

ICT-Based Community Development Initiatives in South Africa

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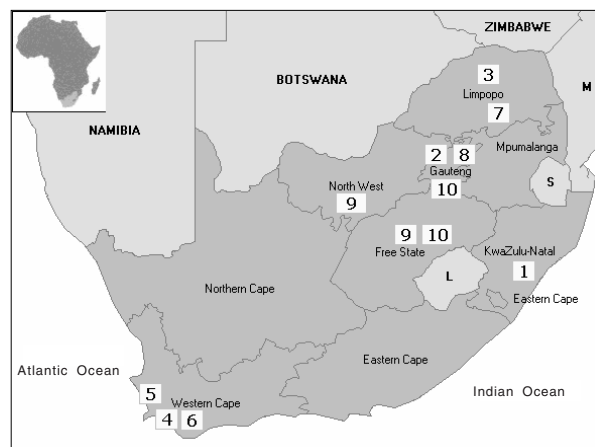
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INTRODUCTION

South Africa has seen many changes in the decade since the mid-1990's but it is still struggling to rectify the damage caused by apartheid, which aimed to maintain white domination while extending racial segregation and emphasising territorial separation (Chokshi et al., 1995). The legacy of apartheid has left a large percentage of South Africa's population living in poverty, many without proper housing or associated facilities and minimal, if any infrastructure. Another devastating effect of apartheid is the high percentage of illiteracy within South Africa due to the lack of educational amenities available to non-whites during that era. Fifty percent of the population of 42 million lives below the poverty line while 13.6% of the population aged 15 and over is not able to read or write (*World Fact Book*, 2003).

Figure 1. Geographical distribution of ICT community development initiatives



Many of South Africa's cities are of First World standards with access to advanced technologies, yet poverty-stricken areas are still stuck in the Third World, providing inhabitants with, in many cases, not even basic needs fulfilment. World economic trends show an increasing reliance on information, supported by technology. Without access to the necessary technology to attain knowledge and information as well as efficient communication, a significant number of South Africans are destined to remain in an impoverished state (Cogburn, 1998).

BACKGROUND

Internet, Electronic Commerce, Globalization and the Digital Divide

The Internet in conjunction with other enabling technologies is fuelling globalization, and electronic commerce is drastically changing the way in which modern-day business is conducted (Stavrou et al., 2000). E-commerce enables business transactions to extend across international borders and allows relationships to exist on a global level. The downside to this business evolution is that it threatens to widen the abyss that already exists between the active participants and those unable to participate due to lack of resources such as technology infrastructures, technology itself, skills and education. Deprived of the necessary infrastructure for conducting business via e-commerce and the Internet, business contenders are left at a severe disadvantage.

One way to gauge the digital divide within a country is to look at its ICT penetration (Corrocher & Ordanini, 2002). In a developed country such as Sweden, 66% of the

country has *regular* Internet access whereas in South Africa only 15% of the population has *any* form of access. Within South Africa, approximately 10% of black residences have telephones in their homes, in contrast to the 90% of whites (Miller, 1999).

ICTs and Community Computing in Bridging the Digital Divide in South Africa

Community centers incorporating ICT can aid in bridging the digital divide by providing access to information and facilities to indigent community inhabitants. Such centers can bring communities together to create a knowledgeable society, strengthening the population, and improving its ability to fight poverty (Cogburn, 2000).

Many factors must be considered in providing Internet access and computing facilities within a South African context. These include funding, resources and current infrastructures as well as the willingness of community members to accept and make use of the amenities.

Table 1 gives an overview of some community-oriented ICT initiatives, selected for their diversity in geographic location and structure. Figure 1 shows the geographic distribution according to province. Note that some projects have multiple locations. Although most projects have multiple goals, they have been classified below into two main categories according to their main thrust: (1) providing a basic ICT infrastructure to a disadvantaged community in the form of business or telecentres,

Table 1. Selected South African ICT community development initiatives

Nr	Project Name	Year	Sponsor	Main Objective
1	Manguzi Wireless Internet	1998	CSIR (SA Government)	Internet connectivity
2	Kgautswane ICT Centre	1999	Worldbank	Computer infrastructure
3	Mogalakwena HP I-community	2002	HP (private)	ICT infrastructure & training
4	Khayelitsha Mini-telecentre	1999	USA (SA Government)	ICT infrastructure
5	Milnerton Library Business Centre	1999	Provincial Government	Digital information access
6	Zenzele Training & Development	1988	Mfesane (Christian NGO)	Information access & skills training
7	Bridges to the Future - SA	2002	consortium (public/private)	Adult literacy
8	Microsoft Digital Village	1997	Africare (corporate consortium)	Literacy & Internet skills
9	FET.com ICT Education	2001	Marconi (private)	ICT skills training
10	Project Literacy	1976	NGO (private)	Adult literacy

and (2) initiatives going beyond infrastructure delivery, aimed at ICT-based adult literacy and skills building to thus actively engage in community upliftment.

SOUTH AFRICAN ICT INFRASTRUCTURE PROVIDING COMMUNITY INITIATIVES

The following are some representative initiatives involving ICT that have attempted to bridge the digital divide and provide a means of communal computing for impoverished South Africans. This is not an attempt to provide a comprehensive inventory of all the ICT community development initiatives, but rather to demonstrate the diversity of ICT-driven development initiatives in the country. For a comprehensive listing of ICT community development refer to Bridges.org (2003).

Manguzi Wireless Internet

Manguzi Wireless Internet project provided Internet access and e-mail via a dial-up link, as well as learning resources to a community in Kwazulu-Natal where no telecommunications infrastructure existed. This was achieved using radio and satellite broadcasting technologies. The centre has been in operation since September 1998 and access to the Internet was established within the centre since May 1999.

Manguzi is a poor, rural community where most people can't even afford a bicycle. The center, therefore, had to be located to accommodate the largest possible clientele. The project needed to be inexpensive, robust, reliable and suitable for a particular application (i.e., Web browsing, e-mail and Internet connectivity) in a sparsely inhabited rural area. Local schools requested to be part of the project in order for Internet access to be available to their students. Two schools were nominated to participate in the project and both were fitted with a single computer, a radio with an antenna, a satellite receiver card and a DSB dish. A Telecentre served as the hub of the network and has two parts: a phone structure with five telephone booths and a fax machine, and an IT component consisting of a LAN with 8 PCs. A computer at the Telecentre served as a router and was connected by radio link to the computers at the schools. The information requested was downloaded directly to the schools' PCs via satellite. The schools were provided with infrastructure and teachers were trained in how to use a computer, e-mail and the Internet as a teaching tool (Stockholm Challenge, 2003).

The main aim of the project was to facilitate access to opportunities and information as well as to create local ICT capacity and in doing so to make a tangible difference

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