

## **Zambia to Become an Information Society by 2015: A Reality Check**

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*ABSTRACT: This paper assesses the efforts Zambia has made to build an information society by the year 2015 - an objective agreed upon by world leaders during the summits on information society in Geneva (2001) and Tunisia (2005) respectively. The findings reveal that the majority of Zambians are not connected to the Internet. Currently, Zambia is estimated to have 16, 464 Internet subscribers and 700,000 Internet users, which account for only 5.9% of the population. The Internet in Zambia is still too expensive for many people. This is partly due to the fact that computers and other accessories needed to connect to the Internet are still not affordable.*

### **I. Introduction**

Information communication technologies (ICTs) in general have been deemed by many scholars as a conduit through which nations could achieve the much dreamed-about concept of "information society". ICTs have the potential to diminish physical barriers that hinder people from communicating with each other over distance and obtaining information within a blink of an eye. Acknowledging the potentialities of ICTs in facilitating the growth of an information society, the International Telecommunication Union (ITU) of the United Nations (UN) convened the "World Summit on Information Society" in 2001 and 2005. The two Summits were held in Geneva and Tunis respectively with a view to availing world leaders an opportunity to brainstorm and see how ICTs could be made more accessible to people in order to build an information society by the year 2015.

The Zambian government attended both summits on information society in Geneva and Tunisia. During these summits, all heads of States and Governments agreed to turn the digital divide into a digital opportunity for all. They agreed to set targets for improving access to ICTs by 2015 in order to build an information society in their own countries. Priority was placed on Internet accessibility and access to telecommunication technologies because the leaders recognized the critical role these technologies, especially the Internet, play in facilitating communication. They agreed to fight tooth and nail to improve Internet accessibility among their citizens in order to

improve access to information - a critical resource in an information society. The Zambian government endeavored to explore ways and means to ensure that Internet is made more accessible to Zambians. It is imperative therefore to look back into history and see what the Zambian government has achieved in this endeavor.

## **II. Background Information about Zambia**

The Republic of Zambia is a landlocked country in Southern Africa. Zambia has eight neighboring countries: Democratic Republic of the Congo (DRC), Tanzania, Malawi, Mozambique, Zimbabwe, Botswana, Namibia, and Angola. Zambia's capital city is Lusaka, located in the southern part of the central plateau of the country. Zambia's population is concentrated mainly around Lusaka and Copperbelt provinces. After independence from Britain in 1964, Zambia moved towards a system of one-party rule with Kenneth Kaunda as president. Kaunda dominated Zambian politics until a multi-party election which was held in 1991. Zambia's economy has been traditionally dominated by the copper mining industry. However, the government has recently been pursuing an economic diversification program. According to the last census conducted in 2000, Zambia's population was slightly above 11 million.

Like any other country in the world, Zambia is linked to the "International Information Grid", the Internet. Zambia was first connected to the Internet in 1994 through ZAMNET Communication Systems Ltd. ZAMNET was established by the University of Zambia and it became the first Internet service provider in the country. The establishment of ZAMNET drastically facilitated communications within Zambia and abroad. Zambians were liberated from a traditional mail postal service- a slow process they were using when communicating with people living within Zambia and in the Diaspora. Today Zambians can communicate with anyone at any time through services offered by the Internet such as the e-mail and chat rooms, provided that they have Internet connection.

## **III. Assessing Zambia's Efforts**

In order to assess how far Zambia has advanced towards the building of an information society by 2015, several performance indicators need to be analyzed as parameters. One parameter is the number of Internet Service Providers (ISPs) operating in Zambia. The second yard stick is the number of Internet subscribers in Zambia. Last but not the least is the number of Zambians who use the Internet. These and other parameters could help to determine whether or not Zambia has done well in making Internet more accessible to its people.

### *1. Internet Services Providers and connections available in Zambia*

Zambia, which in the First and Second Republics embraced socialism as an economic model for development, opened its doors to capitalism in the early 1990s. This saw

many sectors of the economy being run by individuals and private organizations, not the state. The state assumed the role of providing an enabling environment for the individuals to compete in the running of the economy. The communication sector was no exception. In Zambia today, only two companies in the communication sector are run by the government. The rest are privately owned.

Prior to 2001, there were only three Internet service providers in Zambia. These were ZAMNET, Coppernet and ZAMTEL. ZAMNET was established in 1994 by the University of Zambia. Coppernet was established in 1996 by Zambia Consolidated Copper Mines (ZCCM). And ZAMTEL (Zambia Telecommunications) started providing Internet services in 1997. In comparison, there are many more players in the industry today. According to the Communications Authority of Zambia (2009), there are 19 registered Internet Service Providers in Zambia: ZAMTEL, ZAMNET Communication Systems, Coppernet Solutions, Microlink Technologies, UUNet Zambia, Africonnect, Zain Zambia, Real Time, Bring.com Zambia Ltd, Oisat Cable Limited, Epochal Digital Technology, MTN Zambia, Post Link Limited, Bring.Com Zambia Limited, Pronet Online, Comium Data Zambia Limited, Quick Edge, Foris Telecom, Iburst Zambia Limited, and Morse Communications. However, not all these ISPs are up and running effectively. A lot of them exist just on paper. According to Mulozi (2008), out of the 19 registered ISPs, only six of them are active.

Almost all the Internet Service Providers in Zambia offer the same types of connections for the people of Zambia. Most of the ISPs are increasingly providing broadband wireless services through VSAT and satellite technologies. DSL modem technology is also in use for Internet connections in Zambia. The dial-up service is slowly being phased out. Only few ISPs such as ZAMTEL, ZANET Communication Systems, and Coppernet are still providing dialup services along with broadband connection services. It should, however, be pointed out that a few of the ISPs such as Zain Zambia, MTN, and ZAMTEL, do provide Internet to Zambians through the use of General Packet Radio Services (GPRS) and Enhanced Data rates for Global Evolution (EDGE) technologies. This is because these three companies are also major players in the mobile phone industry in Zambia. So they use their mobile phone technologies to provide Internet services to Zambians. This is really a convergence of technologies.

The privatization of the communication industry by the Zambian government has attracted many companies into the Internet service industry. This can be seen as a giant step towards making Internet more accessible in Zambia. According to the laws of supply and demand, the increase in the number of ISPs in Zambia could result in the provision of more affordable Internet services. In this respect, Zambia has done well to attract more players in the Internet services industry with the hope of making Internet more accessible to its people.

## *2. Internet Subscribers in Zambia*

One may wonder why the Internet subscriber number should be used to measure Zambia's efforts in making Internet more available to its people. The reason is simple. The Internet subscriber base is an incubator which hatches the Internet users. If more organizations and households subscribe to Internet services, more people will use the Internet. In other words, the omnipresence of Internet in organizations and households would necessitate an increase in Internet users. Those who cannot afford an Internet connection can access Internet facilities through their friends and organizations that have subscribed to the Internet services. In this regard, there is a direct link between Internet subscriptions and Internet usage.

Although Zambia was the pioneer of Internet services in the Sub-Saharan Africa, the rate at which people and organizations have been opening Internet service accounts with ISPs leaves much to be desired. According to the International Telecommunication Union (ITU), the number of Internet subscribers in Zambia in 2007 and 2008 stood at 16,830 and 16,464 respectively. Note that these figures for subscribers include both corporate and household subscribers. The downward trend shown above is regrettable for Zambia.

The above figures show that very few Zambians and organizations are connected to the Internet. This constrains their ability to participate fully in the information society where information is a key resource for all human endeavors. The regression in the number of Internet subscribers indicates that some of the people and organizations that were previously connected to the Internet have decided to stand aloof by not renewing their Internet subscriptions. This seriously hampers their ability to get the information they need anytime anywhere - the philosophy upon which the concept of Information Society is founded.

### *3. Internet Users in Zambia*

It is observed that the number of Internet users in Zambia has not been increased at the rate as fast as that of mobile phone users in the country. The combined number of mobile phone users from all the three mobile service providers in Zambia today stands at 4 million out of 11 million people. This is, however, not the case with Internet users in Zambia. In 2003, the Internet users in Zambia stood at 45,000 (Mulavu & Mwenda, 2005). This number increased to 50,000 in 2004 (Raphael, 2005). A report by Zambia Library Services in 2005 puts the number of Internet users at 231,000, representing 2.1% of Zambia's population. Index Mundi (2009) estimates that Zambia's Internet users in the year 2008 stood at 500,000. The Index's findings are supported by the ITU, which in March, 2008 estimated that the percentage of Zambia's Internet users was 4.3%. The number of Internet users has continued to increase. In June, 2009, the number of Internet users in Zambia stood at 700,000, which was 5.9% of Zambia's population (ITU, 2009).

The above statistics show a steady increase in the number of Internet users in Zambia. One would, however, argue that the rate of increase is not good enough, considering the population of the country. A 5.9% of Internet users imply that 94.1% of Zambians do not have access to the Internet. In this regard, Internet in Zambia can be seen as a long-neck jar from where only birds with long beaks can manage to drink. It entails that only a privileged few has access to the Internet. This is fundamentally against the principles and philosophies of universal access to information and thus makes the concept of information society more like a utopia than a reality.

There are a number of countries on the Continent of Africa which have achieved remarkable growth in terms of the number of people accessing and using the Internet. These shining examples include Morocco and Seychelles. According to the ITU (2008), there are 7,300,000 users of the Internet out of its population of 34,343,219 (about 21.3%) in Morocco. In Seychelles, 38.9% of its population has access to the Internet. Zambia seems lagging far behind in this regard.

#### **IV. Digital Divide**

Digital divide was one of the issues that the world leaders agreed to resolve so as to achieve universal access to information through the use of ICTs. However, the case of Zambia is not promising. As stated above, the Internet in Zambia is a privilege of the elite. There is a serious digital divide in terms of Internet accessibility in Zambia. According to Zulu (2008), about 80% of the Internet users in Zambia are based in Lusaka. This assertion is backed up by the findings of the World Bank, which in 2003 argued that 80% of the Internet users in Zambia are in Lusaka. What this means is that Internet accessibility is not evenly distributed among towns and districts in Zambia. Lusaka is better serviced than any other town or district. This digital divide is much worse in rural or outlying areas where poverty hits the hardest. Their lack of access to ICTs, especially the Internet, means that these rural communities will continue wallowing in abject poverty. This definitely defies the concept of Information Society -- a society where there is easy access to information through the use of ICTs.

It is obvious that Zambia has not done well to ensure that the Internet access is affordable to its people. There is also a serious digital divide in terms of access to the Internet. Therefore, it is necessary to uncover hindering factors.

#### **V. Barriers to Make Internet More Accessible in Zambia**

There are many bottlenecks to make Internet more accessible in Zambia.

The cost of computers and other ICTs accessories needed for one to connect to the Internet is very high in Zambia. Zambia does not manufacture computers or ICTs accessories. They are all imported. Consequently, custom taxes, shipping costs, etc. are all transferred over to the customers. As a result, the prices of computers and other

accessories tend to be too high for many Zambians to afford. For example, an ordinary lap top computer with a RAM of 512 MB memory size and 120 GB hard drive costs over \$1,000 (USD) in Zambia while the same type of computer costs \$300 (USD) in China. This high cost makes it impossible for many Zambians to buy computers and other accessories.

The cost of getting an Internet connection through Internet Service Providers is another hindrance to Internet accessibility in Zambia. The connection or installation costs and the monthly subscriptions are too high. According to the information obtained on the 4th October 2009 from the Coppernet website, the installation cost for broad band connection services through analog leased lines, digital subscriber lines (xDSL) 64kbps-2mbit/sec links, VSAT connections or sitting on LAN connected via WAN to their Network is ZMK (Zambian Kwacha) 3,145,986.00. This amount of money is equal to \$665.82 (USD). Although these charges are meant for organizations that could use the connection on more than one computer, they are still high. The ISP charges are prohibitive to many Zambians and organizations. In countries like China, one does not need to pay installation fees. The only fee one pays in China is for the modem. The modem costs only 100 Chinese Yuan, which is about \$14.62 (USD).

In addition to the installation costs, the monthly subscription fees are too high for both single and multiple users' connections. The data obtained from ZAMNET Communication Systems Limited website on the 4th October 2009 shows that the monthly subscription for a dial-up connection for the single home use is ZMK 326,000.00, which is \$77 (USD). This equals to an annual subscription for Internet services in China. In China, the monthly subscription fee for a DSL broad band connection with the speed of 100mbps is 40 Yuan, which is approximately \$6 (USD).

The cost of surfing the net at Internet Cafes in Zambia is also extremely high. It is more pronounced in rural areas. "The cost of accessing Internet in rural areas is five times higher than in the urban areas. In some cases, it costs between ZMK 500-ZMK 1000 per minute" (Mulozi, 2008, p. 19). This amount is about \$0.10-\$0.25 (USD) per minute. In urban areas, it is about ZMK 100 or \$0.025 (USD).

Underdevelopment of information communication infrastructure is another hindrance to Internet accessibility in Zambia. Some areas in Zambia do not have the much needed telecommunication infrastructure. "Internet Service Providers are not rushing into rural areas because of lack of infrastructure" (Mulizi, 2008, p. 19). This worsens Zambia's digital divide in terms of Internet accessibility.

Another factor contributing to low usage of the Internet in Zambia is illiteracy. The majority of Zambians cannot read or write. According to IFLA/FAIFE (2007), 80% of Zambians are illiterate. Even if they have access to the Internet, they will not be able to read the web contents.

Computer illiteracy is another factor contributing to low usage of the Internet in Zambia. Many people in Zambia do not know how to use a computer.

There is also the issue of technological phobia. Some people have the fear for technology. They do not want to learn about the Internet. Related to this is a lack of awareness of what the Internet can do for people. A lot of people do not even know what the Internet is.

## **VI. Efforts made by Zambia to make Internet more accessible**

Despite the gloomy picture about Internet access in Zambia, it is fair to say that the Zambian government has made and is still making efforts to avail the Internet to its people. Among its efforts are:

- The liberalization of the communication sector in 1991 opened doors to private investment. Today, Zambia has 19 Internet Service Providers.
- In 2007, the Zambian government launched the ICT policy, which will facilitate the growth of the information and communication sector as it will provide guidance by creating a roadmap for ICTs development in the country and set very clear public sector investment direction in the short, medium and long time frames.
- The launching of the mobile phone service in Zambia is also another giant leap towards making the Internet more accessible. If accessing the Internet through mobile phones is fully utilized, it has the potential of increasing the Internet accessibility and usage as rural areas today are covered by some mobile service providers such as Zain Zambia.
- The embracing of VSAT technology by many Internet Service Providers has the potential to increase the Internet usage in the sense that even those areas devoid of information and communication infrastructure (i.e., rural areas) could be connected to the Internet through VSAT.
- The transition of the Zambia Telecommunication Exchange from the old analog system to a digital communication infrastructure is one of the efforts aimed at improving ground telephone and Internet communication.
- The introduction of the universal ICT Fund by the government through the Communication Authority is another step in the right direction. This fund is meant to support ICT activities in rural areas, including the Internet connectivity. If fully implemented, it will benefit the rural areas that have limited access to ICTs, including the Internet.

- Another important activity with the potential to increase the Internet accessibility in Zambia is the installation of the optical fiber cable by Zambian Electricity Supply Corporation (ZESCO), Zambia Telecommunication (ZAMTEL), and the Copperbelt Energy Corporation. Although this project is undertaken to improve the operations of these three companies, they have indicated that they will allow the Internet service providers to use this infrastructure at a fee to provide broad band Internet connection to their customers. Once installed, this National backbone will be connected to the East Africa Submarine Cable System (EASSY), the Fiber Optical Project that intends to connect 21 countries to the rest of the world. Zambia's National backbone can connect to the EASSY via Tanzania or Mozambique as these are Zambia's neighbors through which the fiber optical infrastructure will pass. This will definitely boost the Internet accessibility.

As a result of these and other efforts, Zambia has done better than some other African countries such as Ethiopia and Malawi in terms of the Internet accessibility. According to ITU (2009), in Ethiopia, 0.4% of the population uses the Internet. In Malawi, 0.9% of the population uses the Internet.

## **VII. Conclusion**

Judging from the number of Zambians who have access to the Internet, one could say that Zambia has not done enough towards the realization of the concept of Information Society as the majority of Zambians are not connected to the global network. Only 5.9% of Zambia's population has access to the Internet. The Internet services in Zambia are too expensive for many Zambians who are still grappling with challenges of poverty. Internet is a luxury to them.

Zambia also faces a serious digital divide in terms of access to the Internet. 80% of the Internet users are based in Lusaka. People living in rural areas have limited or no access to the Internet. This has been largely attributed to the lack of adequate telecommunication infrastructure in rural areas needed for the Internet connection. Zambia needs to double its efforts in this regard if it has to achieve the objective of making the Internet more accessible. Can objective agreed upon by world leaders during Summits on Information Society in 2001 and 2005 in Geneva and Tunisia respectively.

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