department of Trade and Industry, responsible for interactions with the WTO

The Department of Arts, Culture, Science and Technology, which developed the Science and Technology White Paper articulating the need for the development of an information society policy.

The Department of Communications, responsible for the development of policies in the domains of telecommunication and broadcasting.

The Department of Justice, responsible for the creation of legislation.

Get the *Department of Trade and Industry* home page at

[http://www.dti.gov.za](#)

Get the *Department of Arts, Culture, Science and Technology* home page at

[http://www.dacst.gov.za](#)

Get the *Department of Communications* home page at

[http://www.dcom.gov.za](#)

Because the responsibility for the various elements of e-commerce lay in different departments, little progress was made towards a consistent set of policies for e-commerce in South Africa.

In May 1998 the Department of Communications, having received the mandate to do so, established an Information Technology investment cluster. The main objective of this cluster was to develop coherent legislation on issues related to the information society.

A government task team was established to develop a discussion document that would facilitate debates on e-commerce both in the national and international arena. This document would form the basis of discussion for the development of an e-commerce policy and subsequent legislation, via a Green Paper and subsequent White Paper.

The next section describes the development of this Discussion Document.



3. Towards an electronic commerce policy for South Africa

Policies are developed in South Africa through the process of Green and White Papers. Because of the intensive and democratic process of consultation, the policy process will take approximately two years to complete. It is divided into three phases:

Research and information gathering, leading to a Discussion Paper on e-commerce (September 1998 to April 1999)

Green Paper consultative process – public/private sector-stakeholder committee (May to December 1999)

White Paper and legislation (January to June 2000)



Get the e-commerce debate home page at

, The South African government has approached the development of e-commerce policy with the following objectives in mind.⁶ The government needs to:

create an enabling legal and regulatory environment for open and fair participation in e-commerce

support technological developments that will lead to the establishment of global connectivity

ensure that legal systems and international trade agreements between nations are adjusted and reformed to accommodate the new concepts of law

establish appropriate law enforcement to prevent crimes in the information space

promote education to increase information literacy among all citizens

In reviewing and developing policies regarding e-commerce, the government will pursue the following activities:

establish structures made up of government departments affected by or involved with e-commerce, to direct the process

identify all stakeholders in South Africa and promote active debate between the public and private sector

identify a set of key policy issues, questions, concerns and debates relating to e-commerce and conduct research
study the status of e-commerce in South Africa
review current policies, laws and institutional roles
review e-commerce practices and policies in other countries
produce a Discussion Paper on e-commerce highlighting key issues and opportunities

3.2 Objectives

These are the objectives of the Discussion Document and the process can be summarised as follows.

First, inform and raise awareness in government. E-commerce has received relatively little attention in government circles up to now. Neither e-commerce nor its impact on policies in South Africa has been extensively investigated, and thus it could be said that it is not well understood. In order to address this, the development process must be designed so that it will inform and educate government.

For this reason it was decided that government officials from all those departments that will influence or be influenced by government policy should participate in the development of the Discussion Document. A core task team was identified to drive the process.

Second, use the existing international body of work to leapfrog learning. Significant research has been done and is still in progress on e-commerce policy. South Africa does not have the resources to research all aspects of e-commerce. From this perspective, it is imperative that existing work be investigated to accelerate the learning.

Two approaches have been followed to harness international experience:

Identify issues unique to South Africa. As already mentioned, South Africa has both a developed and developing world component. This environment produces unique challenges that may differ from those in the developed world. This should be kept in mind when utilising research work from developed countries. From this perspective, the Discussion Document should identify issues unique or different in South Africa where international practice or thinking may not be appropriate. Because of this, strong emphasis was put on identifying

those issues that were different from those articulated by the OECD, and areas of omission.

Inform debate between the public and private sectors. An informed, well-articulated Discussion Document will facilitate the expected debate between the public and private sectors while the Green and White Papers are being developed. This is expected to shorten the time needed to reach consensus.

It was decided that the OECD position would be used as departure point for the development of the South African view. The OECD position provides a framework for debate where issues pertaining specifically to the South African environment could be highlighted and debated both nationally and internationally.

3.3.1 The OECD framework as a point of departure

As mentioned, the process designed for the development of the e-commerce Discussion Document has as its framework the OECD document outlining a global action plan for electronic commerce, as prepared by business with recommendations from governments. This creates a common frame of reference that is already accepted as an international approach. The additional focus on understanding the marketplace and the legislative frameworks currently in place add to the understanding of that framework, but are highlighted as of importance in the South African context.

A number of issues have surfaced in the course of the process, which are possibly unique to a developing country such as South Africa. They include:

Understanding the issues of the so-called "unbanked society", whose economic wealth is referred to as "mattress money": not kept in savings accounts but rather under mattresses. How does one deal with this in the electronic domain? The conversion of cash to something accepted electronically is no simple task. Reaching the unbanked society is a tremendous challenge, made more difficult by the fact that it is not always easy to define who or where such people are. One cannot segment purely according to geographical region. For example, Gauteng province is an industrial and commercial hub, yet there are specific regions in the province where there is little or no infrastructure, let alone banking facilities.

ated by the OECD,

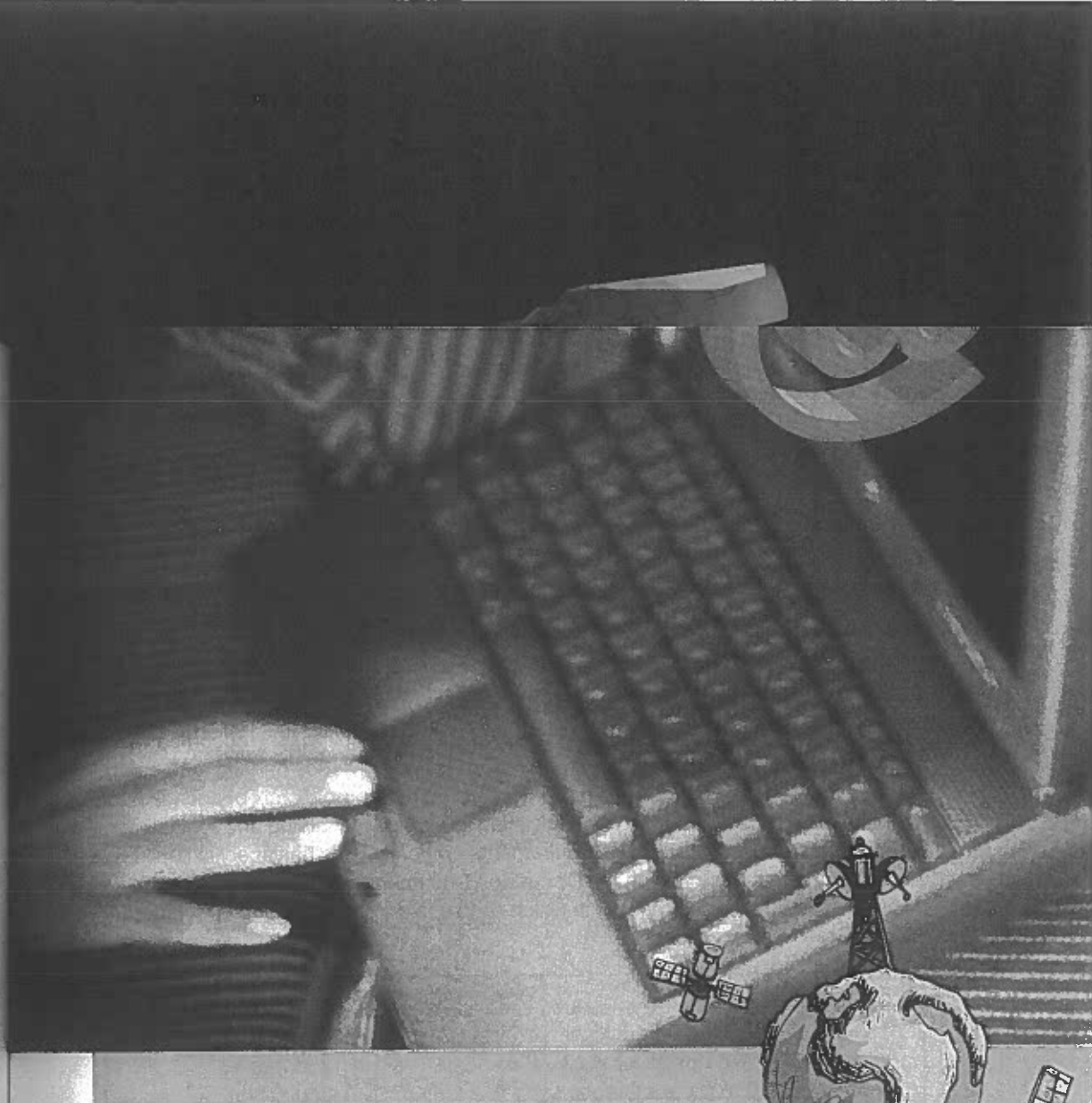
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- Infrastructure and access are typical challenges in developing countries. Statistics show an improvement in access in some communities, but there is still an uphill struggle ahead.
 - The benefits of e-commerce in underdeveloped communities. South Africa has a high crime rate. In line with the gap between haves and have-nots, criminals in underdeveloped areas are unsophisticated. Consequently an interesting benefit of e-commerce may be that criminals will not be able to defraud or access an electronic domain. A step towards effecting this improvement is seen in authenticating recipients of welfare payments in the Eastern Cape via electronic identification systems. Thus the mechanisms needed to effect e-commerce may have broader impact and so maximise benefits in unique ways.
 - SADC and the African context. South Africa is not an island. Clearly there is a strong need for integrative initiatives. The GIIC Africa, "African Connection" and a host of other initiatives are helping to raise awareness and bring Africa closer to implementation of what could be a leapfrogging concept. In debating and establishing policy, South Africa must not ignore these initiatives and must continue to engage in discussions with countries to ensure that the impact of its own policies benefits other developing nations.

Chapter 4 - E-commerce policy

South Africa, like most other countries, will have a complex stakeholder environment in which e-commerce has an impact or will be deployed. The accompanying table shows current stakeholder groupings and specific issues pertaining to each. The further process will need to take into account the complex mix of agendas and needs to ensure that the final legislation in regard to enabling and regulating e-commerce will meet all these requirements optimally. This has specific implications for the manner in which the Discussion Document will be published and communicated, and the manner in which each stakeholder grouping is included in the Green Paper process.

Sector	Stakeholder group		Role/representation	Challenges, issues
Public	Policy makers		DOC, DTI, DOF, SARS	
	Implementers/users		DOW, Provincial and Local authorities, DACST, DPSA	
	Key operational stakeholders		SITA, SACSA, SARB, DOJ, SALC	Role of structure as policy makers or merely implementing policy
Consumers	Consumer Council		National representative body investigating rights of consumers	
	Communities		Represented through community structures such as civic or community councils, tribal chiefs etc.	Different approaches to engaging required, huge logistical and resources challenge
	NGOs			
Private	E-commerce users		Business-to-business, SMEs (NTSIKA), Black empowerment groups	Main driver is direct commercial benefit to be gained
	Representative structures		ECASA, SACOB etc.	ECASA is probably overarching body - has adopted OECD format
	Infrastructure providers	Communications infrastructure	Telkom, VANS, competitors to Telkom, large networking giants, ISPs	Telkom monopoly ends in 2002. Already ISPs are making inroads, how will policy be different to accommodate change?
		Service providers	Companies e.g. EC-Net, SACA, Thawte	Use existing international standards and technologies
		Financial sector	COSAB, SARB, ACB	Highly advanced. Must interface with international standards

The above segmentation of the marketplace is only one cut, and quite simplistic. It is clear that there is a great need to engage the various stakeholders to ensure that all needs and points of view are correctly interpreted in the policy-making process. Thus a more detailed analysis resulting in defining strategies to engage each group must still be undertaken.

3.4.2

A number of aspects of the process and the content of the Discussion Document that is being developed have led to learning that is useful. These include:

E-commerce is a cross cutting issue, and does not simply require legislation on its own. The related legislation and its impact on or relationship to e-commerce is a cause for concern, as there are questions as to whether sufficient understanding of these relationships exists.

As mentioned before, interdepartmental collaboration and joint involvement in the setting up of the policy framework will need to be further addressed. Some progress has been made, and the Discussion Document drafting process has helped to highlight the issue and motivate inter-departmental involvement further. The Department of Communications is only a custodian of the process; all related departments must ultimately be involved and aware of the fundamental impact of e-commerce.

The process of Green and White Papers typically takes a minimum of 18 months – a long time in the electronic age. Questions as to what alternative processes exist, and what areas could be addressed more speedily as “quick wins”, need attention immediately. It is possible to begin drafting some legislation while higher level policies are being discussed. An example of this would be legislation pertaining to cryptography, or the extension of existing definitions in legislation to permit interpretation in the electronic domain.

The pace of implementation of e-commerce in the private sector is picking up rapidly. The implications are that private sector initiatives may dictate policy because they are already in place; alternatively, policy may be established that requires major changes in implementation in industry and this can be an expensive process. A balance must be struck between accommodating *de facto* standards and international best practice that is being implemented on the ground, and the longer-term strategic needs of the country.

4. Conclusion

The development of enabling policies and regulatory infrastructures in support of the emerging information society is arguably the most important initiative that can now be embarked on by governments, both in the developed and developing worlds. For this reason, it has to be ensured that processes are followed to produce quality products while utilising scarce resources. This chapter outlined the approach taken by South Africa, and has articulated the status, insights and learning derived from the process thus far.

Clearly there is still a long journey ahead, and much to be learned and done. The levels of debate that will be engaged in will hopefully be high and there is great hope that e-commerce will have the impact it promises on improving life for South Africa's citizens.

Acronyms used

ACB	Clearance Bank
COSAB	Chamber of South African Banks
DACST	Department of Arts, Culture, Science and Technology
DOC	Department of Communications
DOF	Department of Finance
DOJ	Department of Justice
DPSA	Department of Public Service and Administration
DTI	Department of Trade and Industry
DOW	Department of Welfare
ISPs	Internet service providers
NGO	Non-government organisation
NTSIKA	SME facilitation structure
SACOB	South African Chamber of Business
SACSA	South African Communications Security Agency
SALC	South African Law Commission
SARB	South African Reserve Bank
SARS	South African Revenue Service
SITA	State IT Agency
SME	Small and medium-sized companies
VANS	Value Added Network Service providers

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obtained his Electronics Engineering degree with distinction at the University of Pretoria in 1989. He joined the Division for Information and Communications Technology (Mikomtek) at the CSIR in 1993.



Michael has several years' experience in software development. He has been involved in developing applications and application frameworks for both Internet and intranet environments.

More recently he has been involved in business development and consulting in the information society domain, focusing on policy and regulatory issues. Michael was part of a delegation led by Minister Jay Naidoo which attended the OECD conference on electronic commerce in October 1998. He represented the CSIR on a government task team, led by the Department of Communications, investigating electronic commerce.

Recently Michael joined Investec and is focusing on e-commerce.

Other interests include information delivery, cybernetics, technology and knowledge management.

Endnotes



- 1 This chapter is based upon a paper presented at INet 99, Towards an electronic Commerce policy for South Africa, Groenewald (michaelg@investec.co.za), Lehlokoe (Dillo@doc.pwv.gov.org), Romanowska (ela.romanowska@csir.co.za)
- 2 Mansell and Wehn, *Knowledge Societies*, Oxford University Press 1998
- 3 http://www.polity.org.za/govdocs/white_papers/scitech.html section 2.6
- 4 For further information, see I-WAYS, Digest of Electronic Commerce and Regulation, 4th Q, Transnational Data Reporting Services (iways@tdrs.com), pp. 38-57
- 5 Jay Naidoo, Speech at the OECD Conference on Electronic Commerce <http://docweb.pwv.gov.za/docs/sp/1998/sp1008.htm>
- 6 *Towards an Electronic Commerce Policy for South Africa*, Paper presented at INet 99, Groenewald (michaelg@investec.co.za), Lehlokoe (Dillo@doc.pwv.gov.org), Romanowska (ela.romanowska@csir.co.za)