THE REPUBLIC OF UGANDA

MINISTRY OF WORKS, HOUSING AND COMMUNICATIONS

NATIONAL INFORMATION AND COMMUNICATION TECHNOLOGY POLICY

OCTOBER 2003

FOREWORD

It has been established that information is a key factor for any development process. In light of the catalytic role that information plays in national development, government has set up a policy framework to ensure optimum utilization of this resource towards socio-economic development. For government to implement the long term national development programmes like the Poverty Eradication Action Plan (PEAP), the Plan for Modernization of Agriculture (PMA), and others, timely and relevant information must be available at all levels of implementation. Developments in Information and Communication Technology (ICT) have dramatically changed the way information is collected, stored, processed, disseminated and used, thus making it the most powerful tool for modernization and development.

There are three areas of focus in the ICT Policy:

(a) Information as a resource for development,

(b) Mechanisms for accessing information,

(c) ICT as an industry, including e-business, software development and manufacturing.

The policy recognizes that the three areas are not mutually exclusive. Rather, the new ICT have led to convergence between the media and telecommunications. For instance, on a multi-media computer system, one can read online newspapers and other publications, watch television stations and listen to various radio stations as well as getting a wide variety of information from different websites.

Although the majority of the population is still dependent on the conventional and traditional information delivery systems, especially radio, new ICT can greatly enhance the efficiency of these systems in delivering development information.

ICT has been identified as one of the rapidly growing areas that have the potential to 'leap-frog' Uganda to benefit from the globalised economy. E-commerce and ICT-based services have been earmarked among the eight priority areas for export development, particularly through the Smart Strategic

Partnership programme between government, private investors and development

partners.

The mandate to oversee media and information management falls under the Directorate of Information, President's Office, and that of overseeing telecommunications is under the Ministry of Works, Housing and Communications. However, since information and communication cut across many sectors, the implementation of the policy will involve various ministries, local authorities, development partners, NGOs, as well as the private sector. The opportunities brought about by developments in ICT require a new legal and regulatory framework. Once the policy is launched, the relevant legislation will be put in place to ensure a secure and conducive environment for the policy to work.

When the policy is successfully implemented, it will stimulate more participation in the socio-economic political and other developmental activities, which should ultimately underpin sustainable national development and lead to improved standards of living for the majority of Ugandans.

Hon John Nasasira
Minister of Works, Housing and Communications

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ACRONYMNS

DSL	Digital Subscriber Lines
EAC	East African Cooperation
GDP	Gross Domestic Product
GIS	Geographical Information System
GoU	Government of Uganda
ICT	Information and Communication Technology
IDR	International Direct Routes
IDRC	International Development Research Center
IFC	International Finance Corporation
ISP	Internet Service Provider
ITU	International Telecommunication Union
LC	Local Council
MoWHC	Ministry of Works Housing and Communications
MSI	Mobile Systems International
NGO	Non Governmental Organisation
NURP	Northern Uganda Reconstruction Programme
PEAP	Poverty Eradication Action Plan
PMA	Programme for Modernisation of Agriculture
PoP	Point of Presence
R & D	Research and Development
SNO	Second National Operator
UCC	Uganda Communication Commission
UIA	Uganda Investment Authority
UIIAP	Uganda Information Infrastructure Agenda Project
UMI	Uganda Management Institute
UNCITRAL	United Nations Commission on International Trade Law
UNCST	Uganda National Council for Science and Technology
UTV	Uganda Television
VSAT	Very Small Aperture Terminal
WAN	Wide Area Network
WBS	Wavah Broadcasting Service
WIPO	World Intellectual Property Organization
WLL	Wireless Local Loop

1 INTRODUCTION

Uganda's economic performance has been impressive in the past decade. The average real rate of GDP growth has been 6.9 per annum since 1990/91. Significant progress has been registered in trade liberalisation, privatisation, civil service reform, financial sector reforms and decentralisation initiatives. Information and Communication Technology (ICT), just like other economic sectors, registered significant growth over the same period. ICT has proved to be the change agent of the 20th Century and has the potential to fundamentally transform the way governance and commerce operate, improving the knowledge and ability of citizens to participate more in the development process. The sustainability of both the high economic growth and efficiency in operations of both private and public institutions, are dependent on the adoption and effective utilisation of ICT.

The government of Uganda has recognised the fundamental importance of ICT in any policy for development, and creating the conditions for the fullest participation by all sections of the population. The Decentralisation policy is intended to ensure that opportunities exist at all levels of Ugandan society for the discussion and formulation of local opinion.

However, little advantage can be taken of those opportunities if the information needed to provide them with meaning and purpose is not available or, when it is available, it cannot be effectively transmitted to the people who need it. Of equal importance are the means by which information is communicated in the opposite direction, from the grassroots to the centre and amongst the population.

The scope of the ICT Policy covers:

    (a) information as a resource for development

    (b) mechanisms for accessing information, and

    (c) ICT as an industry, including e-business, software development and manufacturing.

The policy looks at various categories of information from different sectors, essentially aimed at empowering people to improve their living conditions. The sectors include: health, education, agriculture, energy, environment, business, science and technology, etc.

Government recognises that ICT has a big role to play in stimulation of national development, in particular, modernization and globalisation of the economy. In recognition of the need of ICT for the development process, government undertook several initiatives to promote the development and application of ICT. The telecommunication sector was liberalised in 1996 by a policy framework, which provided for the introduction of competition and licensing for multiple operators. An independent regulatory body, the Uganda Communication Commission was established in 1997 to spearhead the development of the telecommunication industry in the country. A number of other initiatives were undertaken to increase provision and access of information for development to the targeted recipients in the forms best adapted to their needs and circumstances. Similarly Radio and TV Print Communications was liberalized to break the monopoly of Government and allow private sector participation.

The liberalisation of the acquisition, use and application of ICT led to a rapid expansion of the ICT industry in Uganda over the last ten years. Various technologies that have been adopted include: cellular and mobile telephone networks, mobile radio communication, paging services, courier services, multi-purpose community tele-centres (which offer a broad range of communication services such as fax, telephone, computer services, e-mail and internet, media services, books and other reading materials, etc.). There has also been an expansion of print media as well as an increased number of private radio and Television stations.

The IDRC funded study (1998) on the current status of ICT revealed low coverage and skewed distribution of ICT infrastructure in the country. This was found to be concentrated in urban areas, especially around Kampala. The private service providers have no incentive and lack the requisite infrastructure as well as appropriate policy and legislative framework to cater for nationwide coverage. The maintenance and sustainability of the ICT development initiatives also remain a critical challenge.

To enhance and streamline the developments in the ICT sector, government has formulated an ICT Policy Framework to meet the challenges and the harnessing of the underlying potentials and opportunities of the system.

2 BACKGROUND TO POLICY FORMULATION

2.1 THE ROLE OF INFORMATION IN DEVELOPMENT

Information is a resource that activates various sectors of the economy, making it possible for producers and consumers to be linked to markets. Availability of information provides an opportunity for the public to participate meaningfully in governance, through engaging in public discussions and contributing to decision-making.

For the national development programmes of poverty eradication, decentralisation, etc. are to succeed, information should be availed at all levels of society, that is from the national level, districts, sub-counties down to the grass roots. Through open communication channels, that allow information exchange in all directions, the information needs of various interest groups can be identified and fulfilled. ICT has to make it easy and fast for end-users to access, store and retrieve a broad range of information.

2.2 THE IMPORTANCE OF ICT

ICT can be broadly defined as technologies that provide an enabling environment for physical infrastructure and services development of applications for generation, transmission, processing, storing and disseminating information in all forms. These forms include; voice, text, data, graphics and video. From the foregoing, ICT has a role to play in any country's development. Like other countries, Uganda has recognized the potential and enabling element of information and communication technologies as a tool for social and economic development. Reasons why ICT is considered important:

(a)   ICT has a very broad range of applications that span across various sectors of health, education, agriculture, government, commerce, etc.

(b)   ICT enhances economic growth through making enhanced competitiveness possible, increased trade and investment.

(c)   Creation of opportunities and empowerment by provision of access to local and global markets and promotion of rural development.

(d)   Improved delivery of social services and reduction of vulnerability to natural disasters as well as reducing isolation of communities and providing immediate linkage to the modern world.

(e)   Improved transparency and governance through availability of public domain.

(f)   Introduction of new management and control methods in both public and private sectors hence facilitating enterprise resource management.

(g)   Introduction to the new knowledge-based economy.

(h)   Modernization of private sector through improved market access, sales, trade and knowledge of business trends.

(i)   Facilitation of research and development.

For Uganda therefore, embracing ICT has a lot of specific advantages that not only will enable it improve and sustain development but will also lead to poverty reduction.

2.3 THE NEED FOR AN ICT POLICY

There has been no laid out or pronounced specific policy by government to govern Information and Communication Technology despite the numerous reasons why there should be such a policy. These reasons include the need to:

(a) Constitutional requirements implement some of the provisions of the Constitution in respect of national aspirations and development. It is desirable to develop a policy framework that addresses the issues of ICT. Article 29 of the Constitution focuses on the freedom of expression, while Article 41 address the right of access to information. Both these articles reflect the human rights principles regarding the right to communicate, as outlined in Article 19 of the UN Declaration of Human Rights. The African Union formerly OAU to which Uganda is a member, has also provided for the right to development in the African Charter on Human Rights.

(b) Streamlined the flow of development information of all kinds from government departments as a substantial contributor to the overall volume of information intended for popular use. Alongside this information, is a large amount of material circulated by NGOs, development partners, and others. In the opposite direction, from the grassroots to the center, there is yet another

substantial flow of information. To-date, there is relatively little coordination between these different streams of messages and, inevitably, both duplication and fragmentation occur, with corresponding waste of funds and loss of impact.

(c) Harmonised a legal and institutional framework that would ensure a coordinated approach to overall development of ICT in the country.

(d) Develop and put in place a framework that can guide and direct inward investment in a   manner that is desirable for the country and attractive to prospective investors and which harnesses all possible resources.

(e) For Uganda to keep up-to-date or even take advantage of the available opportunities to achieve sustainable development.

(f) Take advantage of convergence of information and communication technologies in terms of development, delivery on single platforms, hardware and software designs, etc, means that the hitherto separate approaches are no longer efficient. The ICT policy would, as a consequence, lead to a redefinition of sectoral policies, boundaries, institutions and regulations in a manner that takes account of:

     (i)   Industrial policy

     (ii)   Telecommunications policy

     (iii)   Science and technology policy

     (iv)   Information and Communication policy

(g) Develop a policy that would stimulate industrial growth, commerce, infrastructure and linkage of rural and urban communities as well as uplifting of disadvantaged groups, while taking care of gender balance.

(h) Embrace the global shift by countries to knowledge-based societies and economies, that necessitates, that for Uganda to be part of these developments.

(i) To develop the content and general dissemination of information, be it for good governance, illiteracy eradication or any other development agenda requires ICT for effective impact.

(j) Address concerns in the areas of intellectual property rights, privacy, security of information, confidentiality, anti-piracy, censorship and info-ethics. These have become major issues to technological advancements and have to be resolved or tackled through a policy enabled environment.

(k) Co-ordinate various initiatives by government departments/agencies,

companies, NGOs and individuals that are all participating in the ICT arena require a policy framework in order to maximize resource allocation and utilization.

2.4 POLICY FORMULATION PROCESS

In recognition of the need to develop appropriate and deliberate policy and strategies in order to enhance the role of ICT in poverty eradication, the government through the Uganda National Council for Science and Technology (UNCST) initiated a consultative and participatory process to formulate the national ICT Policy.

In 1998, a field survey on information and communication channels was conducted by a Project Team, which was constituted by the then Ministry of Information. This provided background information for two stakeholder workshops that were held. It was also part of the consultative process preceding the preparation of a Draft White Paper on Communication and Information for Sustainable Development.

In 1999, a National ICT Policy Task Force was set up to spearhead and oversee the formulation of a National ICT Policy. The Task Force was of multi-disciplinary and multi-sectoral nature with representatives of all key ICT stakeholders from both government and the private sector. The Task Force held several consultative meetings and initiatives to solicit inputs into the policy. Efforts were made to mobilise resources from development partners to support the formulation process.

A high level dialogue for key stakeholders was held in August 2000 to identify and harmonise the institutional and sectoral issues with respect to the development and application of ICT. The initiative was followed by a National Workshop on the theme " Formulation of a National Policy Framework" held in September 2000 in Kampala. The workshop brought together stakeholders from government, parastatal institutions, the private sector, research and development institutions, training institutions, professional societies, NGOs, CBOs and development partners. The National Forum discussed the background information on the status of development and application of ICT in the country

and identified an institutional framework and the key policy issues that need to be addressed in the national policy document.

The Task Force picked inputs from the work of the following stakeholders:

(a) Uganda National Council for Science and Technology initiative, which established a Task Force, held workshops and high level strategy discussions.

(b) Uganda Information and Infrastructure Agenda Project (UIAAP) spearheaded by Makerere Institute of Computer Science.

(c) Big Push Strategy by Uganda Investment Authority.

(d) The Draft White Paper on Communication and Information for Sustainable Development that was initiated and developed under the then Ministry of Information.

(e) Strategies for Rural Communications Development.

(f) Report (Perwit International) presented at a Stakeholders Workshop on Promoting Business in Uganda.

(g) Report (Perwit International) on Strategic Partnership for e-Business in Uganda.

3 STATUS OF INFORMATION AND COMMUNICATION SYSTEMS

3.1 POLICIES, STATUTES AND LAWS, ACTS, AND REGULATIONS

The current status of ICT in Uganda has been influenced by various Policies, Statutes, Laws, Acts and Regulations, passed and enacted in the last ten years. These have, among other things, brought about liberalisation in the various social/economic sectors that have led to impressive economic performance. The more relevant ones are briefly described here below:

3.1.1 Relevant Policies, Statutes And Acts

3.1.1.1 The Communications Act, 1997

The Telecommunications Policy was enacted in 1996. The main objective of the policy was to increase the penetration and level of telecommunication services in the country through private sector investment rather than government intervention.

3.1.1.2 Rural Communications Development Policy, 2001

The main objective of the policy is to provide access to basic communication services within reasonable distance to all people in Uganda.

3.1.1.3 The Press and Journalist Statute, 1995

The Statute extended Article 29(1) *(Freedom of expression)* of the Constitution to the print media. It also created the Media Council, the National Institute of Journalists of Uganda and a Disciplinary Committee within the Media Council. The Council is responsible for regulating eligibility for media ownership and requires journalists to register with the National Institute of Journalists of Uganda.

3.1.1.4 The Electronic Media Statute, 1996

The Statute created a licensing system, under the Broadcasting Council, for radio and television stations, cinemas, and videotape rental businesses. The purchase, use, and sale of television sets was also to be subject to licensing by the Council.

3.1.2 Current Initiatives

These Policies, Statutes, Laws, Acts, and Regulations are not adequate for the current environment, as seen in the 'Emerging Issues' presented later in the Policy. Even without the policy framework, initiatives have been started by some 'Implementation Agencies' to address this gap. One example is the United Nations Commission on International Trade Law (UNCITRAL) for e-commerce, which has been forwarded to the Law Reform Commission by the Uganda Investment Authority (UIA), for adoption into a Ugandan Law.

3.2 TELECOMMUNICATION INFRASTRUCTURE

3.2.1 Development of the ICT Infrastructure

Prior to 1996, Uganda's communication infrastructure was among the least developed in Africa. Further more, 70% of the communication services were concentrated in urban areas, leaving the rural areas with the least access to these vital communication services[1]

As a result of the liberalisation policies adopted by government during the 1990s, the infrastructure situation has changed, as illustrated in the table below:

Table 3.1 Growth in ICT Infrastructures Since 1996

SERVICES PRODIVED	Dec 1996	Oct 1998	Dec 1999	July 2001	July 2002	June2003
Fixed lines connected	45,145	56,196	58,261	56,148	54,976	60,995
Mobile Subscriber	3,000	12,000	72,602	276,034	393,310	621,082
National Telephone Operators	1	2	2	2	2	2
Mobile Cellular Operators	1	2	2	3	3	3
Internet/Email subscribers	504	1,308	4,248	5,999	6,600	7,024
VSAT International Data Gateways	2	3	7	8	8	8
Internet Service Providers	2	3	9	11	17	17
Private FM Radio Stations	14	28	37	112	115	119
Private Television Stations	4	8	11	20	22	22
National Postal Operators	1	1	1	1	1	1
Courier Service Providers	2	7	11	10	11	14

Source: Uganda Communications Commission, 2003

The trend depicted above shows tremendous growth in communication and ICT infrastructure.

However, the level of infrastructure and services are far below the average compared with other economies in the World. Moreover most of the developments are still concentrated in urban areas, benefiting a small percentage of the population. It is clear that more needs to be done to further develop the infrastructure.

3.2.2 The Main Telecommunication Infrastructure Providers

The Communications Act of 1997 provided for two 'National Telephone Operators', a duopoly that was designed to give incentives to private investors in the telecommunication sector. Therefore, some services would be provided by only the two operators for a period of 5 years, starting in July 2000. This made them the main telecommunication infrastructure providers.

Therefore, their current status is important to the policy.

The two National Operators are Uganda Telecom Limited (UTL) and MTN Uganda.

3.2.2.1 Uganda Telecom Limited (UTL)

Uganda Telecom Limited took over the telecommunication services of the former government-owned Uganda Posts and Telecommunications Corporation (UP&TC) which, until 1995, was the only major telecom operator in Uganda.

Uganda Telecom was privatized in 1996 with Uganda Government retaining 49% shares and 51% shares being held by a consortium comprising Telecel (from Switzerland), Detecon (subsidiary of Deutsche Telecom of Germany) and Orascom (from Egypt). Orascom has however sold its shares to Telecel.

UTL transmission, Switching and Access system comprises of:

Transmission:

(a)   Two (2) International Gateways- Voice, Data, Internet

(b)   National SDH and PDH Microwave Systems for Inter- Exchange Transport

(c)   Optic Fibre Rings in Kampala

(d)   PCM copper based systems for Inter-Exchange Transport

Switching:

(a)   GSM Mobile Switch at Mengo

(b)   Analog & Digital Telephone Exchanges all over the country for landline services

(c)   Data Nodes for Country-wide Data Network

Access:

(a)   Copper Cable Access Network in major towns

(b)   GSM base stations

(c)   Optic Fibre in Kampala

(d)   Broadband Wireless System

3.2.2.2 MTN Uganda Limited

MTN Uganda launched mobile phone operations in October 1998 as the Second National Operator (SNO). MTN is required by its licence to cover all Uganda's districts and county headquarters. MTN provides Mobile phones fixed live services and an international gateway.

3.2.3 Other Significant Infrastructure

As indicated in Table 3.1 above, there is other service Providers apart from the two National Telephone Operators. These include:

3.2.3.1 Mobile Cellular Operators

Apart from the two National Telephone Operators, there is a third mobile phone operator; Celtel Uganda Limited. This was the first Mobile operator in Uganda

commencing its operating in 1995 and to-date has a nation wide coverage.

In Uganda, mobile services provide a viable solution to problems arising out of:

(a) Inadequate spread of fixed line infrastructure

(b) The need for quick deployment and ease of installation

(c) Requirements for general mobility

Additionally, mobile phones can offer a cost-effective means of providing service to rural and remote areas, especially those with mountainous terrain, where it is difficult to install fixed line infrastructure

All mobile phone operators offer pre-paid and post-paid/contract services. Competition between the mobile phone operators has brought some advantages to the users, including:

(a)   Lower airtime charges.

(b)   Increased coverage.

(c)   Introduction of value added services such as voice-mail and text
        Messaging.

The introduction of value-added services has raised new regulatory issues. For example, should these new services be treated as value-added services, and should value-added service providers be licensed to provide these new services alongside network operators? If so, how can fair competition be assured/enforced?.

3.2.3.2   Internet Access Service Providers

By February 2002 there were seventeen licensed Internet Service Providers (ISPs) in Uganda. (Note: Those providing Internet access services, as opposed to Public Internet Services, which are mainly cafes)

Most ISPs provide Internet/Email access only in Kampala. Internet/Email subscribers outside Kampala have to make "national" calls to connect to their ISP's access point, which makes these services very expensive. There is a need to have Email/Internet access in all parts of the country at affordable cost, by making it accessible through local Points of Presence (POPs), in all the major towns in Uganda. POPs can be established in more towns in the country through:

(a) ISPs being encouraged[2] or required to install International Data Gateways in these towns.

(b) ISPs being encouraged or required to lease capacity on the trunk routes of the main national infrastructure providers.

The use of the Internet has grown substantially in recent years. Some of the subscribers have corporate accounts with multiple users. Most subscribers access Internet/email by dial-up lines, mostly UTL fixed lines. However an increasing number are using broadband wireless connections. The new data services offered mainly by the two National Operators are getting users from the corporate world.

3.2.3.3. Telecentres

There is a growing number of Privately and NGO operated Tele-Centres which offer a broad range of communication services including: Telephone, Fax, Email, Internet, Computing, Photocopying, etc. The first pilot Tele-Centre in the country is at Nakaseke in Luwero District. It was started with the support of UNESCO, IDRC, ITU and UTL. There are other Tele-Centres in Buwama and Nabweru, which are run under the ACACIA initiative, and were implemented by UNCST.

3.2.3.4 VSAT International Data Gateways

Uganda Communications Commission (UCC) stopped issuing new International Data Gateway licenses, in July 2000 at the start of the 5-year exclusivity period for the National Telecom Operators. However by then 8 providers had been licensed. The cost of VSAT terminals has dramatically dropped in recent years. A terminal to-date can be purchased and installed for less than 4,000 US Dollars instead of the early 2000 when it purchased between US$ 10,000-20,000 for small to medium internet access needs. This technology is likely to play a crucial role in providing Internet access to rural Uganda.

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[2] Uganda Communications Commission (UCC) stopped issuing new International Data Gateway licences, in July 2000 at the start of the 5-year exclusivity period for the National Telecom Operators.

3.2.4   Emerging Issues

(a)   A large part of rural Uganda has no telecommunication infrastructure Local participation in ownership of licensed telecom services providers is low.

(b)   Convergence of information and communication technologies has enabled creation of new services (e.g. Voice-mail and Text-messaging), which require new regulations.

(c)   The cost of services is still too high for most Ugandans.

3.3 COMMUNICATION INFRASTRUCTURE

3.3.1 Broadcasting

The state owned Radio Uganda enjoyed monopoly of the airwaves till 1992, when there was media liberalisation. Since then, over 100 FM Radio stations have been licensed to operate. Unlike Radio Uganda that covers the whole country, the FM stations have limited geographical coverage and mainly carry commercial and entertainment programmes. Most of the FM stations are based in Kampala and a few are in the regional towns. There are three community service stations, one of them being Maama FM, which is a women's radio station. While the FM radios broadcast in English and/or the local language of the area, Radio Uganda broadcasts in 28 languages, including English and Kiswahili.

In several studies done, including the field survey done in 1998 to provide background information for the White Paper on Communication and Information, Radio Uganda was found to be the major source of information in Uganda.

Similar to the situation for radio, the government owned Uganda Television (UTV) continues to operate alongside the five privately owned Television stations namely; Wavah Broadcasting Services.

3.3.2. Print

The state-owned *New Vision* has the widest circulation of about 38,000 copies, closely followed by *The Monitor*, with a circulation of about 35,000 copies per day. Both papers are English dailies and mainly circulate in urban areas. *The Monitor* is now part of the *Nation* Group of Companies, which is based in Kenya and is also the publisher of the weekly regional paper, *The East African*. *New Vision* has

4 other papers published in local languages: *Orumuri, Etop, Rupiny and Bukedde.*
Other Communication infrastructure include:

(a)   Film and Video partia production.

(b)   The Theatre.

(c)   Library and Archives.

(d)   Documentation centers.

These are ill equipped, found in urban centers and in most cases not fully utilized in the communication of development information and need to be strengthened.

3.3.3   Local Council and Institutional Networks

Several research done, including the field survey preceding the White Paper on Communication and Information, have found that Local Council (LC) structures had contributed positively to the flow of information from and to the central government. Institutional networks like health centres, the agricultural extension system, Community Based Organisations (CBOs) and others were also found to be useful networks for the channeling of information to various groups.

3.3.4   Indigenous and Traditional Communication

The encouragement of the use of new ICT, is no doubt, important to the improvement of the development information flow. ICT can greatly enhance the long established traditions of popular entertainment as a means of communication. Theatre in particular, with its combination of drama, music and dance, has proved capable of effectively conveying messages to audiences in sympathy with its conventions.

3.3.5   Emerging Issues

(a)   Trends of media concentration/monopolies have started to emerge.

(b)   Print and Television media are urban oriented leaving rural areas to be served by mainly radio.

(c)   Most FM stations and Television stations offer entertainment programmes with very little time for informational/educational programmes.

(d)   Most of the programmes and films used are imported at relatively low cost, which makes it difficult for the local film and media production industry to take off.

(e)   Local theatre artists and traditional communication channels need to be fully utilized in the communication of development information.

(f)   There is need to reinforce the traditional communication channels using ICTs.

(g)   Libraries, Archives and Documentation Centres are poorly stocked and need to be provided with more up-to-date materials.

3.4   HUMAN RESOURCES CAPACITY

3.4.1 The Knowledge Society

It is widely accepted today that the "Information Society" is going to lead to the "Knowledge Society" where individuals as well as institutions are valued (and judged) according to what they know and how much they know. Populations need new knowledge and new skills to understand, to feel at ease with, to take advantage of, to benefit from, and to operate ICT efficiently. The speed of change of ICT means that acquisition of this new knowledge and skills needed to operate ICT is becoming a never-ending process.

3.4.2 ICT Training in Uganda

Although there has not been a comprehensive survey of human resources in ICT in Uganda, it is fairly obvious that various levels of skills are required and the existing training institutions are meeting some of the training needs.

There is need to assess the national requirement for ICT skills, establish how much of this is available, and then determine the best strategy of meeting the appropriate ICT skills requirements. However the ICT skills that will be needed, and therefore, the kind of training that will be required, will depend very much on the ICT policy adopted by Uganda as a nation, and the Government in particular. For example should government adopt a policy of information sharing using modern ICT, Local Area Networks (LAN) and Wide Area Networks (WAN] will be introduced in government Ministries, Departments and Agencies. This would require government employees to acquire a range of ICT skills that would otherwise not be required.

The following subsections briefly describe ICT training currently available in Uganda.

3.4.2.1 Formal/Academic Institutions of Higher Learning

Most institutions of higher learning, both private and public, offer varying levels of ICT skills training, mostly as part of their programmes for formal academic qualifications. At Makerere University, the Institute of Computer Science provides high-level academic training in the field of computer science to Computer Science specialist students. Most other departments have incorporated ICT training in their curricula. However, in many cases facilities are not adequate to provide the required exposure, for example the number of computers is not enough to provide students with adequate hands-on practice. The Global Distance Learning Centre at the Uganda Management Institute hosts similar facilities.

Other Institutions of higher learning with similar training programmes include:

(a)   Islamic University in Uganda.

(b)   Mbarara University of Science and Technology.

(c)   Kyambogo University.

(d)   Uganda Communications Institute.

(e)   Uganda Management Institute.

(f)   Uganda Martyrs University, Nkozi.

Small companies with a handful of PCs and larger establishments that are well equipped provide a range of ICT skills. Most of these institutions are privately owned, and the range of ICT skills training offered includes:

(a)   Basic end-user skills such as word processing, spreadsheets, and databases.

(b)   Computer programming skills.

(c)   Networking skills.

The courses themselves are of widely varying duration and content, making it impossible to judge the competence of graduates from these institutions, by looking at their certificates. There is a need to standardise these short ICT courses so that the market can have means of telling what it is getting by way of

ICT skills.

3.4.2.2 ICT Training in Schools

The Ministry of Education and Sports has approved a curriculum for ICT Training for Secondary Schools, and a limited number of schools are offering ICT Training. These schools are being equipped under various programmes, including the Schoolnet and ConnectEd Projects.

It should be pointed out that only a very small percentage of Secondary Schools are offering ICT Training, and in almost all cases the facilities are awfully inadequate for reasonable hands-on experience.

The Ministry of Education and Sports is in the process of formulating an ICT Policy for Education that it hopes to adopt so as to drive ICT training in schools and other institutions under its mandate.

3.4.2.3 Training of Government Employees

There is some training in ICT in the Public Service, and this mainly comes as part of donor-funded projects. This happens on project-by-project basis, and there is no coordination among these projects as far as ICT training is concerned. Most of this training takes place abroad and there is very little visible effort being made to develop local training capacity. There is therefore urgent need to give the Public Service ICT training in order to meet the challenges of the future.

3.4.3 Media Training in Uganda

There are several institutions offering formal media training. These include: Makerere University Mass Communication Department, School of Journalism and Media Management at UMI, Islamic University of Mbale and a few other private institutions. In addition, short courses, seminars and workshops are often organised by various groups for specialised media training.

3.4.4 Intellectual Assets

In the new "knowledge society", there is a need to recognise the importance of "human capital" or "intellectual assets", and find ways of measuring and

quantifying this very important resource.

Recognition and quantification of the value of intellectual/knowledge assets, will lead to higher values for those businesses and companies that invest in the training and retraining of their staff. Accounting practices will need to start considering investment in knowledge acquisition as increasing the asset value of a company or individual, rather than a mere expenditure. Taxation policies also need to change so as to provide incentives to business people to invest in knowledge acquisition.

3.4.5 Emerging Issues

(a) There is need for better coordination in ICT training in the country. For example IT literacy courses could be standardised so that it is easy to compare course content covered by students from different IT training institutions.

(b) There is need to recognise the value of intellectual assets if Uganda is to become a full participant in the "knowledge society".

(c) There is need to find financing for ICT innovations in order to turn them into productive enterprises.

(d) There is need to set minimum standards for ICT training at all levels of education.

(e) Taking into account media convergence, ICT integration into media training is essential to keep abreast with opportunities offered by new technologies like on-line journalism.

(f) There is need to build capacity at various levels of professional journalists, development communication specialists and at the grass root level.

(g) There is need to put in place mechanisms for enforcing observance of professional media ethics.

(h) There is urgent need to give the public service ICT training in order to meet the challenges of the future.

3.5 APPLICATION OF ICT IN UGANDA

The penetration of computers in the private and public sector is fairly high. All Banks have some level of computerization and most of the large private sector organizations use ICT to support some of their activities. A number of NGOs (in particular the international ones) and international agencies operating in Uganda are reasonably computerized.

Penetration of Personal Computers (PCs) has been recognized as an effective indicator of the extent of ICT in society. In Uganda the penetration is estimated to be less than 1 PC per 1,000 of the population.

Although the level of penetration of computers within the public service is reasonably high, the level of utilization of computers to support organizational activities and operations is still very low. In most cases computers are being used for basic tasks like word-processing. Not many of these organizations are utilizing their computer systems for high-end value-added applications like:

  (a)   Management Information Systems (MIS).
  (b)   Database management systems.
  (c)   Personnel management systems.
  (d)   Accounting and budgeting, etc.

There are very few LANs in organizations within the public service and there are hardly any WANs.

The Internet and other forms of information and communications technology are now readily available in Kampala, the capital city of Uganda. Limited access to these technologies by medium and lower income populations, in rural areas especially, is widely perceived to be a major impediment to increased economic growth and prosperity in Africa, Uganda inclusive.

Broadening equitable access to ICT requires a political commitment from the region's leaders, and Uganda has the human and technical resources to exercise substantial leadership in this arena. Given the fact that there is already an ICT Big Push Strategy in place in the country, and the various efforts that are being put in place by different government bodies, political commitment is a prequisite in order to put ICT at the forefront of the government's strategies for the future.

The very nature of information and communications technology requires that the

case for broader access be made at a regional level. The construction of the proposed East African Cooperation (EAC) high capacity digital transmission link is one of the most appropriate actions for ICT regional cooperation.

For a nation to embrace a technology and make effective use of it, it is vital that substantial investment is put into understanding and adapting the technology to the environment and circumstances that the technology is going to work under. ICT projects, including pilot projects, must be undertaken to develop the application of ICT for development.

Most ICT projects are currently undertaken through donor funding by government, quasi-government and private institutions. They include:

(a) The ACACIA project for pilot Tele-Centres at Nakaseke, Buwama and Nabweeru.

(b) The DANIDA Local Government Project in Rakai District.

(c) The Infodev Information Infrastructure Agenda at the Institute of Computer Science at Makerere University.

(d) The Inter-Ministerial Mapping and Geographic Information System (GIS).

(e) The Academic Research Network Project.

(f) Initiative to Create an ICT Resource Centre and Internet Café.

(g) The Local Area Network and Internet Connectivity Project for the Parliament of Uganda.

(h) The Campus Network Project for Makerere University.

(i) NGOs, Development Partners and Private sector funded projects.

For the media, *The New Vision, The Monitor, Bukedde, Orumuri, Etop* and *Rupiny* have online publications, while WBS Television and Radio Simba are on the Internet.

3.5.1 Emerging Issues:

(a) There is a need to carry out Research and Development activities in the application of ICT for the national development.

(b) There is a need to attract and encourage Ugandan scientists and engineers who have been engaged in successful Research and Development work in other countries, to come and do the same in Uganda, and become agents of technology transfer.

(c)   There is a need to establish, promote and strengthen centres of excellence in ICT Research and Development.

(d)   A Uganda Information and Communication Technology long-term plan with set targets should be developed, and should be in congruence with the developments in the region.

(e)   Sector-specific Policies and Strategies for implementation should be made, and should fit in with the general framework of the region.

(f)   There is need to put in place Sector-specific Round Tables on ICT while taking into consideration the needs of a given region.

(g)   There is need to put in place a National Information and Communication Infrastructure planning process at national and district levels in consultation with all stakeholders.

(h)   There is need for cross-sectoral and integrated approach in introduction of ICT applications, including e-Government.

3.6 INVESTMENT IN ICT INDUSTRY

Although significant funds will be necessary to develop the use of ICT throughout the country, limited financial resources are not the major barrier to progress in this area. There are important organizational factors that include; commitment to use ICT by decision makers, obtaining the necessary human resources, instituting appropriate regulatory environment, and developing the capacity to cope with rapid change. The World Bank in a recent report stated that:

"Countries which are able to seize the opportunities of these (ICT) technologies will be able to leapfrog into the future, even though they lack a developed communications infrastructure today. In fact, countries with little existing communications infrastructure have less need to deal with vested interests in old technologies and can proceed directly to the use of wireless and fibre-optics technologies. The key will be visionary leadership and the ability to mobilise nations around an attractive and realisable vision of their citizens' future". (Knight, P. and E. Boostrom, 1995, "Increasing Internet Connectivity in Sub-Saharan Africa: Issues, Options, and World Bank Group Role," Online World Bank Publications.)

In the new millennium, Uganda is faced with challenges and opportunities that need proactive policies. It is, therefore, imperative that Uganda improves the tools to effectively compete in the global arena. ICT remains the tool for the future, which should be developed now. The basic goal is, therefore, to improve and broaden equitable access to Information and Communications Technology as a means of creating new opportunities for socio-economic development in Uganda.

3.6.1 Investment in Telecommunications Infrastructure

There has been substantial investment in setting up telecommunication infrastructure in Uganda during the last eight years. The three largest telecommunication services providers, namely Celtel, MTN Uganda and UTL, have made most of the investment.

However national coverage is still a major challenge; even higher investments will be required to increase coverage of telecommunication services to a satisfactory level.

3.6.2 Investment in Communication Infrastructure

Communication is one of the basic human rights and access to communication channels should not be left entirely to market forces. This creates a situation of information dualism, with a minority urban information rich and the rural majority being information poor. Conducive environment for investments in communication infrastructure should be promoted to narrow the information gap between the urban and rural areas.

Apart from radio, investments in other media have not been growing because such investments require a lot of capital. There is need to encourage partnerships so as to promote the growth of other areas in the media

While encouraging media enterprises to expand, there should be regulations that will allow media pluralism to thrive. Conditions should permit fair competition and should enable new entrants in the industry to survive

3.6.3 Other Investment in ICT

There have been very few investments in other ICT activities in Uganda. Such investments include:

(a)   Sembule Electronics Limited, a local electronics company started assembling Computers, Telephone Heads and PABX Switch Boards in 1994. Unfortunately this effort stopped some years back. A number of other companies have attempted to assemble ICT equipment but have not made much impact on the market.

(b)   In the software industry, two individual System Developers based at Makerere University, have separately developed software applications for the local market. One developed accounting software for small businesses, and the other one developed a billing system for Cyber Cafés. Both products are quite successful on the local market. The Cyber Café billing software is now sold in Zambia and Zimbabwe.

3.6.4 Emerging Issues

(a)   There is need to create and promote an enabling environment aimed at encouraging investment in the ICT industry, in both private and public sectors.

(b)   There is need to finance innovations and applications in ICT in order to turn them into productive ventures.

(c)   Some incentive scheme should be put in place to encourage investors to extend to the rural areas.

(d)   Import taxes on newsprint should be minimal as newspapers are a form of educational material. Due to high prices, only a few people can afford to buy the papers.

(e)   The licence/tax structure should take into account the type of service the particular media offers, otherwise most media houses will continue to offer mainly entertainment programmes to avoid expenses involved in collecting materials for news articles and educational programmes

(f)   There should be regular audience research to identify information needs of various interest groups.

3.7 TECHNICAL SUPPORT FOR ICT

3.7.1 Maintenance of Communication Infrastructure

Engineering practice requires communications operators to develop and maintain an in-house capacity to maintain their infrastructure, in order to provide a reliable, high-availability service to their subscribers. In the case of highly specialised systems, a maintenance contract should be entered into with, the system suppliers, the suppliers' local representative, or some other competent firm.

Developing countries generally have not developed a culture of maintenance. It is therefore important to institute policies that will encourage and develop the culture of maintenance.

As we embrace the use of sophisticated technology, it is vital that we develop good engineering practices of designing, and maintaining robust, faulty tolerant, high-availability systems. A communication infrastructure covering and serving the whole nation needs to be carefully designed, so that the critical parts of the infrastructure have a level of redundancy and diversity, which will minimise catastrophic failures.

3.7.2 Emerging Issues.

(a)   There is need to encourage the development of a communications maintenance culture in Uganda.

(b)   There is need to ensure inherent use of after sales support of ICT equipment.

4 POLICY STATEMENT, OBJECTIVES AND STRATEGIES

4.1 POLICY, VISION AND GOAL

4.1.1 Policy Statement

The government of the Republic of Uganda recognises the important role information and ICT play in national development. Government consequently unreservedly commits itself to champion the development and use of ICT in Uganda.

4.1.2 Vision

A Uganda where national development, especially human development and good governance, shall be sustainably enhanced, promoted and accelerated by efficient application and use of ICT, including timely access to information.

4.1.3 Goal

To promote the development and effective utilisation of ICT such that quantifiable impact is made throughout the country within the next ten years.

4.2 POLICY OBJECTIVES

(a)   To sensitize and create awareness among the general public and all stakeholders about the role of ICT in Uganda's development process.

(b)   To increase the levels of ICT functional literacy in all sector and build human resource capacity.

(c)   To promote and enable the building and establishment of an appropriate infrastructure that supports ICT development and at the same time achieve Universal Access in Uganda.

(d)   To promote fair competition and private investment in the ICT sector with particular emphasis on development and encouragement of local participation including specific incentives for investing in ICT.

(e)   To identify and establish innovative financing mechanisms that address specific needs of ICT development.

(f)   To promote the use of ICT in the stimulation of production, storage, and dissemination of in-country information and knowledge in both the public and private sectors.

(g)   To facilitate the broadest possible access to public domain information.

(h)   To promote a conducive environment for media pluralism that will

enhance cultural identity and national sovereignty.

(i) To promote multilingualism and the other efforts to provide access to information by the disadvantaged groups and communities.

(j) To ensure gender mainstreaming in information and communication programmes and in ICT development.

(k) To provide for establishment of an enabling and desirable legal and regulatory framework that, among other things, takes into account the convergence of technologies.

(l) To encourage and support Research and Development in ICT.

(m) To accord due regard, recognition and protection to intellectual property rights.

(n) To enhance collaboration and co-ordination in ICT development at the local, regional and international level.

4.3 STRATEGIES

Objective 1: Sensitization and Creation of Awareness

Strategies:

(a) Develop, implement, monitor and regularly circulate a comprehensive public information and communications programme on ICT.

(b) Develop and manage mechanisms that involve the public and stakeholders in the policy formulation and development process, for ICT.

(c) Establish a public responsive regulatory and licensing regime.

(d) Create an enabling environment for public and private sector participation in promoting ICT awareness programs.

Objective 2: Literacy Improvement and Human Resource Capacity Building

Strategies:

(a) Integrate ICT in mainstream educational curricula as well as other literacy programmes and provide for equitable access by pupils and/or students at all levels.

(b) Develop and manage ICT Centres of Excellence to provide basic and advanced ICT training.

(c) Set up mechanisms that promote collaboration between industry and training institutions so as to build appropriate human resources capacity.

(d)   Promote twinning of training institutions in Uganda with those elsewhere so as to enhance skills transfer.

(e)   Promote appropriate incentives to public and private sector partners in order to ensure contribution to skills development in the ICT sector.

(f)   Design and develop incentives aimed at attracting foreign-based Ugandan ICT professionals to the country.

(g)   Establish training schemes as well as training manuals for development information providers and for workers at district and sub-county levels responsible for its onward transmission.

(h)   Provide technical assistance and training for communication experts in the maintenance of equipment as well as in media economics and social sustainability.

(i)   Develop in collaboration with professional bodies, business and other organizations, standard curricula in all institutions engaged in training communication and ICT specialists of all categories.

(j)   Put in place mechanisms that will improve ICT skills among employees of the public sector.

Objective 3: Promotion of Building appropriate Infrastructure

Strategies:

(a)   Establish coordinated sectoral policies that encourage and promote access to and affordable use of infrastructure.

(b)   Provide for, and ensure the meeting of, rollout obligations in licenses issued for infrastructure development.

(c)   Promote the use of digital networks by providers.

(d)   Establish a National Internet Protocol backbone network, and adequate connectivity to the Global Information Infrastructure (GII).

(e)   Provide Internet Points of Presence (PoP) to all district headquarters and a National Internet Exchange Point.

(f)   Establish information and communication access points at all districts and sub-counties in Uganda.

(g)   Establish a National Information Portal to promote dissemination and access to information in the public and private sector domain.

(h)   Establish infrastructure that addresses ICT needs of crosscutting sectors like health, education, agriculture, local administration, etc.

(i)   Facilitate the establishment of Internet-ready Industrial Parks to engage in Data Capture and Data Processing export work.

(j)   Facilitate the establishment of community radio stations so as to increase levels of information dissemination and public participation.

(k)   Develop an incentive scheme to encourage investors to extend services to rural areas.

Objective 4: Promotion of Competition, Private Investment and Local Participation

Strategies:

(a)   Establish and maintain a licensing and regulatory regime that promotes fair competition.

(b)   Set up an enabling environment, including an incentive scheme for joint ventures and private investment with special attention to increased local ownership and/or participation.

(c)   Make provisions for ICT development and sustenance in Government budgets.

(d)   Set up policies that encourage utilisation of local facilities and professionals.

(e)   Use competition in conjunction with incentives to secure reduction in prices charged to consumers.

Objective 5: Innovative Financing for ICT Development

Strategies:

(a)   Identify and encourage innovative financing schemes for ICT development, including the Strategic Partnership for E-business in Uganda.

(b)   Provide incentives, including tax-relief for innovations and experiments.

(c)   Create and maintain, with assistance where feasible, from development partners and the private sector, a special development fund for the promotion and development of ICT.

Objective 6: Stimulation of the Production, Storage and Dissemination of National Information

Strategies:

(a) Develop, implement and monitor a programme to create public awareness about rights and responsibilities regarding proprietary information.

(b) Revise and update the relevant laws in order to provide adequate legal protection for proprietary indigenous and foreign information.

(c) In revising and updating the relevant laws, the promotion of principles underlying exemptions to the protection of intellectual property rights will be taken into account, such that the rights of all citizens to access and use of public domain information are not prejudiced.

(d) Encourage individuals and institutions to carry out research on local needs, issues or problems, so as to generate information relevant to the local environment.

(e) Encourage individuals and institutions to open web-sites, where they can post information regularly.

(f) Provide for local participation in media programme productions and promote exchange amongst communities.

(g) Create a national information grid to provide a central reference point for all development information with counterparts for use at the local level.

(h) Maintain an archive and database of significant development information initiatives so that models can be studied for future application.

(i) Create private/public partnerships to draw on professional communication skills for use in the formulation of development information.

Objective 7: Facilitation of Access to Public Domain Information

Strategies:

(a) Codify the right of universal access by all Ugandans to public domain information, without compromising individual or national security.

(b) Establish appropriate mechanisms and structures through which various government ministries and departments will provide information at the lowest possible cost and with the fewest restrictions possible in order to maximize access to and use by all citizens.

(c) Initiate an e-government programme to digitize public domain information and make it available through Internet web sites, public library systems and other appropriate dissemination media.

(d) Relevant government ministries, departments and organistions to undertake, under a co-ordinated effort, to carry out research into citizens' information needs as well as barriers to information use and develop strategies to overcome these barriers.

(e) Ensure that facilities for communication are provided at levels of cost, which match the ability of their users to pay, so as to reduce gender and spatial disparities in information access.

(f) Strengthen libraries, archives and documentation centers to supplement communication channels for development communication.

(g) Utilize the Local Council structures to facilitate information flow from the grassroots to the center and vice versa.

(h) Increase accessibility to government information and ensure uniform practices in its distribution by Government Information Officers.

(i) Create a mechanism for redress in respect of complaints related to ICT regulation or policy decisions and government actions.

Objective 8: Conducive Environment for Media Pluralism
Strategies:

(a) Establish legislation for promotion of national ownership of various categories of media.

(b) Develop a regulatory system that will prevent mono-media or cross-media concentration, as well as mergers.

(c) Establish minimum requirement of local and foreign programmes, as well as regulations on use of in-house and other local programmes.

(d) Institute a requirement for a minimum percentage of public service programmes for the various forms of media (Public service, community service or commercial).

(e) Ensure equity in the formulation and delivery of public interest messages to various interest groups, including minority groupings, as well as between urban and rural communities.

(f)   Ensure that public interest messages are delivered in appropriate languages and at suitable times for their target audiences.

Objective 9: Promotion of Multilingualism and Information to Disadvantaged Groups

Strategies:

(a)   The government in collaboration with relevant partners to develop freely accessible language education materials and have them appropriately disseminated while at the same time translating key information resources into local dialects.

(b)   The government to work with local authorities to develop indigenous information content in various formats, taking into account the special needs of disadvantaged groups.

(c)   The government to encourage and support private sector initiatives that develop and disseminate multilingual content, particularly to the disadvantaged groups and communities with special needs.

(d)   Develop in the medium to long-term search engines and web browsers with extensive multilingual capabilities and online dictionaries as well as reference materials.

(e)   Capture, preserve and promote indigenous culture, knowledge and heritage.

(f)   Utilise ICT to reinforce traditional communication channels to supplement mass media in the communication of development information

(g)   Establish community centres, which will provide platform for local theatre performances as well as video, films and other audio-visual shows.

(h)   Develop and exploit local talents of folk performers, which will contribute to local programming for community radio services as well as preservation of cultural values.

Objective 10:   Gender Mainstreaming

Strategies:

(a)   Take into account gender information needs and interests of both men and women in all information and communication programmes.

(b)   Develop mechanisms of increasing women's access to information (especially in rural areas), so as to reduce the gender information gap.

(c)   Use non-discriminative gender sensitive language in information and communication programmes.

(d)   Ensure equal participation in all aspects of ICT development

Objective 11:   Establishment of Desirable and Enabling Legal Framework
Strategies:

(a)   Solicit and collect stakeholder views and inputs on establishment of an enabling framework that will, among other things, promote national security.

(b)   Institute legislation to ensure freedom of access to information as guaranteed in Article 41 of the Uganda Constitution of 1995.

(c)   Review existing laws, taking into account other suitable or relevant laws elsewhere, and design a new legal framework that promotes and supports ICT policy objectives, while taking cognisance of major crosscutting issues like privacy, security, intellectual property rights and copyrights, without unduly restricting public access to information.

(d)   Take into account various stakeholders views, the existing situation, and determine a desirable institutional framework to spearhead ICT activities.

(e)   Put in place legal and regulatory frameworks, which define the nature of public interest obligations and civic responsibilities of companies that deal in communications business, especially the broadcasters who use publicly owned frequencies.

(f)   Translation into law of international treaties such as the WIPO agreements, ITU resolutions, UNCITRL on commerce, etc. to provide regulatory certainty to investors.

(g)   Ensure quality through the institution of a code of conduct to govern relations between the private sector and representative bodies, as well as ensuring observance of professional and business ethics.

(h)   Follow up with the necessary legislation and establish the relevant institution(s) following enactment of the ICT Policy.

Objective 12:   Encourage and Support Research and Development in ICT

Strategies:

(a)   Establish mechanisms for promoting and coordinating efforts in Research and Development for ICT.

(b)   Establish a fund to support Research and Development efforts, with due regard to promoting innovation and participation of national professionals.

(c)   Encourage private sector investment in local Research and Development in collaboration with local universities and institutions.

(d)   Publicize and disseminate information resulting from the above efforts with a view to encouraging greater participation throughout the country.

Objective 13:   Accord Due Regard to Intellectual Assets

Strategies:

(a)   Develop the necessary policies that provide for preparation and transition to a knowledge-based society.

(b)   Encourage and promote innovative schemes that attach value and reward to intellectual assets.

Objective 14:   Enhancement of Collaboration and Co-ordination at Local, Regional and International Levels

Strategies:

(a)   Identify and take into account other national development policies, e.g. Plan for Modernization of Agriculture (PMA), and Poverty Eradication and Action Plan (PEAP) in the development of ICT policy while at the same time remaining consistent with the Strategic Framework for National Development Vision 2025.

(b)   Establish an information resource management system to coordinate programmes and avoid duplication with existing or planned actions by government agencies, NGOs and development partners.

(c)   Establish a mechanism that ensures due consideration of multi sectoral needs and provides for cross-sectoral involvement in ICT development efforts and programmes.

(d)   Develop and support the necessary structures to co-ordinate the various

objectives outlined in this policy.

(e)   Identify, develop and establish a database of local, regional and international partners in ICT development.

(f)   Develop and run programmes that attract and direct development partner assistance into ICT development.

(g)   Organise and/or participate in fora related to ICT, which provide for co-operation opportunities.

5 INSTITUTIONAL FRAMEWORK FOR POLICY IMPLEMENTATION

For successful implementation of the Policy Framework, three Institutional level elements will be desired:

(a)   Coordination.

(b)   Action Plans.

(c)   Monitoring, Evaluation and Review.

5.1   COORDINATION

The successful implementation of the ICT Policy requires coordination in the following areas:

(a)   Implementation of the ICT development objectives;

(b)   Fostering of ICT initiatives in the country;

(c)   A repository of ICT standards, registration and classification of documentation related to locally developed and imported ICT solutions.

(d)   Ascertaining status of ICT in the country through regular national surveys.

(e)   Ensuring periodic review of the ICT Policy to match the rapid changes in the ICT sector.

(f)   Establishment of a mechanism for collaboration with the sector implementing bodies, policy and regulatory bodies.

(g)   Infrastructure rollout at national and regional level.

(h)   Implementing the ICT policy, in line with the decentralization policy.

(i)   Carrying out other activities deemed necessary.

A coordination framework comprising of the following is proposed:

(i)   National ICT Co-ordination Committee (NICTCC);

(ii)   National Technical ICT Sub-Committee (NTICTSC);

(iii)   National ICT Secretariat (NICTS); and

(iv)   Institutional ICT Committees (IICTCs).

The National ICT Co-ordination Committee (NICTCC) be set up comprising:

a)   Minister from Office of the President;

b)   Minister from Office of the Prime Minister;

c)   Minister of Works, Housing and Communication;

d)   Minister of finance, Planning and Economic Development;

e)   Minister of Education and Sports; and

f)   Minister for Tourism, Trade and Industry.

The NICTCC is supposed to give political guidance to the ICT sector and the Minister of Works, Housing and Communication shall chair its meetings. The National Technical ICT Sub-Committee (NTICTSC) will provide technical support to NICTCC and will comprise of Permanent Secretaries and representatives from Civil Society, Institutions of Higher Learning, Industrial Organizations, Financial Institutions, Telecommunication Operators etc. The Permanent Secretary of Ministry of Works, Housing and Communication will chair the meeting of this Committee. Each institution shall also have its own ICT committee to cater for the institutional requirements and interests, which for harmonization purposes shall be forwarded to NICTCC through the NTICTSC. The National ICT Secretariat shall be set up in the Ministry of Works, Housing and Communications under the Uganda Communications Commission. The National ICT Secretariat shall be responsible for the following:

a) To provide financial support to the National ICT Coordination Committee and the National ICT Technical Sub Committee;

b) To monitor the implementation of the ICT policy objectives by the relevant institutions;

c) To foster ICT initiatives in the country;

d) To act as repository of ICT standards, registration and classification of documentation related to locally developed and imported ICT solutions,

e) To ascertain the status of ICT in the country through regular national surveys,

f) To ensure that the relevant Ministries namely; Ministry of Information and Ministry of Works, Housing and Communication carry out periodic reviews of the ICT Policy to match the rapid changes in the ICT sector;

g) To establish a mechanisms for collaboration and promotion of partnerships between various categories of players in the sector; and

h) To ensure well distributed Infrastructure rollout at national and regional

level; and implementation of the ICT policy, in line with the Decentralization policy.

5.2 ACTION PLANS

Each of the sector implementing institutions will design elaborate action plans for implementation of the relevant sections of the policy, which together will form the National ICT Action Plan. The National ICT Action Plan will be integrated into the national budget process for support by the government.

5.3 MONITORING, EVALUATION AND REVIEW

The National ICT Coordinating Committee through the Secretariat, will ensure that the ICT Policy is regularly reviewed and its implementation is continuously monitored and assessed. Furthermore, a mechanism will be developed for evaluating the impact of the National ICT Policy on the growth of the economy, reduction in poverty, ICT literacy, infrastructure growth, and any other relevant indicators.