



REPUBLIC OF KENYA

**NATIONAL INFORMATION &
COMMUNICATIONS TECHNOLOGY (ICT)
POLICY**

BY

**MINISTRY OF INFORMATION &
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VISION AND MISSION STATEMENTS

VISION

A prosperous ICT-driven Kenyan society

MISSION

To improve the livelihoods of Kenyans by ensuring the availability of accessible, efficient, reliable and affordable ICT services.

1. INTRODUCTION

1.1 BACKGROUND

Countries that have harnessed the potential of Information and Communications Technologies (ICTs) have attained significant social and economic development. In addition, they are rapidly transforming into information and knowledge-based economies.

The Government, therefore, recognizes the role of ICTs in the social and economic development of the nation and has promulgated a national ICT Policy based on the Economic Recovery Strategy for Wealth and Employment Creation (2003-2007).

This policy seeks to facilitate sustained economic growth and poverty reduction; promote social justice and equity; mainstream gender in national development; empower the youth and disadvantaged groups; stimulate investment and innovation in ICT; and achieve universal access. It is based on internationally accepted standards and best practices, particularly the COMESA Model adopted by the COMESA Council of Ministers in March 2003.

The policy is based on four guiding principles: infrastructure development, human resource development, stakeholder participation and appropriate policy and regulatory framework.

1.2 STATUS OF ICT IN KENYA

Kenya has witnessed significant growth in the ICT sector as demonstrated by the number of telephone lines, Internet Service Providers (ISPs), the number of Internet users, broadcasting stations, and market share of each one of them. The Government has liberalised the mobile cellular market and currently, there are two mobile cellular operators. Available statistics indicates that there were:

- (a) 260,000 fixed telephone line subscribers and 3.0 million cellular mobile subscribers by June 2004, translating into fixed teledensity of 0.75 per hundred inhabitants for fixed and 9.75 per hundred inhabitants for mobile against the world average of 19 and 21 respectively.

- (b) 73 registered ISPs, 16 of which are active, approximately 1,030,000 users and over 1000 cyber cafes and telephone bureaus by June 2005.
- (c) 16 operational television stations and 24 FM radio stations.
- (d) Approximately 11,500 public phones installed throughout the country by the year 2003.
- (e) An estimated 60% of the population have access to television and 90% have access to radio services.

1.3 THE POLICY AND REGULATORY FRAMEWORK

In 1997, the Government released the *Telecommunications and Postal Sector Policy Guidelines* that created an environment for competition in several market segments and paved way to the enactment of the Kenya Communications Act of 1998 which repealed the Kenya Posts and Telecommunications Act and established:

- (a) CCK as the Telecommunications, Radio Communications and Postal Sector Regulator;
- (b) National Communications Secretariat (NCS) to serve as a policy advisory body;
- (c) Communications Appeals Tribunal;
- (d) Telkom Kenya Limited; and
- (e) Postal Corporation of Kenya.

2. CHALLENGES OF ICT IN NATIONAL DEVELOPMENT

2.1 INTRODUCTION

The broad challenge is to harness the potential of ICTs for economic growth and poverty reduction. Specific challenges include lack of a comprehensive policy and regulatory framework, inadequate infrastructure, and insufficient skilled human resources.

2.2 POLICY, LEGAL AND REGULATORY FRAMEWORK

Currently, ICT issues are considered under various legislation including: *The Science and Technology Act, Cap. 250 of 1977*, *The Kenya Broadcasting Corporation Act of 1988* and the *Kenya Communications Act of 1998*, which are inadequate in dealing with issues of convergence, electronic commerce and e-Government. There is need for a comprehensive policy, legal and regulatory framework to:

- (a) Support ICT development, investment and application;
- (b) Promote competition in the industry where appropriate;
- (c) Ensure affordability and access to ICT nationally;
- (d) Address issues of privacy, e-security, ICT legislation, cyber crimes, ethical and moral conduct, copyrights, intellectual property rights and piracy;
- (e) Support research and development in ICT; and
- (f) Develop an institutional framework for policy development and review.

2.3 ICT INFRASTRUCTURE

The lack of adequate ICT infrastructure has hampered provision of efficient and affordable ICT services in the country. Emphasis will be placed on:

- a) Provision of support infrastructure, such as, energy and roads;
- b) Supporting software development;

- c) Promotion of local manufacture and assembly of ICT equipment and accessories; and
- d) Provision of incentives for the provision of ICT infrastructure.

2.4 HUMAN RESOURCE DEVELOPMENT

The Government recognizes the role played by the various institutions providing ICT education and training. However, there is need to strengthen and streamline the training through:

- a) Promoting ICT in education at primary, secondary, tertiary and community levels by developing ICT curricula and ensuring that teachers/trainers possess the requisite skills;
- b) Setting up a framework for evaluating and certifying ICT training programmes;
- c) Developing a mechanism for attracting and retaining skilled human resources;
- d) Establishing networks for sharing training resources; and
- e) Developing strategies to support research and innovation.

2.5 ELECTRONIC LEARNING

The lack of a policy framework on e-learning has hampered its development and utilisation. In this regard, there is need to:

- a) Provide affordable infrastructure to facilitate dissemination of knowledge and skill through e-learning platforms;
- b) Promote the development of content to address the educational needs of primary, secondary and tertiary institutions;
- c) Create awareness of the opportunities offered by ICT as an educational tool to the education sector;
- d) Facilitate sharing of e-learning resources between institutions;

- e) Promote centres of excellence to host, develop, maintain and provide leadership of better learning resources and implementation strategy;
- f) Exploit e-learning opportunities to offer Kenyan education programmes for export; and
- g) Integrate e-learning resources with other existing resources.

2.6 UNIVERSAL ACCESS

Access to ICT services is limited to a few major towns leaving out the rural areas of the country where most Kenyans live. There is therefore need to enhance universal access through:

- a) Provision of adequate resources to the ICT sector;
- b) Developing the requisite ICT infrastructure;
- c) Creating incentives for service providers to deploy services in rural and under-served areas;
- d) Establishing a Universal Service Fund;
- e) Creating awareness of benefits of ICT to the public; and
- f) Developing knowledge-sharing networks at grassroots level.

2.7 PUBLIC-PRIVATE PARTNERSHIPS (PPP)

There is need for an enabling environment for Public-Private Partnerships (PPP) in ICT development.

2.8 E-GOVERNMENT

The major challenge facing Government is to provide services in an efficient and effective way. E-Government provides a framework for improved service delivery and enhanced communication and information provision within Government, with the citizenry and the business community. There will be

need to develop adequate capacity within Government to implement e-Government and realise the benefits of e-service delivery.

2.9 ELECTRONIC COMMERCE

The main challenge affecting the application of e-commerce in Kenya is the inadequate policy, legal and regulatory framework. There is need, therefore, for a conducive policy framework and adequate legislation to support e-commerce.

2.10 CONTENT DEVELOPMENT

The main challenge is the underdevelopment of local content. ICT is a conveyor of information, providing opportunities for local people to interact with each other expressing their own ideas, knowledge, heritage and culture in their own languages. Improving local content will entail:

- a) Developing content in local languages;
- b) Rallying all stakeholders and development partners' support in creating local content; and
- c) Identifying, selecting and capturing information and knowledge available in various formats.

2.11 ELECTRONIC SECURITY

The challenge is for the country to establish an adequate legal framework and capacity to deal with national security, network security, cyber-crime and terrorism; and to establish mechanisms for international cooperation to combat cross-border crimes. An e-security structure will be developed in collaboration with the relevant institutions.

2.12 ICT LEADERSHIP

There is need for sustained high level ICT leadership and championship at national level to provide oversight, inspiration and political goodwill. Effective leadership should facilitate the mobilization of resources needed to develop an ICT environment that is conducive to investments in the country.

2.13 ENGENDERING ICT

Gender issues touch on all aspects of ICTs in development. There is, therefore, need to:

- a) Ensure the participation of women in ICT policy formulation and implementation at all levels.
- b) Ensure that ICT policies at all levels are engendered and geared towards meeting specific developmental needs of women.

2.14 YOUTH AND ICT

Youth are the largest population of potential ICT users, and they need to have access to affordable and appropriate ICTs.

3. INFORMATION TECHNOLOGY

3.1 INTRODUCTION

The rapid advancements in the field of Information Technology (IT) and the resultant explosive growth of the information services sector have radically changed the world's economic and social landscape. These changes have given rise to a new society based on information and knowledge. This has further resulted in new avenues of development, employment, productivity, efficiency, and enhanced economic growth.

Globally, IT-led growth is creating jobs, raising productivity, increasing incomes and opening many opportunities for increased trade and human development. Extensive application of information technology now provides opportunities for new ways to create wealth thus contributing significantly to poverty alleviation.

The Government recognizes that there is a growing digital divide between the countries that are highly endowed and developed in the field of information technology and Kenya as well as between rural and urban areas in the country. It is therefore, the objective of the Government to initiate steps to reduce this divide by using information technology to rapidly develop all sectors of the economy.

The Government recognises information as a resource which must be generated, collected, organized, leveraged, secured and preserved for national prosperity.

3.2 POLICY OBJECTIVES

The broad-objectives of the IT policy include:

- a) Ensuring that IT plays a key role as an empowerment tool, addressing gaps relating to gender, youth, people with special needs, rural and urban and disadvantaged groups, and as a literacy tool for the population and potential users;
- b) Fostering the use of IT to promote tourism and protect Kenyan social values, culture, and environment;

- c) Using IT to achieve the objectives of alleviating poverty, improving healthcare, and general welfare of the population;
- d) Using e-Government as a tool to improve internal efficiency and quality of public service delivery and help in the fight against corruption;
- e) Encouraging the use of IT in schools, colleges, universities and other educational institutions in the country so as to improve the quality of teaching and learning;
- f) Using IT to generate additional employment and promoting entrepreneurship for the new digital economy;
- g) Encouraging and accelerating investments and growth in IT hardware, software, Internet, training, IT enabled services, telecommunications and electronic commerce;
- h) Providing adequate infrastructure in the country for IT sector to flourish;
- i) Using IT to improve security;
- j) Using IT to promote *inter alia*, labour, health, social welfare, sports, culture, water and natural resources; and
- k) Facilitating the development of sectoral IT policies and strategies e.g. e-education, e-water, e-health, e-agriculture.

3.3 STRATEGIES

The Government will adopt the following strategies to realise the above objectives:

3.3.1 Information Technology Infrastructure

Measures will be put in place to encourage the provision of infrastructure for access to local, national and international information resources. The aim will be to provide sufficient internet capacity for schools, colleges, businesses; and to provide a reliable and secure internet infrastructure. A nationwide network consisting of fibre optic, satellite and terrestrial radio communication networks will be established.

The Government will encourage the sharing of the capacity of public and private utility providers (e.g. power, water, railway, etc) that have rights of way to develop the national information infrastructure. The Government will also support the development, deployment and maintenance of multi-purpose community, public library and post office owned public access centres.

The Government will encourage the growth of local software industry by increasing awareness among stakeholders of the opportunities offered by different software models, including proprietary, open-source and free software in order to increase competition, access, diversity of choice and to enable users to develop solutions.

3.3.2 Electronic Commerce

In recognition of the important role e-commerce plays in economic development, the use of e-commerce in trade and investments as a means of integrating Kenya into the global economy will be promoted.

To this end, the Government will:

- a) Support the development of e-commerce by enacting appropriate legislation to support e-business;
- b) Support promotional campaigns to raise public awareness on the potential opportunities presented by e-commerce; and
- c) Promote collaboration with the international community in developing an equitable framework for e-commerce.

3.3.3 E-Government Services

The overall goal of e-Government is to make the Government more result oriented, efficient and citizen centred. The e-Government strategy will focus on redefining the relationship between Government and citizens with the objective of empowering them through increased and better access to government services.

The broad objectives of e-Government will be to:

- a) Improve collaboration between Government agencies and enhance efficiency and effectiveness of resource utilisation;

- b) Improve Kenya's competitiveness by providing timely information and delivery of Government services;
- c) Reduce transaction costs for the Government, citizens and the private sector through the provision of products and services electronically; and
- d) Provide a forum for citizens' participation in Government activities.

The e-Government initiative will be a shared vision between the Government, private sector and civil society. The implementation process will involve all stakeholders.

3.3.4 E- Learning

The ICT policy will promote the growth and implementation of e-learning. To do this, the Government will employ the following strategies:

- a) Promote the development of e-learning recourses;
- b) Facilitate Public - Private Partnerships to mobilize resources in order to support e-learning initiatives;
- c) Promote the development of integrated e-learning curriculum to support ICT in education;
- d) Promote distance education and virtual institutions, particularly in higher education and training;
- e) Promote the establishment of a national ICT centre of excellence;
- f) Provide affordable infrastructure to facilitate dissemination of knowledge and skill through e-learning platforms;
- g) Promote the development of content to address the educational needs of primary, secondary and tertiary institutions;
- h) Create awareness of the opportunities offered by ICT as an educational tool to the education sector;
- i) Facilitate sharing of e-learning resources between institutions;

- j) Exploit e-learning opportunities to offer Kenyan education programmes for export; and
- k) Integrate e-learning resources with other existing resources.

3.3.5. IT in Health Services

Use of IT in health delivery systems reinforces fundamental human rights by improving equity and quality of life. The Government will promote use of IT in health delivery by:

- a) Providing IT facilities in all public health facilities;
- b) Providing IT training to medical staff;
- c) setting standards and norms for IT in the healthcare system;
- d) Developing legislation governing telemedicine and health information; and
- e) Establishment of national resource centres for IT in the healthcare system.

3.3.6 Local Content

The overall objective will be to develop local content in ICTs for greater access and relevance to the citizens. To this end the strategies on local content will:

- a) Support locally based development of IT applications and multi-media content for productivity;
- b) Encourage the use of local languages in developing content;
- c) Encourage the development of content that captures and preserves knowledge and culture of local communities;
- d) Promote electronic publishing, collection and preservation of local materials; and
- e) Encourage the development and management of information and knowledge resources as a national heritage.

3.3.7 Fiscal Measures

The Government will introduce measures to stimulate increased investment and growth in the ICT sector in order to create a favourable investment climate for the development of a globally competitive IT enabled economy.

The Government's overall objective will be to:

- a) Promote favourable fiscal policies to ensure that the country's ICT products and services are globally competitive;
- b) Develop fiscal mechanisms that respond to the fast changing needs of the information economy;
- c) Promote duty free zones and incubation centres to attract ICT investment; and
- d) Make budgetary provision to spur the growth of ICT.

3.3.8 Information Technology Standards

The Government will institutionalise the standardisation of IT products and services for quality assurance and adherence to the national and international standards. The mandates and institutional capacities of Kenya Bureau of Standards (KEBS) and CCK will be strengthened to ensure quality and compatibility of IT products and services.

3.3.9 Human Resource Development

The realisation of the policy objectives will depend on the availability and adequacy of skilled human resource capacity. The Government will support the creation of the necessary capacity by:

- a) Integrating IT subjects in the curriculum at all levels of education;
- b) Establishing educational networks for sharing educational resources and promoting e-learning at all levels;
- c) Establishing the establishment of ICT Centres of Excellence;
- d) Encouraging and supporting IT training for decision-makers, community and civil society leaders;

- e) Creating opportunities and providing assistance for the disadvantaged, people with special needs, women and the youth to acquire IT skills; and
- f) Enhancing capacity for research and development in IT.

3.3.10 ENVIRONMENTAL ISSUES

The Government will promote the use of environmentally-friendly IT products to address environmental and cost issues. This will include developing regulations for recycling and disposal facilities.

4. BROADCASTING

4.1 INTRODUCTION

Broadcast media have emerged as one of the most powerful communication tools in the 21st century thus revolutionising the way in which individuals and societies interact.

A series of reforms have been undertaken in the broadcasting sub-sector to ensure that it becomes competitive and serves the growing needs of the people of Kenya. Consequently, over 24 radio and 16 TV stations are operational.

The aim of this policy is to provide a rational and comprehensive framework to govern the establishment, ownership, control, management and delivery of information, entertainment and educational services to Kenyans through provision of efficient and reliable broadcasting. The policy further aims to outline the framework within which national public broadcasting, private broadcasting and community broadcasting and signal distribution services will be provided. It also provides for capacity building in the sector.

4.2 POLICY OBJECTIVES

The overall policy objective for the sector is to create an environment that enables broadcasting services to be provided in the public interest and to contribute equitably to the socio-economic and cultural development of Kenya. Specific objectives of the policy are:

- (a) Development of a legal and regulatory framework as a basis for investment in, growth and sustenance of broadcasting services and for dispute resolution;
- (b) Encouraging the growth of a broadcasting industry that is efficient, competitive and responsive to audience needs and susceptibilities;
- (c) Provision of a licensing process and for the acquisition of licences and allocation of frequencies through an equitable process;

- (d) Ensuring the development of broadcasting services that reflect a sense of Kenyan identity, character, cultural diversity and expression through the development of appropriate local content;
- (e) Promoting diversity in ownership and control of broadcasting services and availability throughout Kenya;
- (f) Promoting fair competition, innovation and investment in the broadcasting industry;
- (g) Ensuring adherence to social responsibility by encouraging the development of and respect for codes of practice by all broadcasting licensees;
- (h) Promoting Research and Development; and
- (i) Ensuring universal access to, and viability of public service broadcasting.

4.3 STRATEGIES

The following strategies will be adopted to achieve the above objectives:

4.3.1 Legal and Regulatory Framework

The CCK will be designated as the sector regulator for broadcasting. Appropriate legislation will be developed to cover regulation, policy advisory and dispute resolution for the sector.

4.3.2 The Public Broadcaster

The Kenya Broadcasting Corporation (KBC) will be restructured to ensure its relevance and viability in the market. Amendments will be made to the KBC Act to reflect the nature, structure, mandate and funding of the corporation as a public broadcaster.

4.3.3 Promotion of Local Content

The CCK will, in consultation with the broadcasting, media professionals and production industry as well as the public, devise mechanisms to ensure

increased local content in the various types of programming services including films, drama, children's programmes, documentaries and music.

Media training institutions in conjunction with the broadcasting industry will be encouraged to nurture research into aspects of programming and curriculum development in the industry.

The Government will promote local production of advertisements and create an enabling environment for the production and export of local broadcast and media products that will contribute towards job creation.

4.3.4. Content Advisory Council

A broadcasting Content Advisory Council will be set up to advise CCK on broadcasting content standards to enable it:

- (a) Monitor broadcast content;
- (b) Handle complaints from operators and consumers;
- (c) Monitor the compliance of broadcasters with the programming code; and
- (d) Monitor broadcasting ethics compliance.

The Council will work in liaison with the Kenya Film Censorship Board

4.3.5 Professional Standards

Programming decisions will be made by broadcasters based on professional criteria and the public's right to know. All broadcasters will be required to act in the public interest and be guided by a code of conduct which will *inter alia* address:

- (a) broadcast of material suitable for children;
- (b) broadcasts that contain scenes of violence, sexually explicit conduct and offensive language;
- (c) audience advisories to assist audiences in choosing programmes;
- (d) the need to report news truthfully, accurately and fairly, without intentional or negligent departure from the facts;

- (e) the need to exercise care in dealing with individuals' privacy; and
- (f) the need to accommodate diversity of opinion; and
- (g) Broadcast stations must adhere to regulations and guidelines issued for fair coverage during elections.

4.3.6 Market Regime

This policy will foster pluralism, efficiency and fair competition and increased reliance on market forces in the provision of broadcasting services. Consequently, competition in the sub-sector will be enhanced through licensing of more radio and television stations.

The Government will establish a framework within which different players will be licensed in the various market segments to promote efficiency in the sector.

4.4 LICENSING OF BROADCASTING SERVICES

Any person wishing to provide broadcasting services will be required to obtain the necessary licences.

Broadcasters, including those re-broadcasting free-to air programmes will be required to meet the prescribed local content levels.

The broadcasting services will be licensed according to the following categories:

- (a) Free-to-air radio;
- (b) Free-to-air television;
- (c) Satellite-free-to-air radio;
- (d) Satellite-free-to-air television;
- (e) Satellite-subscription television;
- (f) Satellite-subscription radio;

- (g) Terrestrial-subscription television;
- (h) Subscription Cable television;
- (i) Low power radio;
- (j) Signal distribution; and
- (k) Any other class of license as determined in accordance with the Regulations.

4.5 MARKET STRUCTURE

Licences for broadcasting will be issued based on the following market structure.

4.5.1 National Public Broadcasting Service

This service will be provided by the Kenya Broadcasting Corporation, operating commercially, with universal service obligations, and with Government support to sustain its universal service obligations.

4.5.2 Private Broadcasting Service

The main objective of granting of licences for private broadcasting services will be the development of a diverse and pluralistic broadcasting landscape, while taking into account the viability of individual enterprises as well as the industry as a whole.

Private broadcasting service providers will be expected to provide a diversity of programming content, contribute to job creation and human resource development.

The CCK will be responsible for developing criteria for technical evaluation and fair and equitable grant of licences and allocation of frequencies.

All licences will be valid for ten years and will be renewable every ten years.

Private broadcast licenses will not be granted to any political party, or affiliate of a political party.

Broadcast licensees who are not on air for longer than one year will automatically lose their licence.

4.5.3 Community Broadcasting Service

Community broadcasting service providers, who are fully controlled by a non-profit entity, will be licensed to offer non-profit services that serve a particular community. They will be required to:

- a) Offer a distinct broadcasting service dealing specifically with community issues, which are not usually dealt with by private or public broadcasting service covering the same area; and
- b) Focus on the provision of programmes that highlight community issues, including, but not limited to, developmental issues, health care, basic information and general education, environmental affairs and local culture.

Licensing of community broadcasters will follow a free market approach where prospective service providers will make application to CCK. The licenses will be granted after evaluation based on clear conditions and availability of frequencies in the service area.

In order to promote the development of community broadcasting services, the CCK will endeavour to reserve broadcast frequencies for this purpose

Community broadcast licenses will not be granted to any political party, or affiliate of a political party.

All licences will be issued for a period of five years and will be renewable for a period of five years.

4.6 SIGNAL DISTRIBUTION

The Government will license signal distribution services to ensure that the use of broadcasting infrastructure is maximised. A signal distributor will be required to provide services to licensees on a non-discriminatory basis.

4.7 DIGITAL BROADCASTING

The Government will promote the introduction and uptake of digital broadcasting in the country by managing the transition from analogue to digital broadcasts.

4.8 HUMAN RESOURCE DEVELOPMENT

The Government will introduce incentives and measures to improve the training in broadcasting and media to ensure qualitative and quantitative growth of the broadcasting sector.

National professional bodies for media practitioners will be encouraged to participate in setting standards in broadcasting.

Media training institutions will be encouraged to provide structured specialized programmes that cater for people with talent for creative writing, film production, animation creative and technical aspects of broadcasting.

4.9 ENVIRONMENTAL ISSUES

Development of modern broadcasting facilities will be carried out sensitively to minimise their environmental impact. As a prerequisite for grant or renewal of licences, applicants must demonstrate their readiness to minimize the effects of their infrastructure on the environment. This should include provision of appropriate recycling/disposal facilities for waste that may contain toxic substances.

4.10 EQUITY PARTICIPATION & CONTROL

Kenyans will be encouraged to participate in the sub-sector through equity ownership. Furthermore, to ensure that the broadcasting system meets the needs of Kenyans, effective local ownership and control of the Kenyan broadcasting system will be maintained. Any firm licensed to provide broadcasting services shall have at least 30 percent Kenyan equity ownership. However, for all listed companies, the equity participation shall conform to the existing rules and regulations of the Capital Markets Authority (CMA).

4.11 CROSS-MEDIA OWNERSHIP

In order to promote diversity of views and freedom of expression, concentration of ownership of print and electronic media in a few hands will be discouraged. Limits to cross-media ownership will be set through regulations to be issued from time to time and through competition laws.

4.12 SOCIAL RESPONSIBILITY

Broadcasters will be required to avail their services to serving public interest free of commercial interest in times of emergencies.

5. TELECOMMUNICATIONS

5.1 INTRODUCTION

The Government recognises that the provision of modern telecommunications infrastructure and information networks is key to rapid economic and social development of the country. Telecommunications is a critical component for the development of the ICT industry.

The overall Government objective for the sector is to optimise its contribution to the development of the Kenyan economy as a whole by ensuring the availability of efficient, reliable and affordable telecommunication services throughout the country. A key element of the new telecommunication policy is attracting and stimulating investment.

5.2 POLICY OBJECTIVES

This policy aims to achieve the following objectives:

- a) Creating a modern and efficient telecommunications infrastructure in order to position Kenya as a hub of industrial, commercial and financial services in the region;
- b) Developing an efficient, high capacity national telecommunications infrastructure to enhance service delivery to the public with special emphasis on health and educational institutions;
- c) Promoting and strengthening research and development, innovation and manufacturing activities in the country; and

- d) Promoting systematic and comprehensive expansion of telecommunications infrastructure and services with special attention to rural and urban marginalised areas.

5.3 STRATEGIES

The Government will adopt the following strategies to achieve the above policy objectives:

- a) Promote competition, increased customer choice and accelerated investment through liberalization of the sector and the licensing of new players in the various telecommunications market segments;
- b) Promote network and service unbundling, infrastructure sharing and collocation; and
- c) Establish technology-neutral licensing framework that enhances innovation in service delivery.
- d) Restructure the Telkom Kenya to promote efficiency;
- e) Establish universal access mechanisms for promotion of wider access to telecommunications services;
- f) Promote Public-Private partnership in the development of telecommunications infrastructure and equipment;
- g) Collaborate with other countries to support regional telecommunications infrastructure project;
- h) Integrate gender, youth, disadvantaged groups and people with special needs in developing the networks;
- i) Require that physical infrastructure providers - for example, roads, railways, pipelines, property developers and power - to make provision for future installation of ICT facilities.

5.4 TARGETS

To realise these objectives, the Government has set the following targets to be achieved:

- a) Improve the fixed-line teledensity in rural areas from the current 0.33 lines to 5 lines per 100 inhabitants by the year 2015;
- b) Improve the fixed-line teledensity in urban areas from the current 1.97 lines to 20 lines per 100 inhabitants by the year 2015;
- c) Increase the number of mobile subscribers from the current 4 million to 10 million by the year 2015;
- d) Expand the current international internet bandwidth from the current 69 Mbps to 1 Gbps by the year 2015;
- e) Provide all primary schools with affordable internet access by the year 2015; and all secondary schools and tertiary institutions to have affordable internet access by the year 2010; and
- f) Establish internet access nodes at all district headquarters by 2010.

5.5 TELECOMMUNICATIONS LIBERALISATION

The Government will continue with the ongoing liberalisation of the various market segments of the telecommunications sector. Towards this end, the Government will *inter alia*, put in place an appropriate regulatory framework and promote competition.

5.6 EQUITY PARTICIPATION

The Government will encourage Kenyans to participate in the sector through equity ownership. Consequently, any firm licensed to provide

telecommunication services shall have at least 30 percent Kenyan equity ownership. However, for all listed companies, the equity participation shall conform to the existing rules and regulations of the Capital Markets Authority (CMA). The Government will support upcoming small-scale operators through proactive measures.

5.7 MARKET STRUCTURE

This telecommunications policy framework focuses on establishing a market structure that attracts investment in the sector and allows the creation of telecommunications infrastructure for leveraging national development. The market structure will be reviewed from time to time in line with changing market needs and technological trends.

5.7.1 Market segments

Operators and service providers will be licensed under a market structure consisting of the following market segments:

- (a) Facility based public fixed telecommunications providers;
- (b) Land mobile radio-communications services;
- (c) Fixed and mobile satellite services;
- (d) Enhanced facility-based communications network and services;
- (e) Other facility based providers;
- (f) Internet facilities and services;
- (g) Resale services;
- (h) Value Added Services (VAS);
- (i) Telecommunication dealers and contractors licences;
- (j) Telecommunications Technical Personnel Licence.

5.7.1.1 Facility Based Public Fixed Telecommunications Providers

This market segment will include the following licences:

- (a) Local access regional telecommunication operators;
- (b) Long-distance telecommunication operators;
- (c) International telecommunication operators; and
- (d) Local loop operators.

For the efficient utilisation of resources and protection of the environment operators in this category will be required to share infrastructure and collocate equipment with other licensed operators and service providers.

5.7.1.2 Land Mobile Radio Communication Services

In this segment, operators will be licensed subject to the availability of frequency spectrum, and will include the following licence categories:

- a) Cellular mobile telephone service providers;
- b) Public radio paging service providers;
- c) Commercial trunked radio communication network operators;
- d) Private radio paging networks;
- e) Private radio trunking networks; and
- f) Private two-way radio networks.

5.7.1.3 Fixed and Mobile Satellite Services

This market will include the following licence categories:

- (a) Public commercial satellite uplink/downlink gateway services;
- (b) Private VSAT network operator;
- (c) Commercial VSAT network operator;
- (d) Global mobile personal communications via satellite (GMPCS) gateway services operator;
- (e) Satellite based paging network and services;
- (f) GMPCS landing rights;
- (g) Interactive VSAT terminal (station licence);
- (h) VSAT terminal for radio determination and related services;
- (i) VSAT terminal for space research and related services; and
- (j) VSAT for amateur satellite services.

5.7.1.4 Enhanced Facility-Based Communications Networks and Services

Licences in this segment will include the following:

- (a) Public data network operators;
- (b) Private fixed telecommunication networks;
- (c) Broadcast signal distributors; and
- (d) Cable Television networks.

For the efficient utilisation of resources and protection of the environment operators in this category will be required to share infrastructure and collocate equipment with other licensed operators and service providers.

5.7.1.5 Other Facility-Based Providers

In the provision of inter-regional carrier services, it is recognized that there exists private long-distance utility infrastructure and facilities built and operated by corporate bodies such as Kenya Power and Lighting Company, Kenya Pipeline Company and Kenya Railways.

These facilities will continue to be operated by the same organisations under licence. In order to ensure optimum utilisation of the country's utility and ICT infrastructure resources, the organisations will be allowed to lease such capacity to licensed operators under mutually agreed commercial and operational terms and conditions.

5.7.1.6 Internet Facilities and Services

Licences in this segment include the following:

- (a) Internet service providers;
- (b) Internet gateway and backbone services; and
- (c) Internet exchange point services.

5.7.1.7 Value Added Services

Advances in technology provider opportunity for the provision of enhanced or value added services; consequently, licences in this category will include the following:

- (a) Premium rate service providers;
- (b) Audio text service providers;
- (c) Store and forward service providers;

- (d) Electronic data interchange service providers;
- (e) Credit card validation platform services providers; and
- (f) Number portability service providers.

5.7.1.8 Resale Services

This licence category will include the following:

- (a) Bandwidth/lease circuit resale service providers;
- (b) National payphone service providers; and
- (c) National telecommunication access bureau including cyber cafes.

5.7.1.9 Telecommunications Contractors and Equipment Vendors

The provision of telecommunications terminal equipment and wiring has been fully liberalised. Licences in this category will include telecommunication dealer's licence and telecommunication contractor's licence.

5.7.1.10 Telecommunications Technical Personnel Licence

CCK will license the technical personnel of various categories in accordance with their capacities and qualifications.

5.8 BROADBAND SERVICES

To facilitate access to affordable Internet services the Government will encourage the deployment of broadband access technologies.

5.8.1 Digital Subscriber Line on Copper

The Government recognises that last mile copper loop is an opportunity for provision of broadband services. Telecommunication access providers will therefore be free to enter into mutually agreed commercial arrangements for utilisation of available copper loop for expansion of broadband services. The telecommunication operator owning the local loop will be free to decide the areas in which investment is to be made to upgrade the infrastructure for Broadband services.

5.8.2 Cable TV Networks

Cable TV connections, as last mile infrastructure, can be leveraged to provide Broadband penetration. As a result, Cable TV network operators will be licensed to provide Broadband services.

5.8.3 Satellite Networks

Satellite network service providers will be licensed to provide broadband access with emphasis on rural and under-served areas.

5.8.4 Industrial, Scientific and Medical (ISM) Apparatus Frequency Band

The ISM frequency bands in Kenya, i.e. 2.4 GHz and 5.7 GHz, will be opened up for public wireless data communication and the provision of broadband. The use of these bands will be based on the criteria of least congestion, non-protection and non-exclusiveness. In doing so, migration/allocation process will be coordinated to avoid conflict with the existing users.

5.9 REGIONAL TELECOMMUNICATIONS INFRASTRUCTURE

The Government will support the development of regional ICT projects and collaborate with both public and private sector

stakeholders towards development of telecommunication infrastructure.

5.10 FACILITY SHARING

The Government will promote sharing of natural sites, physical infrastructure and co-location of ICT facilities by licensed operators.

5.11 RIGHTS OF WAY

The approvals of rights-of-way and clearance to all service providers are critical for the development of the telecommunications infrastructure. The Government will take necessary steps to facilitate such clearance.

5.12 MULTIMEDIA SERVICES

Licensed telecommunication operators will be allowed to offer multimedia services – such as Voice Over Internet Protocol (VOIP) – with standard features and as far as possible the same level of consumer protection as traditional voice services.

5.13 STANDARDISATION

To enable the establishment of an integrated telecommunications infrastructure, compatible standards with respect to equipment and services will be encouraged.

5.14 DISASTER MANAGEMENT

Telecommunications Service Providers to be required to provide functioning facilities for prediction, monitoring and early warning of disasters.

5.15 TELECOMMUNICATION RESEARCH & DEVELOPMENT

Recognising that telecommunications is a core component of ICTs, Research and Development (R&D) in the sector will be encouraged. Steps will be taken to ensure that the industry invests adequately in R&D to promote local industrial growth and hasten technology transfer. Universities and tertiary institutions will be encouraged to undertake R&D activities in collaboration with telecommunications service providers and manufacturers.

4.16 ENVIRONMENTAL ISSUES

It is important that in development of telecommunication facilities, due regard is taken so as to minimise their environmental impact. The Government will therefore ensure that telecommunications operators minimize the effect of their infrastructure developments on the environment and reduce the inconvenience and intrusion caused by such infrastructure.

5.17 NETWORK SECURITY AND RELIABILITY

The telecommunications infrastructure and networks are critical components of the national infrastructure. Regulations will therefore be developed to ensure that such infrastructure and networks are robust and resilient and have adequate security, redundancy and backup arrangements

5.18 NATIONAL SECURITY

The Government will create statutory obligations of telecommunications service providers to assist law enforcement in executing legal intercept pursuant to the security needs of the country.

6. POSTAL SERVICES

6.1 INTRODUCTION

The Government recognises that all citizens have a right to access basic postal services and will ensure that the country has a vibrant and efficient postal sector. This will be achieved by among others, ensuring that postal operators provide affordable, equitable and efficient universal service.

The Government has designated the Postal Corporation of Kenya (PCK) to be the National Postal Operator.

6.2 POLICY OBJECTIVES

This policy aims to achieve the following objectives:

- a) Promotion of quality of services and responsiveness to customer needs;
- b) Increased access to quality and affordable universal postal services;
- c) Promotion of private sector participation in the postal sector;
- d) Enhancement of postal security;
- e) Promotion of R&D in the postal sector; and
- f) Increased cooperation with sub-regional, regional and global postal service organisations.

6.3 STRATEGIES

- a) Rollout more postal service points;
- b) Improve collection and distribution of mail and parcels;

- c) Restructure Postal Corporation of Kenya for greater commercial viability;
- d) Promote competition in all non-exclusive postal market segments;
- e) Enhance universal access to postal services;
- f) Review the exclusive market segments, from time to time to allow for more competition;
- g) Promote the use of the postal network in the delivery of electronic services; and
- h) Support the provision of financial services through the postal system.

6.4 LIBERALISATION OF POSTAL SERVICES

The Government is committed to the liberalisation of the postal sector in the fast mail and courier service segment where the private sector has continued to play an important role. Further liberalisation will be undertaken in line with prevailing economic and market conditions.

6.5 MARKET STRUCTURE

The policy focus is on creating an environment that attracts increased investments in the sector and allows the development of postal infrastructure and services that support national development goals.

The postal market is divided into the exclusive and non-exclusive market segments.

6.5.1 Exclusive Services

The Postal Corporation of Kenya will provide the following services on an exclusive basis:

- (a) Delivery of letters, postcards, printed paper and small packets with weights up to a maximum of 350grams. This limit will be reviewed in line with prevailing economic and market conditions and any variations published in the Kenya Gazette;
- (b) Printing and issuance of postage stamps and philatelic materials; and
- (c) Provision of private letter boxes and street posting boxes.

Standards and other conditions will be prescribed for universal service provision.

6.5.2 Non Exclusive Services

Non exclusive services will include :

- (a) Courier services;
- (b) Parcel services;
- (c) Direct mail marketing services;
- (d) Postal financial services;
- (e) Electronic and hybrid mail;
- (f) Distribution of publications; and
- (g) Agency services.

6.5.2.1 Courier Services

The need for a faster and more efficient means of goods delivery has been growing and requires same day or overnight delivery. The Government recognizes that the growth of the courier segment has traditionally been driven by private sector. Operators in this market segment are required to be licensed.

6.5.2.2 Parcel Services

The parcel distribution market caters for all postal material falling outside the definition of a letter. Private sector operators currently serve only the high volume, short distance, low unit cost routes. The

Government will promote private investment in this segment. This market segment is therefore, open for competition.

6.5.2.3 Direct Mail Marketing Services

Direct mail marketing is a form of advertising that enables the same message to be sent to a large number of individuals or organisations. Mail order companies rely heavily on efficient postal services for customer communication, distribution of catalogues, receiving customers' orders, goods distribution and the mailing of statements.

Growth in the mail order segment is stimulated by the increasing interest in distance learning and growing sales of consumer products and services. This market segment is liberalised.

6.5.2.4 Postal Financial Services

The majority of economically active heads of households work in urban areas and require banking services in rural areas to support the rest of their families residing in such areas. To help this segment of the working population to support their dependants, the Government will support the provision of financial services in rural areas through the postal system.

6.5.2.5 Electronic and Hybrid Mail Services

The use of modern communications technology can significantly improve the speed of mail delivery and funds transfer. The Governments' ultimate aim is to have all post offices connected to the Internet to support electronic mail services.

6.5.2.6 Distribution of Publications

The distribution of newspapers, magazines and journals require a reliable postal service and is time sensitive. Currently, daily newspapers are distributed by private companies to cover street sales, home and office deliveries. However, there has been a significant increase in the number of publications, especially technical and niche market magazines, which lend themselves to distribution via the post to the subscriber. This market segment is fully liberalised.

6.5.2.7 Agency Services

The main objective of agency services is to utilise the postal system to provide profitable value added services on a competitive basis.

To ensure that the postal system is fully used for the benefit of society, it is essential that both the Government and the private sector make optimal use of the system as an agent for payment of the following among others:

- (a) Tax ,
- (b) Municipal service charges,
- (c) Electricity,
- (d) Motor vehicle licenses, and
- (e) Pension.

6.6 POSTAL SECURITY

Postal crime not only results in financial loss to the postal service provider and the public, but also leads to the violation of privacy. It can also pose a threat to national security, environmental and health concerns.

The Government will put in place mechanisms for combating postal crime.

6.7 PHILATELIC SERVICE

The provision of philatelic services, which involve designing and issuing stamps, will remain an exclusive privilege of the PCK. Such services mirror the unique and varied nature of the Kenyan society, history, culture, heritage, institutions, flora, fauna, and events of outstanding national and international interest.

The CCK will regulate and monitor the issuance of stamps particularly those of a commemorative nature.

6.8 INTERNATIONAL COOPERATION

In order to ensure smooth operation of vast global postal network, close cooperation between different countries is of great importance. In accordance with the existing foreign policy, the Government will therefore, consolidate the existing regional and international relationships in the postal sector and establish new ones where they do not exist.

7. RADIO FREQUENCY SPECTRUM

7.1 INTRODUCTION

Radio frequency spectrum is a scarce public resource that goes to waste if not used optimally. The frequency spectrum will, therefore, be managed in line with public policy objectives, with a view to making it available to all users under specific and clear conditions. This process will maintain a balance between the public and private interest. In the event of conflict, public interest shall prevail.

7.2 POLICY OBJECTIVES

The Government's objective in the utilisation and management of the radio frequency spectrum is to achieve, inter alia:

- (a) Enhanced national security and defence;
- (b) Enhanced emergency preparedness against disasters;
- (c) Efficient national and international transportation systems;
- (d) Sustainable conservation of natural resources;
- (e) Efficiency in the dissemination of educational information and entertainment;
- (f) Efficient and affordable telecommunication services;
- (g) Research and Development; and
- (h) Enhancement of social and economic progress.

7.3 STRATEGIES

The following strategies will be adopted to achieve the above objectives.

7.3.1 Radio Frequency Spectrum Planning, Allocation and Assignment

The radio frequency spectrum will be planned, allocated and assigned in an optimal manner. Measures will be put in place to ensure that the

radio systems are implemented within a reasonable period and radio frequencies are efficiently utilised.

7.3.2 Radio Frequency Spectrum Sharing

Radio frequency spectrum sharing among various services and users will be encouraged in order to satisfy the growing needs for spectrum resources. Where safety of life, service levels or the public interest may be compromised, the requirement to share spectrum will not apply.

7.3.3 Non-Radio Frequency Spectrum Based Alternatives

Where appropriate, the availability of non-spectrum based alternatives to spectrum-based services will be assessed, and the use of alternative non-spectrum technologies will be encouraged.

7.3.4 Market Principles

With the increasing and competing demands for spectrum, market principles will be applied to promote effective use of the radio frequency spectrum, however the Government will ensure that spectrum fees does not become a burden to operators.

7.3.5 Radio Communications Standards

Radio communication standards will be developed jointly by CCK and the KEBS, in conformity with international standards. Users of the spectrum will be required to implement technical and operational standards in order to mitigate harmful interferences and as a measure for ensuring that access and utilisation of the spectrum is maximised.

7.3.6 Migration of Services

Radio frequency spectrum assignment/allocation neither confers ownership nor a continued right to a particular radio frequency. CCK will notify users of any conditions or circumstances, which could result in migration of services to other radio frequencies.

7.3.7 Public Consultation

Appropriate mechanisms will be put in place to allow stakeholders to provide inputs to ensure that the radio frequency spectrum management process is more responsive to technological advances and user demands.

7.3.8 Promotion of Efficient Technologies

Use of spectrum efficient technologies and techniques will be required. The national frequency spectrum policy and management will be reviewed from time to time.

7.3.9 Exemption from Licensing

Government security agencies and other institutions that use spectrum to provide strategic public services may be exempted from paying frequency fees.

8. UNIVERSAL ACCESS

8.1 INTRODUCTION

The Government is committed to ensuring that ICT services are available throughout the country and will support the universal service availability and the widest access to such services.

By the year 2003, 90 percent of the population had access to public free-to-air radio broadcasting services and 50 percent had access to free-to-air television broadcasting services. The total teledensity stood at 8 telephones per 100 inhabitants. There were 920 post office outlets in the country giving a ratio of one post office for every 36,000 inhabitants against the Universal Postal Union target of 6,000 inhabitants for every post office.

In order to increase the level of access to ICTs, the Government will provide the enabling environment for the private sector to play a complementary role towards achieving universal access targets.

8.2 POLICY OBJECTIVES

The universal access policy objectives are:

- a) ensuring that all citizens have access to ICT services;
- b) ensuring that basic ICT services are made available at an affordable price;
- c) promoting the availability of widespread access to internet services; and
- d) ensuring that relevant education and training programmes allow everyone to maximize the opportunities afforded by ICT technologies to improve the quality of their lives and to enhance their work prospects.

8.3 STRATEGIES

8.3.1 Broadcasting Services

The Government will ensure:

- a) Availability of free-to air public service TV and radio channels to all parts of the country;
- b) Continued support towards universal availability of radio services and the widest access to commercial radio channels;
- c) That local programming which reflects the nation's cultural diversity becomes an integral part of public service broadcasting; and
- d) That universal service broadcasting obligation is undertaken by the Kenya Broadcasting Corporation as the national public broadcaster.

8.3.2 Telecommunication Services

The Government will ensure:

- a) Basic telecommunications services are made available at affordable prices;
- b) All fixed and mobile telephone operators provide functional free emergency calls, access to operator assistance and affordable directory enquiry services; and
- c) The establishment of telecentres.

8.3.3 Postal Services

The Government will promote the provision of universal postal services nationwide. The services will cover standard letters, parcels and money orders. Universal service obligation will be partly funded through the Universal Service Fund.

8.4 FINANCING UNIVERSAL ACCESS

The Government expects the private sector to play an important role in meeting the universal access targets through increased investments. The

Government will promote investments in rural and other un-served areas through provision of incentives.

A Universal Service Fund for the ICT sector will be set up to complement private sector initiatives towards meeting universal access targets. The purpose of the Fund will be to subsidise the cost of ICT infrastructure rollout and expansion to un-served and under-served areas by operators in the sector. The Fund will also target training in ICT services.

The Fund will be financed by the operators providing services in the various market segments. Efforts will also be made to identify and mobilize resources from other sources to complement these contributions.

Private-public partnership will play a role in financing the Universal Service Fund.

8.5 ESTABLISHMENT OF ICT CENTRE OF EXCELLENCE

In order to increase diffusion of ICT knowledge, the Government will establish a national ICT Centre of Excellence with nationwide coverage, to promote capacity building and innovation. The Centre will partially be financed through the Universal Service Fund.

9. INSTITUTIONAL FRAMEWORK FOR POLICY IMPLEMENTATION

9.1 INTRODUCTION

The existence of a cohesive and well functioning institutional framework is essential for the attainment of all the objectives of this policy. The aim is to ensure that the various institutions within the ICT sector effectively play their respective but interdependent roles with a view to promoting effective competition, progressive liberalisation and universal access to services.

The Government will provide leadership and direction in the ICT sector and in the implementation of the policy objectives. In addition, the Government will foster broad investment friendly rules and regulations.

The following will play important roles in the development of the ICT sector:

- a) Government,
- b) Development partners,
- c) Civil Society,
- d) Investors and Operators,
- e) Consumers/users.

9.2 ROLE OF GOVERNMENT

The Government's role in the sector will include, *inter alia*:

- a) Development, implementation and coordination of policy;
- b) Regulation and licensing;
- c) Dispute settlement and resolution; and
- d) Provision of an enabling environment for investment in the sector.

9.2.1 ICT Policy Advisory Secretariat

The National Communications Secretariat (NCS), established through the Kenya Communications Act of 1998 will continue to be the policy advisory arm of the Government on all matters pertaining to the ICT sector.

9.2.2 ICT Sector Regulator

The CCK, established through the Kenya Communications Act, 1998 will be the regulatory body for the sector.

9.2.3 ICT Appellate Tribunal

Disputes arising between parties in the ICT sector will be heard and settled by the Communications Appeals Tribunal, which was established under Section 102 of the Kenya Communications Act, 1998.

9.3 ROLE OF DEVELOPMENT PARTNERS

Development partners will play a complementary role towards realisation of development of the goals and objectives of this policy. Within the ICT policy framework, the Government will foster linkages with various development partners to provide financial, material, technical assistance as well as build capacity for sustainability.

9.4 ROLE OF THE CIVIL SOCIETY

The role of the Civil Society will be to inform the policy making process by making relevant contributions in regard to ICT access, e-education, poverty reduction and e-Governance.

9.5 ROLE OF INVESTORS AND OPERATORS

Investors, operators and service providers play an important role in the sector, and will be required to:

- a) Participate in the provision of universal service/access;
- b) Develop a sector with efficiency, credibility, commercial integrity and good corporate governance;
- c) Provide quality and sustainable service with pluralism of choice to consumers; and

- e) Keep abreast with and participate in ICTs both regionally and internationally.

9.6 ROLE OF CONSUMERS AND USERS

Consumers and users will be expected to participate in ensuring:

- a) Universal access and affordability of ICT services;
- b) Quality of services is maintained; and
- c) Continued review of Government policy in accordance with technological and consumer trends.

9.7 ICT PROFESSIONAL BODIES

The Government will recognise and encourage the formation of national ICT professional bodies registered under the laws of Kenya to foster professional ethics, standards and human resource development.

ANNEX I- MARKET STRUCTURE

Telecommunications Market Structure

1 . Facility-based Public Telecommunications Service Providers
– Regional Telecom Operators – (Regional Carrier)
– Long-Distance Telecom Operators – (Inter-Regional Carriers)
– International Telecom Operators – (International Carriers)
– Local Loop Providers – (Local Loop Operators)
2. Land Mobile based radio communication services
– Cellular Mobile Telephone Service Providers – (Mobile Operators)
– Public Radio Paging Service Providers – (Paging Service Providers)
– Commercial Trunked Radio-Communications Network Operators (CTROs)
– Private Radio Paging Networks
– Private Radio Trunking Networks
– Private Two-Way Radio Networks
–
3. Fixed and mobile satellite services
– Public Commercial Satellite Uplink/Downlink Gateway Services (Gateway Services)
– Private VSAT network operator
– Commercial VSAT Network Operators
– Global Mobile Personal Communications via Satellite (GMPCS) Gateway Services Operator
– Satellite-based Paging Network and Services
– Global Mobile Personal Communications via Satellite (GMPCS).
– Interactive VSAT terminal (station) licence
– VSAT terminal for radio determination and related services
– VSAT terminal for space research and related services
– VSAT terminal for amateur satellite services
4. Enhanced Facility based communication networks and services

– Public Data Network Operators (PDNO)
– Private fixed telecommunications data networks
– Broadcast signal distributor
– Cable Television Networks
5. Other facility based providers
– Infrastructure by utility service providers, e.g. electricity, gas, railways, oil, etc
6. Internet facilities and services
– Internet Service Providers
– Internet Backbone & Gateway Services (IB& GS)
– Internet Exchange Point Services (IXP)
7. Value added services
– Premium rate service providers
– Audio text service providers
– Store and forward service providers
– Electronic data interface service providers
– Premium Rate Service Providers
– Credit Card Validation Platform Services Providers
– Number portability Platform Services Providers
– Call Centre Operators and Service Providers
– Other new types of Value Added Service (VAS) Providers
8. Resale services
– Bandwidth/leased circuit resale service providers
– National payphone service providers
– National telecommunications Access Bureaux (including cybercafés, Telephone Bureaux, Multi-purpose Community Telecentres (MCTs))
9. Telecommunications dealers and Contractors Licence
– Telecommunications dealers licence
– Telecommunications Contractors licence
10. Telecommunications technical personnel licence
– Telecommunications Engineers licence
– Telecommunications Technicians licence

BROADCASTING MARKET STRUCTURE

Service

1. Free-to-air radio Service
2. Free-to-air television service
3. satellite free-to-air radio service
4. Satellite free-to-air television service
5. Satellite subscription television service
6. Satellite subscription radio service
7. Terrestrial subscription Television service
8. Cable Television Subscription Service
9. Signal Distribution

ELECTRONIC COMMERCE MARKET STRUCTURE

Service

1. National Certification Service Provider
2. International Certification Service Provider

POSTAL MARKET STRUCTURE

Service

Printing and issuance of stamps
Provision of private letter boxes
Provision of street posting boxes
Delivery of mail below 350g
Direct Mail Marketing Services
Electronic Hybrid Mail services
Courier Services
Parcel Services
Electronic certification services
Postal Financial services
Distribution of publications
Agency services

ANNEX 2 - GLOSSARY OF TERMS

Broadcasting means radio communication, whether by sound or vision, for reception by members of the public.

Certification Service Provider means a person who has been granted a licence to issue electronic signature certificates.

Computer means any electronic, magnetic, optical or other high-speed data processing device or system which performs logical, arithmetic and memory functions by manipulations of electronic, magnetic or optical impulses, and includes all input, output, processing, storage, software and communication facilities which are connected or related as a system or network;

Cross-media ownership refers to the ownership and investment of entities in a manner as to straddle both print and electronic media;

Data Communications - Digital transmission of information between computers

Duopoly - refers to a situation where only two firms provide services in a market.

e-commerce means the use of electronic networks to exchange business information, services, product and payments.

e-Government service means public service provided electronically by a ministry or Government Department, local authority, or body established by or under any law or controlled or funded by the Government.

Electronic Signature means data in electronic form affixed to or logically associated with, a data message, which may be used to identify the signatory in relation to the data message and to indicate the signatory's approval of the information contained in the data message.

ICT (Information and Communications Technologies) means the technologies including computers, telecommunication and audio-visual systems, that enable the collection, processing, transportation and delivery of information and communication services to users.

Information Society means social, business and educational environment where individuals and organisations communicate and access the world's commercial, educational and entertainment resources over a universal network linking them together.

Infrastructure - refers to an integrated system of facilities used to provide one or more ICT services.

Interconnection - refers to physical and logical linking of two separate networks so that customers of one network can reach and communicate with customers of the other network.

Internet means an interconnected system of networks that connects computers via the Transmission Control Protocol Internet Control Protocol (TCP/IP) and includes future versions thereof.

Liberalization refers to the relaxation of Government regulation or formerly rigid or constraining degree of regulation. This creates greater freedom to market entry, providing the operators with greater flexibility to invest, alter operations and services and fix or negotiate tariffs. Liberalisation does not mean the absence of regulation but a new set of regulations able to bring about the indented relaxation.

Licence - An authorization granted by a regulatory authority for the provision of ICT services or for use of the radio frequency spectrum.

Local loop - means the physical circuit connecting the network termination point at the subscriber's premises to the main distribution frame or equivalent facility in the fixed public telephone network.

Local loop unbundling means the unbundling of the telecommunication facility that connects a customer to its local exchange (the local loop), usually a copper pair.

Mobile Cellular Service - refers to communication service providing voice or data to mobile users. A transmitter divides the service area into cells each serving users within its range. The cells are connected to a mobile switching exchange, which switches traffic within and outside the cellular operator's infrastructure.

Operator means a person or organisation that operates ICT facilities and/or services of telecommunications, broadcasting, IT applications or postal services.

Regulation means the process of ensuring that public utilities operate in accordance with legal rules. These rules may govern the offering of service by an operator and includes practices, classification and definitions.

Second Network Operator (SNO) means the operator that will be issued a PSTS licence (in a duopoly situation) after Telkom exclusivity expires.

Telecommunication means any domestic or international transmission of information by wire, radio waves, optical media or other electromagnetic systems, between or among points of user's choosing.

Teledensity means the number of telephone services per hundred persons. Sometimes also the number of telephone services per hundred households.

Unbundling of facilities means the separation of some elements of the telecommunication network of one operator, and the making available of these to another operator, to be used by the latter for providing services to its customers.

Universal access refers to allowing everyone in the country to have access to ICT facilities within a reasonable distance and at a reasonable cost

Universal Service refers to a policy of the Government to make ICT services, including advanced ICT services available throughout the country at affordable prices so that they are either available or easily accessible to anyone whenever they are needed, regardless of their geographic or physical location, and with due regard to people with special needs.

Universal Service Authority means an institution operating under the Ministry or the regulatory authority to design universal service strategies, policies and monitor their implementation.

Universal Service Fund means a fund into which contributions from operators and/or other sources are paid for the purpose of providing ICT services to underserved areas, communities or individuals who cannot afford such services on their own, and in pursuit of universal service/access.

Universal Service Obligations means the obligations put on licensed operators to make services available to all people or all areas, usually

expressed in some quantified progressive number, such as so many services to be provided in specified areas over a certain period of time.

Value-Added Services means (i) the manipulation of format, content, code, protocol, or other aspect of information transmitted via ICT by a customer or (ii) the provision of information to a customer, including the restructuring of information transmitted to a customer or (ii) the offering of stored information through ICT to a user.