Chapter 1
Still in Pursuit of the Fast Lane: The Crawl to Broadband Freedom

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ABSTRACT

South Africa may be renowned for its natural attractions, warm climate and fine wine. But certainly not for high quality broadband. The country has fallen behind its international peers – both developing and developed markets – in the race to rollout Internet connectivity. In fact, even within the African continent, it is neither a leader nor progressive in comparison to its North African counterparts. This chapter aims to provide a chronology of the major developments in the provision of broadband Internet services in South Africa, as well as touching on the challenges faced in bringing this phenomenon into the mainstream. Reasons for the lack of diffusion and adoption of such services point to high end user costs of the service, a limited geographical footprint of both fixed-line and mobile broadband infrastructure, as well as a lack of computer literacy and understanding of what broadband is able to offer. The chapter continues to look at possible solutions including introducing a greater degree of competition into the market to facilitate downward pressure on prices, provisioning further international bandwidth through undersea fibre optic cables, as well as the unbundling of the local loop, to further this objective.

INTRODUCTION

South Africa, situated at the southern most tip of Africa, has an abundance of good fortunes – natural beauty, mineral wealth, a warm climate and good wine. Yet, the digital divide is omnipresent on these shores – the penetration of Internet access is truly pitiful. The pace of development is even more staggering. Internet penetration stood at five percent of the population at the turn of the century and, a decade later, this statistic has just ventured into double digits. This effectively means that nine out of tens residents are on the wrong side of the digital divide. In contrast, leading broadband nations experience an inverse situation whereby a small fraction of the country’s population isn’t
connected – and that’s usually by choice. Alas, the dream of affordable, reliable, high speed Internet access still appears to be some way off. The crawl towards broadband freedom continues.

This chapter aims to provide a historical account of the provision of broadband services in South Africa through scrutinising the milestones achieved, and pivotal challenges faced, in bringing this technology into the mainstream.

A BRIEF HISTORY OF INTERNET ACCESS DEPLOYMENT IN SOUTH AFRICA

Telkom, the state controlled telecommunications company, was awarded a monopoly on fixed-line telecommunications services between 1997 and 2002. As part of its obligations, the company was mandated to implement PSTN services in rural and semi-urban areas around the country, many of which would otherwise not have proved commercially viable to operators in a purely competitive environment. Although initially successful in its endeavours to connect the masses, the gravity of the situation soon became apparent as the company was forced to disconnect over two million telephone lines owing to non-payment.

Telecommunications prices remained high due to the need for cross-subsidisation (i.e. affluent customers needing to finance network rollout to the poor), recouping of losses due to extensive copper cable theft, and monopoly inefficiencies created by the absence of any competition in the fixed-line sector. Value-added telecommunications services were also rather limited in the late nineties and early part of the current decade. Consumers were relatively complacent as they had no alternative and little knowledge of what level and variety of service they should expect to receive.

Due to the fact that Telkom had invested significant capital in its Integrated Services Digital Network (ISDN) platform, it was reluctant to cannibalise on this and install ADSL lines. The incumbent was also very weary of introducing a new service to market which would negatively impact its metered-driven call revenues. Nonetheless, fearing competition shortly after the expiration of its monopoly, the company announced the provisioning of broadband services in 2002 and launched its first fixed-line consumer broadband offering in August of that year. This was an always-on connection to the Internet that operated at a downlink speed of 512 kilobits per second and an uplink speed of 256 kilobits per second. Previously, consumers were restricted to dial-up connections operating at 56 kilobits per second (analogue), 64 kilobits per second (single band ISDN), or 128 kilobits per second (dual band ISDN). Apart from being inherently slower, the dial-up service was billed on a per-second basis, with the result that users accessing the Internet through this technology were typically watching the clock to ensure that their online sessions were kept as brief as possible. Their exposure to the Internet was thus minimised as lengthy online sessions equated to a hefty telephone bill at the end of the month.

Table 1 lists the cost of spending ten, twenty and forty hours online per month during each year between the period 1993 and 2003. The Telkom costs are calculated using the local call rate during peak call-times (i.e. business hours) and factoring in the mandatory line rental.

Figure 1 reveals the escalating cost of spending time online. It is particularly worthwhile noting the sharp increase between 2001 and 2003 since the year 2001.

However, whilst ADSL promised users a greater degree of freedom, the service was launched with a three gigabyte monthly data ‘soft cap’, meaning that consumers could only use the service at its maximum capability until this amount of data had been sent and/or received. After this cap was reached, the service would be severely restricted in terms of international transmission speeds. This resulted in the access to international servers being throttled, whilst local web
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