

# CYBER SECURITY IN TANZANIA – COUNTRY REPORT

## Abstract

*Tanzania does not have specific legislations dealing with cyber security. Currently the laws which are in place were made before cyber security was an issue. This paper discusses the current level of development of ICT and puts in perspective the current steps taken to implement cyber laws. The legal and regulatory framework is geared towards development of ICT infrastructure and providing ICT services to as many people as possible. The Law Reform Commission of Tanzania is looking at putting in place legislations which will deal with cyber space to allow electronic transactions.*

## Country Background

Tanzania is located in the eastern coast of Africa from degrees 1 to 12 of latitude. Tanzania is a tropical country. Tanzania has eight neighbouring countries namely Kenya, Uganda, Rwanda, Burundi, Democratic Republic of Congo, Zambia, Malawi and Mozambique.

Tanzania is blessed to be surrounded by lakes namely Lake Victoria the biggest in Africa, Lake Tanganyika the deepest in Africa and Lake Nyasa ( Lake Malawi), this makes Tanzania to be among the countries in the Great Lakes Regions. Tanzania has a land mass and water bodies covering 945,000 square kilometres. Tanzania also has among the most famous tourist attractions, for example Serengeri National Park, Ngorongoro, Tarangire, Mikumi National Park and many more. Tanzania is also home to the world's tallest free standing mountain, the snow capped Mount Kilimanjaro. Zanzibar islands are also part of the United Republic of Tanzania; these islands are famous for their serene beaches, snorkeling and scuba diving.

The country has a population of just over 35 million people. The population is fairly spread across the country as only 3 cities have population of over 1 million people. The country is fairly stable politically with a fully functioning multi-party democracy.

Economically, the country is among the least developed countries. The country has a GDP per capita of 290 US dollars. The country is dependent of export of agricultural products (coffee, cotton and tobacco) for its foreign exchange earnings. Mining sector is growing with extensive investments in gold and diamond mines. Tourist has seen significant growth in the last five years. The Tanzanian economy has been growing at a rate of over six percent for the past 3 years.

## ICT Infrastructure

Linked to the economy growth the ICT sector has seen a significant growth too. Below are some statistics on the current status of the ICT Infrastructure.

### **Fixed Line Services:**

Two operators were licensed to provide Basic telecommunication services, viz Tanzania Telecommunications Company Limited (TTCL) the incumbent national operator and Zanzibar Telecom Limited (ZANTEL). TTCL has a national wide licence (including Zanzibar) as opposed to ZANTEL, which has the right to operate in Zanzibar only until February 2005, currently the licence of Zantel has been extended to cover whole United Republic of Tanzania. The total number of subscribers is about 150,000 (network capacity is about 250,000 connections).

### **Land Mobile Cellular Services**

Currently the market structure is dominated by four (4) mobile operators namely Vodacom (T) Limited (1,100,000 customers), Celtel (T) Ltd (550,000 customers), Mobitel (320,000 customers) and Zantel (85,000 customers) is operating in Zanzibar. The total subscriber base is just over 2 million as of April 2005.

### **Data Communication Services**

There are eleven (11) Public Data Communications Network operators with the right to install their own international gateway for routing the international traffic. The provision of Data communication services is fully competitive.

### **Internet Service Provision (ISP)**

The Internet Service provision is under full competition mode of licensing. There are 23 Internet service providers operating mainly in Dar Es Salaam and few in major cities and towns countrywide. To improve service provision the National Internet Exchange Point (NIXP) has been installed. Currently there are four ISPs connected.

### **Broadcasting Services**

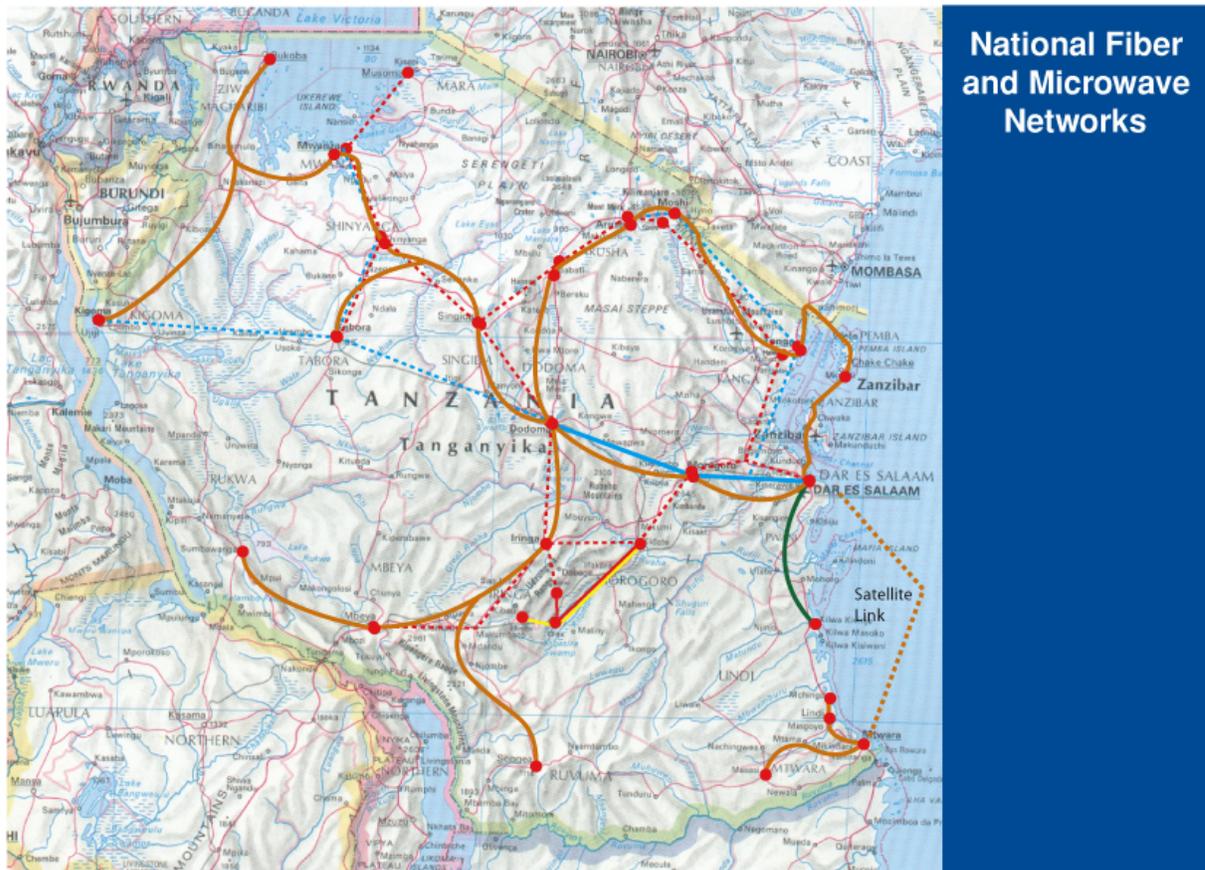
By June 2004, 60 radio stations and 28 television stations are in operation in the country. In the same period 32 cable television operators have been licensed and are in operation.

### **Postal Services**

Postal services are operated by Tanzania Posts Corporation with 154 post offices, 149 post offices operated by agents, 85 post distribution centres. A total of 19,981 post office boxes and 211 private bags are in use.

The above statistics puts a reflection on limited deployment of ICT services in Tanzania. However in comparison to the situation the past 10 years there has been impressive growth. The number of fixed line has increased by over 50% over the past 10% while the mobile services have grown from nothing to over 2 million subscribers. Internet which started to be used commercially in 1996 has an aggregate international bandwidth of over 35 Mbps.

The diagram below shows the transmission links (microwave and fibre optic) covering Tanzania. This diagram shows the current deployment of ICT transmission links. International connectivity so far is provided by satellites with a possibility of connecting to fibre optics in the next 2 years.



## Legal Regulatory Framework

The new licensing framework has been implemented since February 2005. The board of the TCRA at its 9th Special Meeting held in Dar Es Salaam has approved the implementation of the converged licensing framework effective from 23/02/2005. The Board also directed that consultations with existing operators and other stakeholders should continue to ensure its smooth implementation. The approval has been granted to

facilitate the implementation of the government's full liberalization policy following end of the exclusivity policy and to effectively respond to the challenges raised by convergence in the Information Communication Technology (ICT) Sector.

The New Converged Licensing framework is technological and service neutral where a licensee has freedom to choose technology which is most efficient and cost effective is free to take signals from the market as to which services are most in demand. A licensee is authorized to provide different services under a single license.

Possibilities brought about by the convergence phenomena include provision of various communication services like text, data, image, voice and video over an existing infrastructure; the use of a single transmission technology to offer various services, the provision of the same or substitutable service by a variety of different types of providers (e.g. data over cable TV, telephone, or even electrical power networks), substitution of mobile service for fixed service, and integration of customer terminal equipment or access devices such as the telephone, television and personal computers.

Internet access at high bandwidth is envisaged that will create new possibilities to develop multimedia content for information, entertainment, and data processing. It is important to note that in several countries broadband growth has already outpaced mobile telephony. The boom is fuelled by software downloads, online gaming, and e-commerce. In Tanzanian context, affordable high-speed networks could facilitate deployment of Information and Communications Technology for development. The converged licensing framework is meant to facilitate the above possibilities.

It is important to note however, that the above development of the licensing framework focuses on the deployment of more ICT infrastructure and no focus is on the correct use and protecting users from illegal activities. This can be attributed to the fact that there is a very limited deployment of ICT services with less than 150,000 people using computers and related services.

## **Cyber Security and Related Issues**

The Government of Tanzania through the Law Reform Commission has circulated a discussion paper on the introduction of legal framework for electronic commerce in Tanzania. The discussion paper came as a result of a study which highlighted lack of relevant legislations for electronic transactions.

Two areas have been highlighted in the discussion paper namely contracts and consumer protection. Generally the legal system in Tanzania is mainly based on Common law. Regulatory steps to secure electronic transactions such as digital signatures, electronic evidence, reforms to contract law, dispute settlement and others have not yet been promulgated<sup>1</sup>.

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<sup>1</sup> Discussion paper on the introduction of a legal framework for electronic commerce in Tanzania page 10

In terms of contracts, the Tanzanian laws do not yet recognize electronic contracts.

Laws on consumer protection, sales and supply of goods in Tanzania protect consumers on off-line business only which hardly apply to the online business when it comes to the matter of distance contracts. The laws do not protect consumers against any risks involved in distance selling and buying business because when these laws were passed the online or distance contracts were not in practice in Tanzania<sup>2</sup>. It is further noted Tanzanian laws neither cover on-line contracts nor recognize cyber space, the laws provide that, the contract must be in writing and duly signed or authenticated before a witness a requirement hardly applicable in cyber space.

### **Cyber Crimes**

While cyber crimes pose a significant threat to the development of electronic transactions Tanzanian Laws do not recognize criminal activities on the internet. For example illegal intrusion into a computer system can not be prosecuted with the current legislations which require physical presence. Discussion paper has covered this aspect of criminal activity.

### **Computer Frauds**

Computer fraud in the most simplistic form can be described as stealing something of value by means of computers. This can extend to as far as fraudulently giving instructions to computer to transfer funds into a bank account or using a forged bank card to obtain money from a cash dispenser. The Discussion paper has also covered this type of fraud

### **Data Protection**

There is a threat which the use of data processing techniques can pose to the rights and freedoms of those individuals whose personal data is subjected to some form of automated processing<sup>3</sup>. There is no law in Tanzania which protects data or databases in Tanzania. The main concern here could be the right to privacy, data protection and danger of information misuse. The discussion paper has also covered these aspects

### **Spam**

Spam in its most simplistic form is the act of sending large number of unsolicited mails with an intention to market a product or to deceive the users. This aspect has not been covered in the discussion paper, however currently spam is one of the most visible unwanted activities by the computer users in Tanzania.

### **Cyber Attacks**

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<sup>2</sup> Discussion paper page 20

<sup>3</sup> Lloyd J. Information Technology Law 2000 at page xli cited from the Discussion paper

Tanzania is embarking on deployment of e-government and more and more organizations are adopting the internet as medium of transmission for the core business functions. The e-mail is replacing the fax as the main medium of transmission. The organizations that heavily depend of the internet and computer network are at risk from cyber attacks which could be deliberate attempts to disrupt services (Denial of Service Attacks) or even more sophisticated attacks. The information document did not address these aspects of cyber security while there is no legislation which covers these aspects.

## **Concluding Remarks**

As more and more countries are joining the networked economy the impact of criminal activities on the cyber space is going to be significant. The internet does not recognize administrative borders and hence making the internet an attractive option for people with criminal intents. Tanzania needs to join the world in enacting cyber laws which will protect the country and its people against criminal activities on the internet. The Law Reform Commission of Tanzania is in final stages of putting up draft legislation on e-commerce.