Chapter II
South Africa:
The Long Walk to Broadband Freedom

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ABSTRACT

South Africa has fallen behind its international peers—both developing and developed markets—in the race to rollout broadband services. In fact, even within the African continent, it is neither the broadband leader nor progressive in comparison to its Northern African counterparts. This chapter aims to explore the development of broadband services in South Africa, as well as to touch upon 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 very limited geographical footprint of both fixed-line and mobile broadband infrastructure, as well as a lack of computer literacy and an 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, as well as providing cost-based access to international submarine fiber cables and 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 the like. Yet, most South Africans are considerably more likely to know about the happenings in the lives of American movie stars or British musicians than to have a true conception of 'broadband.'

This chapter aims to explore the development of broadband services in South Africa, as well as touching on the challenges faced in bringing this phenomenon into the mainstream.

A BRIEF HISTORY OF BROADBAND DEPLOYMENT IN SOUTH AFRICA

Telkom, South Africa's state-controlled telecommunications company, was awarded a monopoly on fixed-line telecommunications services between 1997 and 2002 (Bridges.org, 2001). 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 competitive environment. Although initially successful in its endeavors to connect the masses, the gravity of the situation soon came to the fore 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-subsidization (i.e., the wealthy needing to finance network rollout to the poor), as well as a lack of competition in the sector. Value-added telecommunications services were also rather limited in the late nineties and early part of the current decade. Due to the fact that Telkom had invested significant capital in its integrated services digital network (ISDN) platform, it was reluctant to cannibalize on this and install ADSL lines. The incumbent was also very wary of introducing a new service to market which would have the effect of negatively impacting on 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.

In this respect, Telkom launched its first fixed-line consumer broadband offering in August 2002. 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. This meant that a one megabyte file could be downloaded in less than 20 seconds and an identical file uploaded in 10 seconds.

Previously, consumers were restricted to dial-up connections operating at 56 kilobits per second (analogue), 64 kilobits per second (singe-band ISDN), or 128 kilobits per second (dual-band ISDN). Apart from being inherently slower, this service was billed on a per-second basis, with the result that users accessing the Internet through dial-up were typically watching the clock to ensure that their online sessions were kept as brief as possible. Their exposure to the Internet was thus minimized as lengthy online sessions equated to a hefty telephone account at the end of the month. The table below lists the cost of spending 10, 20, and 40 hours online per month during each year between the period 1993 and 2003. The Telkom costs are allocated for 10, 20, or 40 hours of local call charges during peak call times (i.e., business hours). The Telkom price constitutes the line rental cost plus the timed call charges.

Figure 1 reveals the escalating cost of spending time online. It is particularly worthwhile

Table 1. Internet access costs over the decade spanning 1993 and 2003 (Internet.org.za, 2003)

Year	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Average ISP costs	80.00	80.00	80.00	80.00	80.00	80.00	88.00	89.00	90.00	94.00	100.00
Year on year increase		0.00%	0.00%	0.00%	0.00%	0.00%	10.00%	1.14%	1.12%	4.44%	6.38%
Telkom (10 hours)	60.06	66.67	88.01	97.69	111.38	141.53	168.62	184.93	201.24	287.61	323.71
Telkom (20 hours)	85.91	94.57	131.78	145.79	173.17	218.82	264.62	295.93	327.24	485.25	546.19
Telkom (40 hours)	137.62	150.39	219.33	241.99	296.74	373.41	456.62	517.93	579.24	880.53	991.15
Year on year increase		9.89%	40.91%	10.55%	19.74%	26.23%	21.27%	12.24%	10.91%	49.26%	12.56%
Total (10 hours)	140.06	146.67	168.01	177.69	191.38	221.53	256.62	273.93	291.24	381.61	423.71
Total (20 hours)	165.91	174.57	211.78	225.79	253.17	298.82	352.62	384.93	417.24	579.25	646.19
Total (40 hours)	217.62	230.39	299.33	321.99	376.74	453.41	544.62	606.93	669.24	974.53	1091.15
Year on year increase		5.36%	23.11%	6.82%	13.21%	18.57%	18.49%	9.70%	8.84%	40.48%	11.66%