Assessing Universal Access to ICT in Ghana

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INTRODUCTION

Information and Communication Technologies (ICT)[1] have become part of the key factors driving social and economic advancement. They have not only altered the way people live, work, communicate and entertain themselves but also created a new infrastructure for business, scientific advancement and social interaction.

Given the importance of ICT, many countries (developed and developing) have evolved policies that would enable every citizen to participate in the digital revolution. However, access to the ICT is concentrated in few regions, countries and population groups. The result is that there is a deepening gap between the developed and developing countries in the availability and accessibility to ICT services. This is referred to as the digital divide. The digital divide is following and supplementing the prevailing income and economic divides existing between developed and developing countries (Navas-Sabater, Dymond & Juntunen, 2002).

According to Navas-Sabater, Dymond and Juntunen (2002), there are two aspects of the digital divide—poverty and isolation. They defined the two aspects, as disparity between the rich and the poor on one hand, and disparities between urban and rural areas on the other. They argue that although both components are important, isolation poses a greater challenge to the utilisation of the service. Therefore, addressing the internal disparities becomes central to universal access discussions.

The policy objective of developed countries is to ensure equal access to ICT services by all the populace—universal service. The concept of universal service is based on the need for uniform geographical coverage of the service, quality, price, and the service offered on a non-discriminatory basis so that the expected benefits of ICTs would be available to the whole population (Tarjanne, 2000). The concept of universal service has increasingly been narrowed down to the connection of households to the public-switched telephone network. Here, the objective is to achieve a minimum level of ICT services that must be available to all users regardless of where they are living and at a price which should be affordable to all (Wellenius, 2000).

Developing countries on their part have adopted a policy that emphasises community's access to ICT services—universal access. Efforts to promote universal access to ICT in Africa have been on the agenda of meetings of high-level policymakers since the early 1990s (Etta & Parvyn-Wamahiu, 2003). As a result different criteria such as distance, population size, time, etc., have been used by these countries to define what they mean by universal access. For example, in Ghana, the criterion is a telephone in every locality of 500 people, whilst in Burkina Faso it is a telephone within every 20 km (ITU, 1998).

The objective of this paper is to assess the deployment of ICT to achieve universal access in Ghana. Given the broad definition of ICT, the assessment will cover telecommunication (specifically telephone), the Internet, computer hardware and broadcasting (radio and television). Until 2003, achievement of universal access in Ghana was more related to increased penetration of telephones—fixed line and mobile, therefore, prominence is given to the deployment of telephones.

UNIVERSAL ACCESS POLICIES IN GHANA

For a long time, Ghana had no definite policy on universal access to ICT services. However, references can be made to programmes that gave some indications of government's intentions. The first of such programmes was the Accelerated Development Plan (1994 – 2000) for the telecom sector. The general objective of the Accelerated Development Plan (ADP) was to revamp the telecom sector through the participation of the private sector to meet the increasing social and economic needs of Ghanaians. This was to enable Ghana to be integrated into the global economy as well as achieving the broad national objective of becoming the "gateway" to West Africa (Atubra & Frempong, 1999).

The government under the ADP adopted the use of pay phones as a way of achieving universal access. The target was to provide every rural community of 500 people with one pay phone. The ADP also had the objective of

raising the national teledensity to a level between 1.5 and 2.5 by the year 2000.

The second evidence of government's policy on universal access can be found in the National Communications Regulations of 2003 (Legislative Instrument). Section 2 of the Legislative Instrument emphasised that the services of communication operators should reach the entire geographical areas specified in their licenses, which include rural, remote parts and sparsely populated areas. Therefore, in the issuance of licenses, the National Communications Authority (NCA) had an intrinsic objective of ensuring universal access to ICT services.

The first succinct ICT policy for Ghana was launched in the latter part of 2003. For universal access, the general objective was to promote equal and universal access to ICT services and resources to all communities. The universal access objective is to be achieved through:

- Implementation of community-based national ICT programmes and initiatives including telemedicine, multi-purpose community telecentres, tele-education and schoolnet initiatives.
- Community–based village information and communications infrastructure initiatives.
- Special ICT initiatives targeted at the disadvantaged communities and sections of the Ghanaian society, including the underserved communities and the physically and mentally challenged (Ghana Government, 2003)[2].

ICT INFRASTRUCTURE

In the early part of the 1990s, Ghana liberalised both telecom services and the airwaves. This liberalisation policy had had profound impact on the development of ICT infrastructure[3] in the country. In this section, we provide an overview of the deployment of ICT infrastructure in the country. The overview shall include telecommunication, the Internet, radio and television.

TELECOMMUNICATION SERVICES

Fixed Line Telephones

There has been considerable improvement in the penetration of fixed-line telephones in the country. In 1990, there were a little over 44,000 telephone lines in the country and this increased to 288,500 in 2003.

Ghana has three companies providing fixed line telephone services—Ghana Telecom (GT), Westel and Capital Telecom. In 2003, there were 291,978 telephones in the country of which the incumbent GT had about 98.8% share. The teledensity of the country was 1.42.

Work by Frempong (2004) revealed that the Greater Accra Region, which hosts the national capital has about 67% of the telephone lines in the country. In this sense, availability of the service in the other regions was limited and therefore, has negative implications for achieving universal access to the service (see Figure 1).

The concentration of telephone lines in the Greater Accra does not necessarily mean that there is increased access by residential users. Most of the service is subscribed to by government departments and agencies, and corporate organisations operating in the Accra-Tema Metropolitan Assemblies.

Pay Phones

There has been a considerable improvement in the deployment of the service in the country. There were only 25 pay phones in the country in 1993, but as at 2003, the

Table 1. Basic telecommunications data (ITU [2003] Telecom Inidcators and Ghana Telecom [2004])

Indicators	Number
Fixed-Line Telephone Networks	3
Fixed Telephone lines	291,978
Teledensity (Fixed telephone lines)	1.42
Waiting list for Fixed Telephones	183,755
Pay phones	6,921
Pay phones (per 1000 inhabitants)	0.33
Ratio of Pay phones to Fixed Telephone Lines	1:43
Cellular Mobile Telephone Networks	4
Mobile subscribers	775,000
Mobile subscribers per 100 inhabitants.	3.8
Ratio of Fixed Telephone subscribers to Mobile subscriber	1:2.7
Total No. of Tel. Subscribes (main line + mobile)	1,066,978

Figure 1. Regional distribution of Ghana Telecom fixed line telephones