Telecommunication Sector Reform for Development

3 steps are required before liberalisation in the telecommunication sector in Namibia can be successfully started. The delay in passing the telecommunications bill has the advantage that Namibia can leapfrog the learning curve of other countries and directly implement so-called “Next Generation Regulations”. Botswana leads the way but Namibia can go further.

Introduction

The main challenges faced in Namibia are to make information communication technologies cheaper and more accessible. Liberalising Namibia’s telecommunication sector, establishing a single competent regulator for the converging telecommunications and broadcasting sectors and actively managing the radio spectrum will open new business opportunities and generate growth and employment. Access to information today is seen as a human right and necessary for the effective participation in society and the economy. The clear link between effective regulation and competition on the one hand and access to information, economic growth and employment on the other hand makes it imperative to act sooner rather than later.

Botswana leads the way

Botswana announced further telecommunications sector liberalisation on 21st June 2006 and is leading the way for Namibia. The liberalisation schedule is displayed in Table 1. The activities together will increase competition between existing players (BTC, Orange and Mascom) considerably and will attract new players as well.

The first activity, lifting the restriction on the provision of VoIP by value-added network service providers translates into issuing voice licenses to Internet Service Providers (ISP). Botswana is following the example of South Africa where this restriction was lifted in February 2005. ISPs will, from the 1st of August be able to compete with BTC, Orange and Mascom for international and long distance calls.

The schedule further ends two of BTC’s monopolies, the backbone infrastructure and the international voice gateway monopoly, both potentially leading to Mascom and Orange being able to cut costs considerably. Allowing mobile operators to start self providing means allowing them to build their own backbone infrastructure to carry their traffic. Liberalisation of the international voice gateway allows Orange and Mascom and any other new entrant to provide international switching and transmission of voice services, without having to use BTC gateway.

| Table 1: Botswana’s Liberalisation Schedule |
|---|---|
| Measure | Date |
| 1 Lift the restriction on the provision of VoIP by value-added network service providers. | 01/08/2006 |
| 2 Mobile operators start self providing (transmission links) | 01/08/2006 |
| 3 Current fixed line and cellular operators may apply for service-neutral licenses. | 01/09/2006 |
| 4 New entrants may tender for service-neutral rural district level licenses | 01/09/2006 |
| 5 Liberalisation of the international voice gateway | 01/10/2006 |
| 6 BTC attains a satisfactory level of tariff rebalancing | 01/12/2006 |
| 7 New entrants may tender for service-neutral national licenses | 01/12/2009 |

The measure that is likely to have the greatest impact on the competitiveness of Botswana’s ICT sector is, however, the issuing of service neutral licenses. It allows operators to provide any telecommunication service regardless of technology (fixed lines, wirelessly or fixed wireless, etc.). This enables Orange...
and Mascom to compete with BTC in the fixed line segment of the market. Alternatively, BTC could now launch its own mobile phone services increasing the choice to 3 mobile networks in Botswana.

New national licenses will only be issued in 2009 according to this schedule. However rural district licences can be issued as from 1st September 2006.

The limitation of only allowing new entrants in 2009 might be limiting the scope of the regulator to enforce competition. All measures in the liberalisation schedule potentially increase competition but do not do so necessarily. If Orange and Mascom decide not to build their own backbone infrastructure and international voice gateways and if BTC stays out of the mobile market there is the danger that competition will not increase.

These measures are comprehensive and will potentially yield a network expansion in Botswana and lower costs for consumers. It also poses challenges to Botswana’s telecommunications regulator in the form of interconnection agreements. In particular, rural networks will require asymmetric termination charge regimes if they are to be viable.

Namibia should follow suit!

Botswana is leaving Namibia way behind when it comes to telecommunications indicators. Botswana’s mobile teledensity, either in terms of 100 inhabitants or square kilometres, is about twice of Namibia’s. Namibia will be falling behind even more should it not commence with liberalisation soon.

### Table 2: Namibia and Botswana Compared

<table>
<thead>
<tr>
<th></th>
<th>Botswana</th>
<th>Namibia</th>
</tr>
</thead>
<tbody>
<tr>
<td>Population</td>
<td>1,715,355</td>
<td>2,011,000</td>
</tr>
<tr>
<td>Surface sq km</td>
<td>600,370</td>
<td>825,418</td>
</tr>
<tr>
<td>Population density per sq km</td>
<td>2.86</td>
<td>2.44</td>
</tr>
<tr>
<td>Monthly household income in US$1</td>
<td>525.6</td>
<td>455.71</td>
</tr>
<tr>
<td>Monthly household income in US$ implied PPP conversion rate 2</td>
<td>943.97</td>
<td>1017.64</td>
</tr>
<tr>
<td>Mobile operators</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Fixed Line Operators</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>No of International Voice Gateway Licences</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>No of International Data Gateway Licences</td>
<td>58</td>
<td>1</td>
</tr>
<tr>
<td>Mobile Subscribers 3</td>
<td>838,967</td>
<td>516,000</td>
</tr>
<tr>
<td>Number of fixed lines 4</td>
<td>132,546</td>
<td>140,000</td>
</tr>
<tr>
<td>Fixed Teledensity</td>
<td>7.73</td>
<td>6.96</td>
</tr>
<tr>
<td>Mobile Teledensity</td>
<td>48.91</td>
<td>25.66</td>
</tr>
<tr>
<td>Mobile per sq km</td>
<td>1.40</td>
<td>0.63</td>
</tr>
<tr>
<td>Fixed lines per sq km</td>
<td>0.22</td>
<td>0.17</td>
</tr>
<tr>
<td>Fasted mobile Internet access 5</td>
<td>GPRS</td>
<td>GPRS</td>
</tr>
</tbody>
</table>

1 Source: ITU estimates for 2004  
2 Source: National representative household survey on ICT access and usage conducted by researchICTafrica and NEPRU  
3 Source: Mascom, Orange and MTC  
4 Source: BTC and Telecom Namibia  
5 MTC is planning to roll out Edge before the end of 2006. Mascom has also tested Edge already and is planning a launch soon. However it also considers rolling out 3G.

### 3 Steps prior Liberalisation

The sequencing of reform measures is critical for an effective transition. The following steps need to be taken before market liberalisation can be successful:

1. Resolve political issues
2. Pass a new telecommunications bill that establishes a single regulator for the entire ICT sector
3. Strengthen the new regulator.

#### Step: 1 Political Issues

Evidence from around the world suggests that competition combined with effective regulation leads to lower prices and better services for consumers. Currently such an effective and enabling regulatory and policy environment is lacking in Namibia. The two reason for that are:

- Two ministries are responsible for regulating the telecommunications sector. The Ministry of Works Transport and Communication (MWTC) is responsible for providing policy guidelines and regulating Telecom Namibia and the Ministry of Information and Broadcasting (MIB) is responsible for the Namibian Communications Commission (NCC) and therefore MTC.
- Another conflict of interest exists due to the fact that MWTC is directly responsible for the Namibia Post and Telecom Holdings (NPTH) which owns 100% of Telecom Namibia and the majority of MTC. International best practice suggests that ownership and regulation should be separated.

The proposed draft telecommunications bill addresses both issues by creating a single authority, the Communications Authority of Namibia (CAN), as an independent juristic person responsible for the entire sector. The draft bill suggests that the MIB would be providing the new regulator with policy guidelines. MWTC could still be in operational control of NPTH but it would lose its regulatory power over Telecom Namibia or fixed line telecommunication in general. It makes therefore sense to task MIB with the policy guidance of CAN.

#### Step: 2 Finalise Telecommunications Bill

The Ministry of Information and Broadcasting drafted a telecommunications bill in February 1999. The bill has been workshopped in co-operation with civil society organisations and the private sector in 2002. Since then a lot of debate has taken place internationally and a new view of what is best practice has since emerged. The delay in passing the telecommunications bill has the advantage that Namibia can leapfrog the learning curve of other countries and directly implement so-called “Next Generation Regulations”. The proposed telecommunications bill allows CAN to implement such “Next Generation Regulations”. The second mobile licence has already been awarded to Powercom earlier this year. It is therefore paramount to pass a new bill and establish CAN. Without adequate regulatory supervision liberalisation might not lead to increased competition, lower telecommunication costs and higher teledensity.

#### Step: 3 Strengthen CAN

The new regulatory institution will need more authority and also more skilled manpower. Namibia’s NCC currently has only seven employees compared to the 67 at Botswana’s Telecommunication Authority. Liberalising Namibia’s telecommunications sector will bring new responsibilities and challenges to the regulator. In particular regulating interconnection agreements and pricing is very labour and skill intensive.

The NCC proposed a staff composition of 14 full-time staff members for CAN. It will be important that CAN has the multi-disciplinary skills required for effective regulation (specifically economic, legal and engineering skills). CAN will need to hire at least one experienced economist with telecommunications background and someone with regulatory and legal background. Additionally, a budget line for external assistance and research needs to be established.

At 14 full-time staff CAN is unlikely to have the capacity to handle all research into interconnections and pricing issues on its own. Even ICASA in South Africa needs to involve international experts for that. In the interim a budget could be allocated to fast-track the development of regulatory capacity through training programmes.
Towards a competitive ICT sector

This section explores whether or not the liberalisation commitments by the government of Botswana would also make sense in Namibia. In addition, further measures are looked at and recommendations derived.

Lifting this restriction on VoIP for VANS

Lifting this restriction would also make sense in Namibia since it reduces the communication costs. Traditional revenues from international and long distance traffic will be impacted by this. This is inevitable as globally networks become IP based and ultimately this will result more efficient and cost effective networks for all.

Mobile operators start self providing and liberalisation of the international voice gateway

Allowing MTC and Powercom to build their own fixed line infrastructure and to establish their own international gateways will increase the competition between MTC and Powercom on the one hand and Telecom Namibia on the other. Currently MTC is required to use the backbone infrastructure of Telecom Namibia even if they are offered at excessive prices. MTC was only allowed for a few exceptions to build their own infrastructure, most recently using VSAT. Following Botswana’s example would mean that MTC would be able to reduce it costs considerably. Being allowed to build its own infrastructure, MTC could then either negotiate lower prices or build its own infrastructure. Powercom might from the start considering establishing its own fixed line backbone.

Liberalisation of the international data gateways

Currently only Telecom Namibia has an international data gateway license. It would make sense to liberalise international data access as well. MTC (and soon Powercom) will increasingly offer Internet content over their mobile network using GPRS+, Edge or 3G technology. With their own international data gateway licenses they would be able to do this at a lower cost than currently possible. The infrastructure constraints on access to the international cable network (SAT3) will need to be examined by the regulator to ensure open access.

Service Neutral Licenses

Competition in the fixed line segment would undoubtedly reduce prices as well and make Namibia more competitive. Powercom could immediately compete with Telecom Namibia and MTC using its fibre backbone to offer converged fixed-mobile services.

Number portability

An important competitive measure would be to establish number portability right from the start to allow the second mobile operator to compete on a level playing field. The exercise would be much easier compared to establishing number portability in South Africa since Namibia has currently only one mobile operator. It would make sense to outsource the number administration to a third independent party or have it administered by CAN. Number portability would need to be established among mobile operators and among fixed line operators separately.

Regulate Interconnections

Regulating interconnection is crucial for establishing fair competition among operators. The draft telecommunications bill deals with this issue well. It states that interconnection “charges must be limited to the carrier’s forward-looking incremental costs of providing such interconnection.” (50:2). It implies that a carrier has to offer the same rate to all other operators and sets a ceiling of what can be charged for termination. However, forward-looking incremental costs are very difficult to determine without having COA/CAMs (CHART OF ACCOUNTS AND COST ALLOCATION MANUAL) in place. It might take several years for Telecom Namibia, MTC and any other operator to be able to report in this way. Additionally, there are high costs involved in establishing such systems. A solution could be to keep the phrase “forward-looking incremental costs” in the bill and use benchmarking studies to determine what forward-looking incremental costs would be for Namibian operators. Benchmarking will never be very accurate and can be subjected to criticism about comparability. However, benchmarking would deliver quicker and fairer results than a non-transparent rough estimate of the incumbent operator.

New entrants

Namibia would not need to make any commitments at the moment regarding new entrants if all current operators can apply for a service neutral license. An additional licence could be awarded should the interactions between these three players not lead to a competitive ICT sector. This could be determined by an annual review process.

Universal Service Fund

The draft telecommunications bill proposed by the MIB contains the establishment of the Universal Service Fund (USF) as well as Universal Service Obligations for carriers. Given the human resource limitation of the soon to be established CAN it would be advisable to:

1) Require only broad universal service obligations for carrier licences to avoid new entrants from “cherry picking”, i.e. to serve only the most profitable segment of a market.
2) Use the Universal Service Fund to provide universal access. Subsidies could, for example, be tendered based on providing a community with the most effective sustainable access solution. Any carrier could compete for the subsidy and reverse auctions can be used to award any subsidies.
3) The Universal Service Fund might be used to subsidise rural networks by paying a small termination charge for any call terminated in rural areas.
4) The USF could further fund rural electrification projects necessary to telecommunication infrastructure roll out.

The universal Service Fund could be funded by a levy on the turnover of any carrier. At only 1% the levy would have yielded N$19.2 million in 2005 based on the revenues from MTC and Telecom Namibia.

Proposed liberalisation schedule for Namibia

Table 3 lines out a possible liberalisation schedule that follows Botswana’s example.

Table 3: Proposed liberalisation schedule for Namibia

<table>
<thead>
<tr>
<th>Measure</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 New Telecommunications Bill passed establishing CAN</td>
<td>01/09/2006</td>
</tr>
<tr>
<td>2 Establishment of a Universal Service Fund</td>
<td>01/10/2006</td>
</tr>
<tr>
<td>3 Lift the restriction on the provision of VoIP by value-added network service providers.</td>
<td>01/01/2007</td>
</tr>
<tr>
<td>4 Mobile operators start self providing</td>
<td>01/01/2007</td>
</tr>
<tr>
<td>5 Liberalisation of the international voice gateways</td>
<td>01/01/2007</td>
</tr>
<tr>
<td>6 Liberalisation of the international data gateways</td>
<td>01/01/2007</td>
</tr>
<tr>
<td>7 Any fixed line and cellular operators may apply for service-neutral licenses.</td>
<td>01/01/2007</td>
</tr>
<tr>
<td>8 Introduce number portability</td>
<td>01/01/2007</td>
</tr>
<tr>
<td>9 New entrants may tender for service-neutral licenses for demarcated geographical areas</td>
<td>01/01/2008</td>
</tr>
<tr>
<td>10 Start of privatisation of Telecom Namibia and MTC</td>
<td>01/01/2008</td>
</tr>
<tr>
<td>11 New entrants may tender for service-neutral national licenses</td>
<td>subject to revisions</td>
</tr>
</tbody>
</table>
Differences are that Namibia would also need to liberalise the international data gateway, a measure that Botswana undertook already. Regarding new entrants Namibia could remain more flexible than Botswana and leave the decision open, subject to an annual evaluation of the sector performance.

Privatisation

Once a reasonably competitive ICT sector with effective regulatory supervision is established there is no need for the government to control major shares of Telecom Namibia, MTC and Powercom (Government owns 100% of Nam-power which is part of the Powercom consortium). The government could gradually sell its shares of Telecom Namibia and MTC on the Namibian Stock Exchange (NSX) or directly dual list both on the Johannesburg Stock Exchange (JSE) and the NSX. The privatisation of Telecom Namibia and MTC would best be a gradual process and might involve offering shares at preferential rates to employees.

Financing Sector Reform

Finalising the draft telecommunication bill might require the input from the ITU or other international experts. This would probably cost between US$15,000 - 20,000. Several source of funding for that type of consultancy exists including the IDRC, USAID, Worldbank and ITU. However, this consultancy could also be funded through the income that the NCC raised currently. It stood at N$8.1 million compared to expenses of N$5.3 million in 2005. This policy brief was compiled by Christoph Stork and Steve Esselaar.

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Figure 2: Levy on the revenue of MTC and Telecom Namibia based on 2005 revenue figures (sources: NCC, MTC and Telecom Namibia)

Conclusion

There is a clear window of opportunity for Namibia to rapidly increase ICT penetration. The combination of regional events, such as Botswana liberalising its market, and domestic events, such as the passing of the Telecommunications Bill, provides Namibia with the opportunity to leapfrog other regional countries in becoming an ICT powerhouse. However, for this to be achieved several factors need to be in place:

- A new telecommunications act
- A strong resourced and independent regulator for the entire ICT sector
- Clear policy guide lines for the regulator
- Creating of a Universal Service Fund

With these factors in place, the steps towards achieving a competitive ICT sector in Namibia can be completed. These steps include

- Lifting the restriction on VoIP
- Allowing mobile operators to self provide (facilities) including international gateways
- Allowing for number portability
- Issuing service neutral licenses
- Regulating interconnection
- Annual reviewing of the ICT environment and the possibility of new entrants
- Clear policy guide lines for the regulator

Namibia sits in the enviable position of being able to learn from its neighbouring countries and not repeat their mistakes. South Africa’s example of privatisation first followed by liberalisation has clearly not worked. Namibia can avoid this pitfall by liberalising the market and, only once there is a competitive ICT sector, privatise Telecom Namibia and MTC. By a fortunate confluence of events Namibia has the potential to surpass its neighbours and create a competitive ICT sector, thereby stimulating economic growth, employment creation and social inclusion.

Figure 1: Revenues of MTC and Telecom Namibian in N$ million (sources: annual reports of MTC and Telecom Namibia)

The annual budget estimate for the CAN was estimated to be N$ million 6.62. A 0.5% levy on revenues of Telecom Namibia and MTC would have yielded N$ million 9.58, enough to cover outsourced research and international expertise on a consulting bases as well. Additional income can be expected from broadcasting and other licenses.