GLOBAL INFORMATION SOCIETY WATCH 2008

Focus on access to infrastructure

Global Information Society Watch
2008

APC H*ivos* I To M

Global Information Society Watch 2008

SOUTH AFRICA

SANGONeT
David Barnard and Jan Moolman
www.sangonet.org.za

Introduction

As in the rest of Africa, a primary aim of the telecom reform process in the early 1990s in South Africa was to open the telecom market to new entrants, especially mobile service providers, network operators, internet service providers (ISPs) and data network providers. Increasing affordable access to telecommunications in the interest of social and economic development was a key goal. In 2006, the Department of Communications, which is responsible for policies for telecommunications and communications in South Africa, announced its three-year strategic plan, which included the goal of "enabling the reduction of the cost to communicate" (Esselaar et al., 2006, p. 12). Despite this, access to and the high costs of communications in South Africa remain critical challenges.

It is in this context that this report outlines the growth and use of the mobile phone as an appropriate technology in South Africa. Given the complexity of this area, it offers only a snapshot of some of the innovative uses of mobile technology in the country.

Growth of mobile

In 2001, the number of mobile phone subscribers in Africa passed the number of fixed-line subscribers. According to *African Telecommunication/ICT Indicators 2008*, the number of mobile subscribers in Africa has increased dramatically in recent years. In 2007, the African continent added over 60 million new mobile subscribers, and mobile phones represented 90% of all telephone subscriptions (ITU, 2008).

Africa remains the region with the highest annual growth rate in mobile subscribers. At the beginning of 2008, there were over 250 million subscribers on the continent. Mobile penetration has risen from just one in 50 people at the beginning of this century, to almost one third of the population today. Mobile subscribers are also now more evenly distributed across the continent. In 2000, South Africa accounted for over half of all Africa's mobile subscribers, but by 2007, almost 85% were in other countries (Goldstuck, 2006).

In South Africa, mobile phones have become the preferred medium of telephony since their introduction in 1994. At the same time, fixed-line subscribers have fallen by more than 10% from their peak in 2000. Arthur Goldstuck (2006) of World Wide Worx argues that this has been a direct result of three key factors:

- The disastrous roll-out of fixed lines by Telkom

- Limited options available from Telkom for fixed lines

- The high cost of fixed-line rentals.

While Telkom met the letter of the law in terms of its universal services obligations set in 1997 to deliver 2.8 million lines in five years, the spirit of the law was a different matter. By 2002, Telkom had to disconnect 40% of the 2.1 million lines it delivered over the previous four years due mainly to non-payment (or non-affordability).

Key players in the mobile market

The South African mobile phone market is dominated by two operators, namely Vodacom and MTN. Both operators were licensed in 1993. A third provider, Cell C, was licensed in 2001.

By the end of 2007, Vodacom recorded 24.3 million subscribers in South Africa, and a total subscriber base of 33 million across its networks operating in South Africa, Tanzania, the Democratic Republic of Congo (DRC), Lesotho and Mozambique. It has an estimated market share of 56% in South Africa, and its customer base is made up of 3.4 million contract customers, 20.8 million prepaid customers and just over 100,000 community service phones (Vodacom, 2008).

At the same time, MTN recorded 14.8 million subscribers in South Africa, but had a total subscriber base of 61.4 million across its 21 operations in Africa and the Middle East. MTN had an estimated market share of 36% in South Africa and its customer base is made up of 2.5 million contract customers and 12.3 million prepaid customers.[1]

Cell C operates in South Africa only and recorded 4.8 million subscribers by the end of 2007 (Guest, 2008).

Mobile and innovation for development

However, even with the ubiquity of access, the challenge to South Africa and other African countries is how best to adapt and translate growth and innovation in mobile technology in support of specific development challenges.

With two out of every three South Africans owning a mobile phone, these devices are the easiest and least expensive way to communicate, and far more pervasive than the internet – clearly an appropriate technology for the context. As a result, mobile phones are being harnessed by individuals and organisations to monitor elections, raise money, support advocacy campaigns and encourage citizen journalism.

Mobile phones are also bridging the digital divide in developing countries at a rate much faster than most other interventions to date. They span socioeconomic and cultural boundaries and are revolutionising the way people organise

---

1 MTN: www.mtn.co.za

themselves and do business. Mobiles are changing the ways people communicate, and they are changing the way civil society works.

Mobile success, driven largely by competition, is also spawning new services such as micro-payment prepaid recharging, single rate interregional roaming and the uptake of m-commerce applications.

Mobile banking

Mobile banking and payments worldwide are receiving significant attention from the banking industry and mobile operators. It is a convergence of two very powerful industries that provides a much more pervasive and accessible channel for the delivery of banking, payment and other financial services. Mobile transacting has a number of advantages over more traditional banking methods as it breaks down geographical constraints and offers advantages such as immediacy, security and efficiency. In South Africa, 31% of unbanked people have a mobile phone, and a further 17% have access to a mobile phone.

In June 2008, the Competition Commission released a report by the Banking Enquiry Panel, which was chaired by Judge Thabani Jali. The panel made 28 recommendations to increase competition in the banking sector to bring down costs, of which nine relate specifically to the National Payment System (NPS) and five relate directly to the automatic teller machine (ATM) network. The Commission's recommendation to open up access to the NPS is seen as the catalyst the mobile payment industry needs to bring online transactions to the majority of the population (Vecchiato, 2008).

According to Leon Perlman, chairman of the Wireless Application Service Providers Association, the findings to open up the NPS are consonant with similar initiatives in many developing countries to provide ubiquitous and affordable banking and payment services using mobile phones (Vecchiato, 2008).

Given the vast potential of mobile technology to transform the banking landscape in South Africa, a number of service providers are already active in this field.

Wizzit offers a secure and efficient mobile payment banking solution to unbanked and under-banked people in the country. The product offered is a low-cost transactional bank account that uses mobile phones for making person-to-person payments, transfers and prepaid purchases. In November 2007, the International Finance Corporation (IFC), a member of the World Bank, announced that it will acquire 10% of Wizzit as part of its efforts to extend banking services to the poor (ITWeb, 2007).

Another South African company, Fundamo[2], develops and deploys m-banking applications which enable secure financial transactions to take place through mobile phones. With m-banking gaining momentum throughout the African continent, Fundamo has already provided solutions and supporting services to providers in South Africa, Kenya,

Botswana, Zimbabwe, Zambia and the DRC. It is also expanding to other markets, such as Brazil, through a reseller licensing agreement with Brazilian banking solutions company BSI Tecnologia. This will allow BSI to sell Fundamo's mobile technology into the Brazilian market. Fundamo has also signed a global partnership agreement with management consulting and technology services company Accenture, to accelerate the worldwide adoption of mobile wallets.

All the main commercial banks in South Africa have introduced mobile banking solutions in recent years in an attempt to roll out services to the unbanked market based on the pervasiveness of mobile phones.

Other applications of mobile technology

There are a number of other examples of appropriate mobile technology applications in South Africa.

M4Girls is a pilot project launched by Nokia together with the Department of Education and Mindset Network. It uses Nokia 6300 mobile phones loaded with educational material to help improve the mathematics performance of Grade 10 girl learners. In addition to the initial pilot using mathematics, Nokia and Mindset are developing digital content in other key subjects such as English and information technology (IT) (ITWeb, 2008).

SMSweb offers an unlimited short message service (SMS) to schools so they can send important messages directly to parents via SMS. About 250 schools across the country already use the service. In 2007 more than four million messages were sent to parents.

FishMS is an SMS-based service from the Southern African Sustainable Seafood Initiative that provides information about the status of global fish stocks to consumers. Users text the name of a fish they are considering buying and are immediately advised as to whether the fish was sustainably harvested, or whether they should think twice before buying it.[3]

MobiDic, short for Mobile Dictionary, is a service that enables users to access dictionary content via their cellular phones. It was launched by SABC Education, a branch of the state broadcaster, in partnership with the Gauteng Economic Development Agency (GEDA) and Biza Telecoms, a black empowerment information and communications technology (ICT) company. The objective of MobiDic is to assist users in improving language skills and enhancing reading and writing abilities. By simply sending a word for which the user needs an explanation to a premium-rated short code number, they instantly receive a definition in return via SMS.[4]

SIMpill is a solution for the wireless monitoring and support of patients on chronic medication. It incorporates wireless technology to monitor and remind patients with chronic conditions to take their medication as prescribed, as well as helping health organisations to be more efficient and cost-effective in their patient care.[5]

---

2   www.fundamo.co.za

3   wwf.org.za/sassi

4   www.sabcmobile.co.za/mobidic

5   www.simpill.com

MXit is an instant messaging service which cuts the cost of an SMS, priced at up to 80 cents to send a one-word message such as "hello", by 100,000 times to just 0.0008 cents. More than six million South Africans – mostly under the age of 25 – are using MXit. New users are signing up at the rate of more than 10,000 a day. There are no set-up or sign-on fees, but users need mobile phones capable of running on general packet radio service (GPRS) or third generation (3G) technology. Once logged on it is possible for people to interact with other MXit users as well as with online chat communities such as MSN Messenger, ICQ, AOL Messenger and Jabber. Both parties must be logged on to the MXit network to send a message. Because one only pays for the data or information that one sends and receives and not for the access to the internet, using a service like MXit becomes very cheap.[6]

Call Me allows Vodacom subscribers to send up to five messages per day, free of charge, requesting a call back from the receiver. Services such as these have emerged in response to consumer behaviour where users would have previously "flashed" the person they wished to speak to by ringing their phone once and hanging up. Call Me formalises the process and helps minimise network traffic through fewer prematurely disconnected calls.[7]

Smile Communications is testing a service aimed at giving customers their own telephone number even if they do not own a handset. Individuals are offered free telephone numbers and voice message boxes. The trial run is being held in the Gamalakhe community, near Port Shepstone in KwaZulu-Natal. Customers will be given a secure PIN code so they can use any Smile phone. Once they log in, they can make low-cost calls and operate a voice mailbox with free message retrieval. Having a personal number means the customer can be contacted directly, though the incoming caller will need to leave a voice message, unless the user logs on to a Smile phone at a prearranged time to answer the call (Stones, 2008).

This service is a variation on another initiative to make telecoms affordable for people that required the cellular operators to hand out four million free subscriber identity module (SIM) cards to the poorest people in South Africa. Vodacom, MTN and Cell C agreed to give away the cards in exchange for spectrum access, but got bogged down by administrative and technical hitches. The cards were useless without a handset, so the owner had to borrow a phone. Though the cards gave the recipient a cellular number, they were not loaded with airtime so users still had to pay the high retail rates for prepaid airtime.

Action steps

Clearly, the mobile market and the potential of mobile technology to increase access and communication holds much promise for South Africa and other developing countries. However, despite the tremendous growth of mobile, there remain significant obstacles to its uptake. High prices and the fact that most older and cheaper phones are not enabled with key technologies are just two of these obstacles.

In June 2008 the Independent Communications Authority of South Africa (ICASA) gazetted regulations aimed at preventing consumers from being locked into long-term contracts with mobile operators – a longstanding criticism of networks. According to the new regulations, consumers will be given the option to choose the period of their mobile phone contracts, from six, twelve, eighteen, to 24 months. The new regulations became effective on 17 August 2008.

This move, as well as efforts in the policy and regulatory environment to promote increased competition, and more affordable pricing and licensing, point to a recognition of the need to support the growth of the mobile sector in the country. ▪

References

Cape Argus (2008) SMS system helps schools, parents. *Cape Argus*, 30 June. Available at: www.capeargus.co.za/?fSectionId=3571&fA rticleId=vn20080630055754502C368889

Esselaar, S., Gillwald, A. and Stork, C. (2006) *South African Telecommunications Sector Performance Review 2006*. LINK Centre Public Policy Research Paper No. 8.

Fundamo: www.fundamo.co.za

Goldstuck, A. (2006) *The Hitchhiker's Guide to Going Mobile: The South African Handbook of Cellular and Wireless Communication*. Cape Town: Double Storey Books.

Guest, K. (2008) Cell C's turnaround proves profitable. *ITWeb*, 16 April. Available at: www.itweb.co.za/sections/ financial/2008/0804161031.asp?O=FPTOP&S=Telecoms&A=TEL

ITU (International Telecommunication Union) (2008) *African Telecommunication/ICT Indicators 2008: At a Crossroads*. Geneva: International Telecommunication Union.

ITWeb (2007) World Bank arm buys into Wizzit. *ITWeb*, 21 November. Available at: www.itweb.co.za/sections/ business/2007/0711211042.asp?S=IT%20in%20 Banking&A=ITB&O=FRGN

ITWeb (2008) Mobile phones to teach Maths. *ITWeb*, 8 April. Available at: www.itweb.co.za/sections/telecoms/2008/0804081343. asp?A=CEL&S=Cellular&O=FPPN

MTN: www.mtn.co.za

Stones, L. (2008) Free cellphone numbers. *Business Day*, 22 April. Available at: mybroadband.co.za/news/Cellular/3566.html

Vecchiatto, P. (2008) Commission opens mobile payment industry door. *ITWeb*, 26 June. Available at: www.itweb.co.za/sections/ financial/2008/0806261040.asp

Vodacom (2008) Vodacom results for the period ended December 31, 2007. Press release. Available at: www.vodacom.co.za/mccrdetail. do?id=1084&action=detail

---

6   www.mxit.co.za

7   www.vodacom.co.za/services/callme_about.jsp

GLOBAL INFORMATION SOCIETY WATCH 2008 is the second in a series of yearly reports critically covering the state of the information society from the perspectives of civil society organisations across the world.

GLOBAL INFORMATION SOCIETY WATCH or **GISWatch** has three interrelated goals:

- **Surveying** the state of information and communication technology (ICT) policy at the local and global levels

- **Encouraging** critical debate

- **Strengthening** networking and advocacy for a just, inclusive information society.

Each year the report focuses on a particular theme. **GISWatch 2008** *focuses on access to infrastructure* and includes several thematic reports dealing with key access issues, an analysis of where global institutions stand on the access debate, a report looking at the state of indicators and access, six regional reports and 38 country reports.

GISWatch 2008 is a joint initiative of the Association for Progressive Communications (APC), the Humanist Institute for Cooperation with Developing Countries (Hivos) and the Third World Institute (ITeM).

GLOBAL INFORMATION SOCIETY WATCH
2008 Report
www.GISWatch.org