Mobile in Botswana – the development edge

by José António Ferreira, CEO, Mascom Wireless, Botswana

Botswana's mobile penetration is relatively high for Africa. Internet usage is low, although the latent demand is high. Internet growth is limited by high prices, limited access, low PC penetration, lack of electricity in rural regions and low technical literacy. Although VoIP is officially banned, Botswana has many registered Skype users. The Botswana Telecommunications Authority is now planning to liberalise and create an open, competitive market that should pave the way for IP based infrastructure and solutions providers in Botswana.

José António Ferreira is the Chief Executive Officer of Mascom Wireless, Botswana. He is a member of the ICT Consultative Council, chaired by the Minister of Communications, Science and Technology. Previously, as Head of Commercial and Marketing at Mascom Wireless, Mr Ferreira was responsible for the launch of prepaid and SMS service in the country. At Portugal Telecom for more than 20 years, José Ferreira, was responsible for several fixed and mobile areas for the operator in Portugal, Guinea Bissau and Botswana.

Botswana is, for those who have forgotten their geography lessons, a landlocked country in the Southern Africa and one of the largest producers of diamonds in world. The GDP per capita is roughly US$3,000-3,500 per year, which is higher than our southern neighbour, South Africa. It is about 1/10 of the GDP per capita in many Western European countries, but some 10 times higher than some countries in Southern and Eastern Africa. Its distribution of income is among the most uneven in the world.

Botswana has been severely hit by HIV/AIDS. Official estimates indicate that almost one in three adults between 16 and 49 years, the most 'productive' age group, is HIV-positive. Fighting HIV/AIDS is a top priority for government, communities, businesses and citizens in the country.

Botswana, however, is known for its political and macro-economic stability. Democratic elections have been held since independence from Britain in 1966. The overall growth in the economy has been some 5-6 per cent in real terms over the last decade. Moreover, Botswana ranks amongst the least corrupt countries.

All this helps to explain the development of the ICT sector thus far in Botswana and to assess the prospects for the sector in the future.

The ICT sector in Botswana – diagnosis and possible cure (where needed)

Currently, the telecommunications industry in Botswana consists of:

- The Botswana Telecommunications Corporation (BTC), a state-owned fixed operator which had a monopoly on telecommunications services until the late 1990s;

- Two mobile operators, Mascom and Orange, which compete on equal terms to supply mobile voice and data services;

- 11 licensed public data service operators and 11 licensed private network operators. Public data service providers can provide their own infrastructure, both national and international, and lease lines to ISPs and private data network operators;

- 22 licensed ISPs, which include Botsnet, a subsidiary of BTC, UUNet Botswana, a subsidiary of MCI and Bytes Technology Group. Many of the ISPs also operate as data network service and/or infrastructure providers.

The regulatory body, Botswana Telecommunications Authority (BTA), was set up in 1996 when the current Telecommunications Act came into force. A new ICT policy is under development, and amended sector legislation is expected to take into account technological and market convergence.

In past years, the number of mobile subscribers has grown strongly whilst the number of fixed line services has remained rather static. Mobile penetration overtook fixed penetration in year 2000 (Figure 1).

By February 2005, mobile subscribers had increased to some 569,000 and

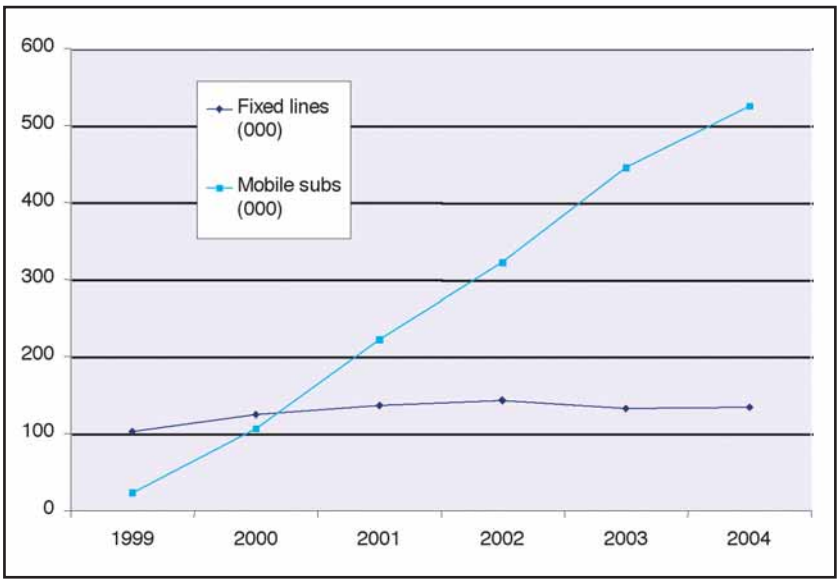

Figure 1: Development of number of subscribers since 1999. Source: Botswana Telecommunications Authority (BTA) (Figures are for end of March each year).

the number of fixed subscribers was about 136,000, according to the BTA. This implies a mobile penetration of around 34 per cent and a fixed penetration of some eight per cent. The mobile penetration puts Botswana ahead of most other African countries, but way short of most countries in the EU.

Taking into account the GDP per capita and comparing the mobile penetration to similar countries in macro-economic terms, reveals that we are pretty much in the middle of the bunch, as Figure 2 shows. It must, though, be remembered that Botswana is an extremely sparsely populated country with than three inhabitants per km.

Fixed line penetration gives a slightly different picture. Botswana has not performed as well in increasing the fixed penetration given the country's overall economic situation and business activity. According to ITU statistics, we rank well below average when compared to countries with similar GDP per capita.

Low fixed line penetration is not necessarily a problem when it comes to voice services, since mobile penetration is so relatively high, but it does hinder public access to Internet and web-based information services.

Currently, Internet penetration is much lower than what could be expected. Levels of Internet use in Botswana are low compared with other countries with similar GDP per head (Figure 4). ITU data from two years ago indicates that there were some 60,000 Internet users in Botswana. Internet service providers claim there are now between 20,000 and 40,000 Internet subscribers in Botswana, split roughly equally between the corporate market and the 'mass market' of consumers and small businesses.

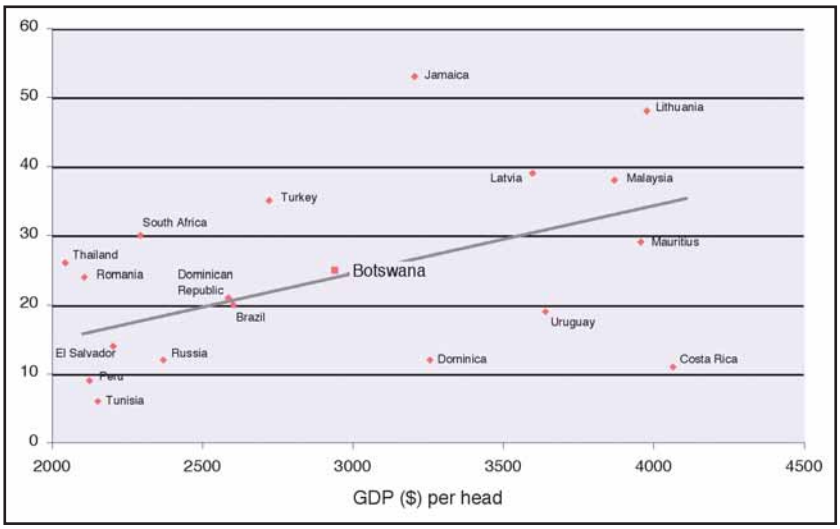

Figure 2: A benchmark of mobile penetration in Botswana. Source: Ovum based on ITU statistics.

A number of indicators suggest that latent demand for Internet is high. Botswana has a high level of literacy and many people with international activities; nevertheless, a number of factors constrain Internet usage growth.

Short-term growth constraints include:

- The high price of global Internet connectivity;

- Limited availability of global Internet connectivity. Today, file transfers from foreign servers are often as low as 2-3 Kb per second, but upgrades of the international facilities are in progress;

- High costs of end user access – high usage residential users often pay 100 per month or more including subscription to the ISP, using either PSTN dial-up service or fixed wireless access, rebalancing of prices to cost will strengthen this constraint;

- The lack of an Internet exchange in Botswana means that a high proportion of emails are routed internationally, using scarce and expensive global Internet connectivity;

- The low levels of fixed line penetration.

Long-term growth is constrained by other factors including:

- Low PC penetration;

- Lack of electricity to power PCs in many rural area homes;

- Low levels of local content;

- Low IT and Internet literacy.

Currently, data network operators and ISPs are banned, through a clause in their licences, from using the Internet to carry voice calls either nationally or internationally. However, there are clear indications that end users are ignoring this ban and making VoIP calls anyway. Traffic statistics support this hypothesis and a significant number of Botswana's Internet users are registered users of Skype. It is estimated that 10-15 per cent of the outgoing international traffic already is VoIP, which, if accurate, raises concerns

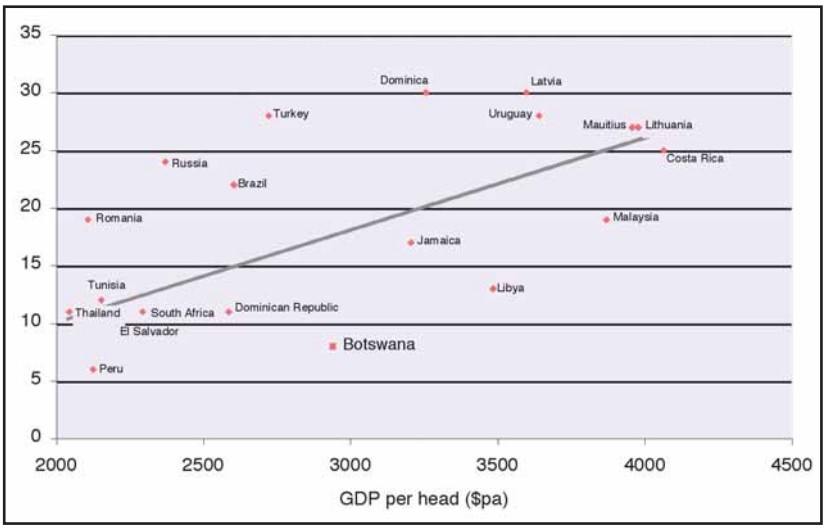

Figure 3: A benchmark of fixed line penetration in Botswana. Source: Ovum based on ITU statistics.

over what will happen when it is allowed.

There is little doubt that IP-based providers could take a significant share of both international and national traffic once fully liberalised.

So, where do we go now?

Following a major study and public consultations, the BTA is now formulating its final plan for liberalisation, which, once approved by parliament, will shape the structure of the industry for years to come. The plan is to liberalise all market segments within 12 to 18 months. Expectations are that it will lead to a fully open market more competitive market to the benefit of users.

First and foremost, it will be important to remove existing bottlenecks and allow competition on facilities and services that are currently monopolised. This includes, amongst others, allowing alternative international gateway providers using IP-based technology.

A major concern is the lack of alternatives for international traffic. There is only one international gateway. Internationally, although the cost of capacity has come down tremendously over the last years, that has not yet shown in the wholesale rates for international traffic in Botswana. Ultimately, the end users are losing from this situation.

Therefore, once the plan for an open market has been approved, the path should be paved for IP-based infrastructure and solutions providers in Botswana, be it national or international services or both.

GPRS and EDGE are just about to be launched in Botswana; this called for a substantial investment considering the small market in Botswana. There is optimism, however, about the take up of GPRS and EDGE-based services.

A compelling offer and pricing model, in accordance with the local economy, will contribute to the wider availability of services, and promote the spread of the Internet and ICT among the population – which is one of the pillars of the country's 'Vision 2016'. ■

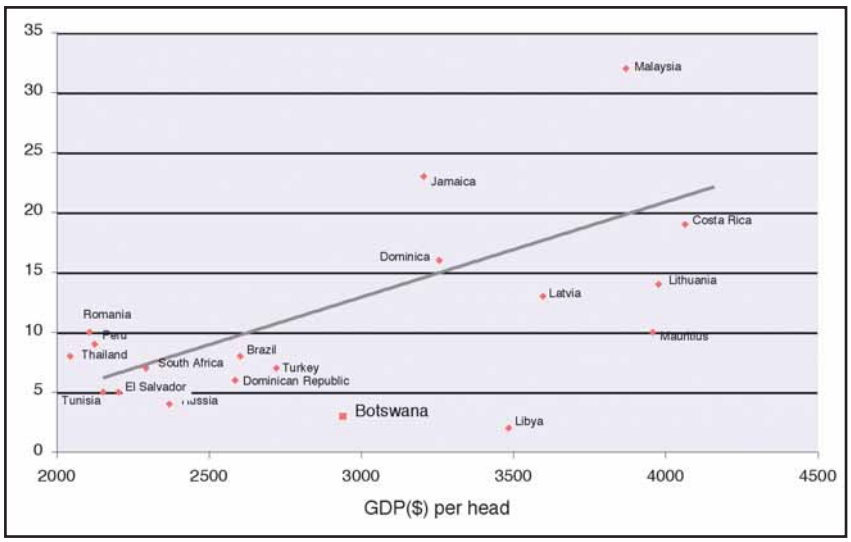

Figure 4: A benchmark of Internet penetration in Botswana. Source: Ovum based on ITU statistics.

We welcome you comments…

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Fax number:

+44 20 7474 0900
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