



**SUBMISSION BY MWEB CONNECT (PTY) LTD IN RESPONSE
TO THE ICASA FRAMEWORK FOR INTRODUCING LOCAL
LOOP UNBUNDLING DATED 22 JUNE 2011**

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1. Introduction

1.1 We refer to the Framework for introducing Local Loop Unbundling discussion document issued by the Independent Communications Authority of South Africa (“**the Authority**”) on 22 June 2011 (“**LLU Discussion Document**”).

1.2 MWEB fully supports the Authority’s goals with Local Loop Unbundling (“**LLU**”) as set out in the LLU Discussion Document, being:

1.2.1 Getting more people connected to the Internet through fixed line or other connections;

1.2.2 Promoting consumer choice; and

1.2.3 Securing existing jobs in the industry.

1.3 In addition to the above goals as set by the Authority, MWEB also believes that LLU, if implemented correctly, can:

1.3.1 increase competition in the sector;

1.3.2 create new jobs in line with the country’s growth projections; and

1.3.3 improve customer experience in terms of both service provisioning and quality of Broadband products.

1.4 MWEB believes there are currently certain key problems associated with the Broadband industry in South Africa. We believe LLU goes some way in addressing these problems, however, if we want to successfully achieve the goals set out above, short term solutions have to be found. For context the following key problems associated with the Broadband industry have been highlighted:

1.4.1 Pricing of Telkom’s IPC solution

Telkom’s IPC offering is currently the only way Internet Service Providers (“ISPs”) can in some way connect to the last mile on the Telkom infrastructure. The cost of this offering is however prohibitive and stifles growth in the industry. Currently the cost of national IPC bandwidth is six times more expensive than connecting to Europe with a redundant solution on two undersea cable systems. It should further be noted that in addition to the high IPC cost that the ISP pays to Telkom, the end user (consumer) also has to pay Telkom a line rental fee for the same connection in order for the end user to reach the ISP. There is

therefore effectively a double charge for the same infrastructure, which also supports Naked ADSL (which we discuss below).

1.4.2 Quality of the IPC network

ISPs have no insight into the Telkom network and often the capacity ISPs purchase from Telkom is not delivered to the end users as a result of serious network congestion on the backhaul from the end user to the Telkom core. Even if ISPs buy additional IPC capacity the backhaul cannot cater for the demand and the bandwidth does not reach the end user. This despite the significant high prices the ISP pays for the IPC capacity.

ISPs also do not have any insight into the Telkom network to ensure that the ISPs' traffic has the same priority on the Telkom network as Telkom's own traffic to its end users. There is clearly a need to regulate this and for specific service level agreements to be attached to IPC or similar Bitstream services.

1.4.3 Naked ADSL

ADSL is increasingly competing against mobile Broadband solutions. As Telkom does not allow for the ADSL line portion to be subscribed to as a stand-alone, it makes for an uncompetitive offering. It also increases Telkom's ability to bundle voice minutes with the ADSL line portion which weakens competitor offerings. This in turn holds back job creation by ISPs as their own growth is impacted.

1.4.4 Wholesale access to the wireless/mobile last mile

- (a) There are many arguments and different views as to whether or not wireless last mile access should be made subject to LLU. MWEB believes that it should.
- (b) The wireless/mobile operators do, to some degree, make available their last mile infrastructures to ISP to compete on wireless solutions, but then on very inflated pricing to ensure that independent operators or ISPs cannot compete effectively. The prices the wireless operators offer ISPs are much higher than the retail offering available in the market, ensuring no ISP can compete in the open market with the wireless/mobile operators.
- (c) MWEB strongly suggests that the mobile operators should be regulated to offer last mile solutions on their networks to ISPs at prices below current retail pricing taking into account, overhead charges and a profit margin. This will further stimulate Broadband growth and ensure that the entire industry can grow, not just isolated pockets which are controlled by the mobile operators and Telkom.

- (d) It is important that LLU does not only refer to access to the fixed last mile as it is equally important for all operators to have access to the mobile or wireless last mile. Even though not enough has been done to open up and develop fixed line internet and to promote competition in the market, Telkom has taken some steps towards LLU (like wholesale IPC and Chipac) in contrast with the mobile operators that has not done anything. The Authority should take cognisance of this when deciding whether or not LLU will include the wireless last mile.

For the purpose of this document we will express our view in context of the copper / fixed last mile, however the same principles will apply to wireless or fibre networks. MWEB strongly urges the Authority to also ensure the last mile of the wireless networks are unbundled to ensure much needed competition and openness of the networks are brought to bear. This is further discussed in paragraphs 2, 3.3 and 4.

1.4.5 Increased investment in the last mile

For Broadband to really achieve its potential and for the internet access industry to grow and create jobs, it should be considered that subsidies should be awarded to companies that invest in last mile infrastructure. Because such investment in infrastructure will benefit the entire country, MWEB believes that such subsidies can fall within the ambit of the Universal Service and Access Fund. However, such subsidies should be made subject to the condition that infrastructure built with subsidies are open to all licensees and subject to proper pricing principles, allowing for a level playing field for all.

- 1.5 MWEB strongly believes that some of these problems and the Authority's objective with LLU can be successfully addressed if the Authority considers a phased implementation of LLU.

LLU has proven to be complex and may take a relatively long time to fully implement. The implementation of LLU will not only require massive capital investment by operators that want to participate, but will also cause such operators' business models to change, this requires time. We believe that it is essential for the Authority to implement LLU in simple phases to ensure the effective roll-out thereof and to achieve the goals set out for LLU, specifically continued competition and job security. Phased implementation will allow existing players to adopt their business models and will also allow smaller companies to raise capital that is needed to remain competitive and survive the onslaught from the large well established operators. A "big bang implementation" approach may lead to only a small number of very large corporates, which can afford the capital that is required for LLU, to remain in the industry. That will stifle economic growth, limit competition, limit job creation

and cause untenable high prices for consumers. MWEB will discuss phased implementation in more detail in paragraph 4 below.

1.6 A proper pricing study is of utmost importance in order to establish the underlying principles of LLU. MWEB proposes that the end goal must be that pricing is set at **Long Run Incremental Cost (LRIC) of an efficient operator**. It will require time to conduct the extensive pricing study that will be needed to implement LLU. This delay is something the big operators will encourage in order to slow down the inevitable change. As it is unavoidable to do these studies, MWEB suggests that the Authority implements some quick wins on the road to LLU. This will assist the Authority in achieving its goals and showing progress in implementing LLU, while we wait for the pricing studies.

1.7 In this document we will discuss:

1.7.1 What should be unbundled;

1.7.2 What are the quick wins, in other words, what can be done right now that will have an immediate positive effect on the industry;

1.7.3 What is phased implementation of LLU and the benefits thereof; and

1.7.4 Will the Facilities Leasing Regulations be sufficient to successfully implement LLU.

2. What should be unbundled

Based on the number of connections, wireless connectivity from the mobile operators currently dominates the basic telephony and internet access market. It is therefore critical that not only the fixed last mile be unbundled, but also the wireless last mile. There is little difference between a fixed line and wireless broadband network and therefore no reason why the one should be unbundled and not the other. MWEB strongly believes it would not be possible for government to achieve the goals set out in the LLU Discussion Document should the wireless networks not also form part of the unbundling process. Please refer to paragraph 4 below for more information on Wireless unbundling.

3. Quick wins / what can be done immediately to show progress while the market studies are ongoing

3.1 Naked ADSL

- 3.1.1 Naked ADSL is a stand-alone ADSL service without a PSTN or analogue (voice) telephony service. In practice this means that consumers will not need an analogue (voice) telephone service in order to get ADSL internet services, as is currently required in South Africa. Or, in other words, with naked ADSL consumers would not be forced to pay for an analogue (voice) service (which they do not use or want) in order to get ADSL.
- 3.1.2 One of the most valuable benefits of LLU is the ability to provide Naked ADSL to the market. However, in the South African context, even without LLU, this can be easily achieved through regulation. The separation of voice and data line rental can immediately stimulate broadband growth in South Africa.
- 3.1.3 The implementation of naked ADSL removes the requirement for an ADSL internet user to enter into a contract with Telkom for the voice services. This allows the ISPs to offer prepaid or “pay-as-you-go” ADSL services to consumers, without requiring credit vetting and contracts from Telkom. Telkom currently does not offer ADSL to consumers that only have a “pay-as-you-go” analogue (voice) service, which means ISPs are also not able to offer ADSL internet service to any of these consumers, because in South Africa you are required to have an analogue telephony service from Telkom (which is not “pay-as-you-go”) in order to get ADSL. This unnecessarily restricts access to broadband for a large group of consumers, specifically less privileged consumers who only qualifies for or can only afford “pay-as-you-go” services.
- 3.1.4 Should a proper market study into the LRIC of an efficient operator determine that there is indeed an access deficit, such deficit will be taken into account in determining the unbundled price of a stand-alone ADSL service. However for LLU to be successful (or have any impact at all), such price should at least allow for a margin below the retail price.
- 3.1.5 Regulatory support: MWEB believes that the unbundling of products and pricing are sufficiently provided for in both the Facilities Leasing Regulations, 2010 and the Consumer Protection Act, 2008 (Act No. 68 of 2008).
- 3.1.5.1 **Facilities Leasing Regulations:** Section 10(3) provides that electronic communications facilities must be sufficiently unbundled so that an electronic communications facilities

seeker does not have to pay for anything it does not require for the requested electronic communications facility.

MWEB does not believe that Telkom is currently sufficiently unbundling electronic communications facilities as contemplated in the Facilities Leasing Regulations.

3.1.5.2 Consumer Protection Act: While the Facilities Leasing Regulations provide for the unbundling of electronic communications facilities, the wording of the Consumer Protection Act is more descriptive in this regard and provides that:

Section 13(1) a supplier must not require, as a condition of offering to supply or supplying any goods or services, or as a condition of entering into an agreement or transaction, that the consumer must—

- (a) purchase any other particular goods or services from that supplier;*
- (b) enter into an additional agreement or transaction with the same supplier or a designated third party; or*
- (c) agree to purchase any particular goods or services from a designated third party,*
unless the supplier—
 - (i) can show that the convenience to the consumer in having those goods or services bundled outweighs the limitation of the consumer's right to choice;*
 - (ii) can show that the bundling of those goods or services results in economic benefit for consumers; or*
 - (iii) offers bundled goods or services separately and at individual prices.*

MWEB does not believe that Telkom can show either convenience or economic benefit to consumers and Telkom are also not providing the services (voice and data lines) separately at individual prices.

3.2 Reduce the cost of IPC for the ADSL network

3.2.1 The current ADSL wholesale, IP Connect (IPC) models offered by Telkom are insufficient and inadequate to stimulate competition and differentiation in the market, since Telkom still dictates many of the characteristics of the ADSL product.

- 3.2.2 Telkom's current model for IPC, not only lacks the functionality of a Bitstream solution, but is also costly, which prohibits the rollout of broadband. This is evident in the fact that smaller ISPs cannot afford to make use of the IPC solution offered by Telkom. Please refer to Schedule 1 attached hereto for an illustration of the high cost of IPC.
- 3.2.3 MWEB proposes that the LRIC of an efficient operator be implemented for ADSL IPC, in order to stimulate the uptake of fixed line broadband and in order to bring the cost in line with international standards. This will enable smaller ISPs to make better use of IPC. While MWEB recognises that it may take time to conduct market studies to determine LRIC, we urge the government (and the Authority) to urgently investigate effectively reducing the cost of IPC in the meantime, which will immediately aid in getting more people connected, promote consumer choice, create jobs and increase competition.
- 3.2.4 MWEB also believes from experience (and substantiated by the table below) that as and when pricing decrease the ISPs will simply buy more capacity from Telkom as the end user demand is insatiable at the moment. As proven by MWEB's own actions, any reduction in price will be offset by an increase in volume and effectively Telkom will receive more revenue from the ISPs.

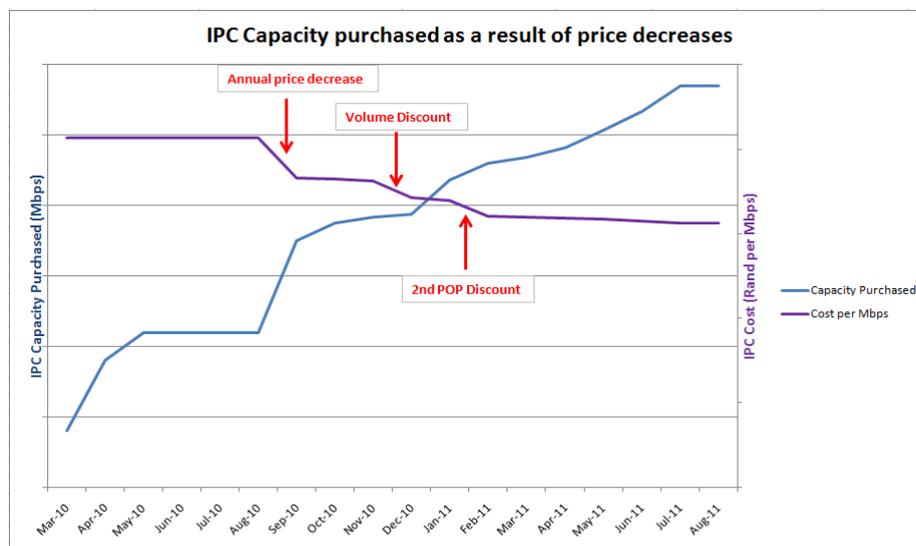


Figure 1: IPC Capacity increase vs price decrease

- 3.2.5 The Authority could also consider following the same principles that were used for the market study the Authority did with the interconnection regulations. The Authority urgently needs to complete the chapter 10 process under the Electronic Communications Act, 2005 (Act No. 36 of 2005) ("ECA") and declare Telkom (and the mobile operators respectively) to

have SMP in order to impose pro-competitive measures to regulate the pricing on IPC and wholesale APN (an APN connects the wireless last mile to ISPs similar to the way IPC does for ADSL services).

3.3 **Open mobile networks to other operators in different locations**

- 3.3.1 Although APN solutions are currently available from mobile operators they are not price competitive, making it impossible for ISPs or other operators to resell mobile broadband at competitive prices. In fact it is cheaper to buy mobile broadband in the open market than it is to buy it from the mobile operators on an APN solution. The kind of APN solutions available are not the kind that allow ISPs to resell on an 'open basis', they are typically only corporate type APN's.
- 3.3.2 Currently there is also no regional breakout at competitive pricing.
- 3.3.3 It is therefore important, in order to grow broadband in South Africa, that all operators also get access to the electronic communications facilities of mobile operators (or the mobile last mile) and that LLU principles apply equally to mobile operators.
- 3.3.4 We need an IPC equivalent (as discussed in 3.2 above) from mobile operators with regional APN at pricing lower than retail market pricing today. The APN pricing should also allow for traffic between the networks to flow over peering links and not force new very expensive lines to be installed between the ISPs and the mobile networks. The pricing must also allow for effective over-sell data ratios and overhead cost to be allocated before any comparison is done to retail market pricing.
- 3.3.5 This is another quick win for the industry as it can be implemented immediately without capital investment, which will again immediately aid in getting more people connected, promote consumer choice, secure and create jobs and increase competition.
- 3.3.6 Allowing for more effective APN pricing will allow ISPs to compete against the might of the mobile operators, lowered pricing and creating jobs.
- 3.3.7 It should be noted that MWEB believes that if it was not for the launch of uncapped ADSL by MWEB at affordable pricing followed by very competitive rates from Cell C on wireless connectivity, the price of wireless connectivity would still be very high. With even more competition on data the stranglehold that the mobile operators have on the wireless markets can be broken to ensure further adoption of broadband and more price competition.

4. Phased implementation

4.1 Why Phased implementation:

4.1.1 A phased approach will ensure that everybody learns as we move along as well as ensuring some immediate results. It will further:

(a) ensure the effectiveness of LLU

LLU needs are different for operators depending on their size and appetite or ability for investment. Smaller ISPs may prefer wholesale data, while larger ISPs may prefer Bitstream, Shared or full LLU, which requires larger investment.

It is a reality that most ISPs will not be able to afford the equipment required to allow them to access the last mile under full LLU if unbundling happens in one big step. In that scenario LLU will be inaccessible to most ISPs; the result being:

- smaller ISPs close down;
- job losses;
- less competition.

(b) ensure job security

If LLU is implemented too quickly Telkom will inevitably suffer job losses. The smaller ISP will not be able to raise capital to invest, further causing job losses and reducing competition.

(c) ensure continued competition

If we unbundle too quickly we will only play into the hands of the large operators who can afford to compete. This stifles competition and will only create large players that can more easily resist new competitive forces. It was not until smaller players like MWEB and Cell C brought in change that the bigger players decided to change their pricing and offerings in the market, which clearly indicates the important role that smaller operators play in the industry and in creating competition and growth.

4.1.2 MWEB therefore proposes that Bitstream (Option 1 in the LLU Discussion Document) and Shared Loop Unbundling (Option 2 in the LLU Discussion Document) be implemented in a phased approach. This approach ensures immediate and ongoing progress towards

unbundling, while it allows time to address possible stumbling blocks that may arise along the way. In addition to this benefit, a phased approach also creates a gradual investment path for access seekers, avoiding major investments before a significant benefit can be enjoyed.

- 4.1.3 It is proposed that Bitstream is used to gain indirect access to the incumbent's infrastructure on a national basis, and from there on, through more complex unbundling and more capital investment, utilize less of the incumbent's network and more of the access seekers own network infrastructure. This will assist the incumbent to reduce its own cost structure as the access seekers increase their own networks.
- 4.1.4 All the phases complement each other and it is therefore proposed that each phase remains available as an option indefinitely, and that an access seeker can use any combination of these to provide its services. This will ensure the smaller player can grow and adopt as their own requirements grow.
- 4.1.5 Below we discuss the gradual or phased implementation of LLU, moving from the current IPC ADSL model to IP Bitstream and then moving on to ATM/ME Bitstream and lastly Shared Local Loop.

4.2 Current IPC ADSL Model

In this model an IPC link connects the networks of Telkom (SAIX) and the ISP together. All the traffic to and from the subscriber is routed via the IPC link and the ISP provides the onward connectivity to connect the subscriber to the Internet.

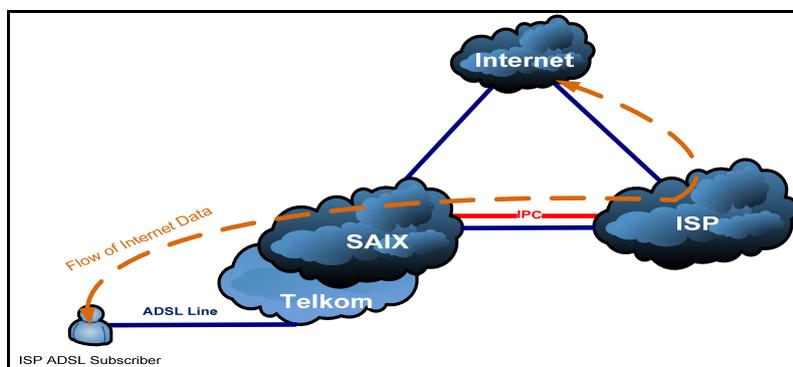


Figure 2: ADSL IPC model

Telkom charges the ISP for the size of the IPC link, since the ISP uses its own infrastructure to deliver all data to the subscriber. IPC gives the ISP the ability to provide local and international capacity and control a part of the cost and performance of the product. However, since the ADSL subscriber's session terminates on Edge Service Routers (ESR's) in the Telkom network, the ISP cannot provide differentiating product features on their ADSL products. These features include fixed IP addresses, which enables small businesses to easily host their email, web pages and Virtual Private Network (VPN) servers. These features enable a SOHO or SME to easily run key applications for a business at a very low cost. The biggest drawbacks of the current IPC ADSL model are the cost and the lack of a Service Level Agreement. Please refer to Schedule 1 attached hereto for an illustration of the high cost of the IPC ADSL model.

Although Telkom's current IPC model gives ISPs slightly more flexibility with the ADSL products than the reseller model, ADSL subscribers on IPC have a significant disadvantage when it comes to performance. The disadvantage is that an IPC ADSL subscriber's traffic has to be sent to the ISP's network from wherever in the country it originates from, before it can be routed to its final destination. In contrast to this, the Telkom (SAIX) ADSL subscriber's traffic will immediately take the shortest route to its destination. This has a significant performance impact on the IPC based ADSL subscriber, compared to the Telkom (SAIX) ADSL subscriber.

Below is a diagram showing how traffic flows between two Bloemfontein based ADSL subscribers using the Telkom Internet product.

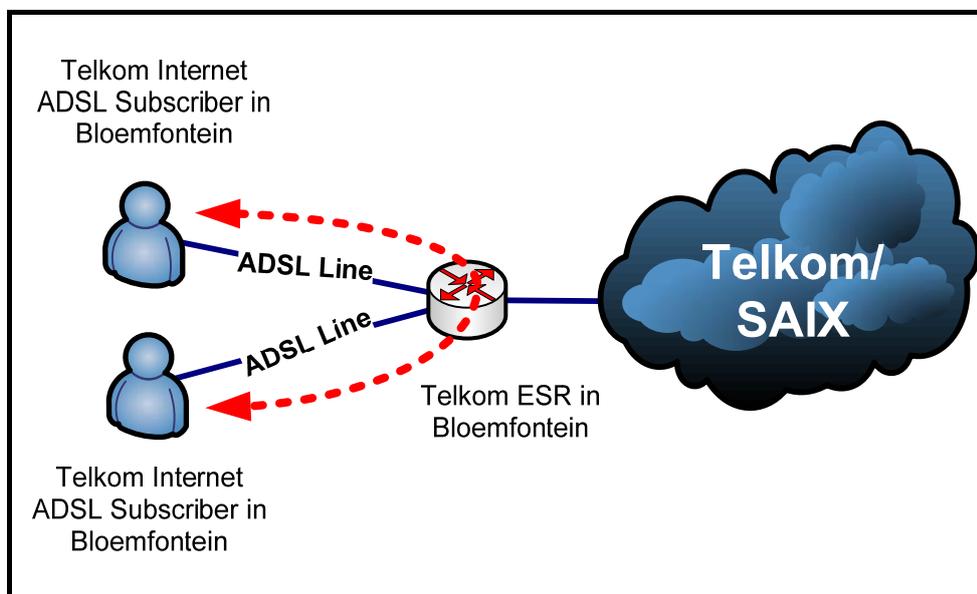


Figure 3 Native ADSL traffic flow

Subscribers using the IPC ADSL solution cannot communicate directly with each other and has to traverse the closest IPC link of the ISP. Below is an example of the same two ADSL subscribers, using an IPC based ADSL product.

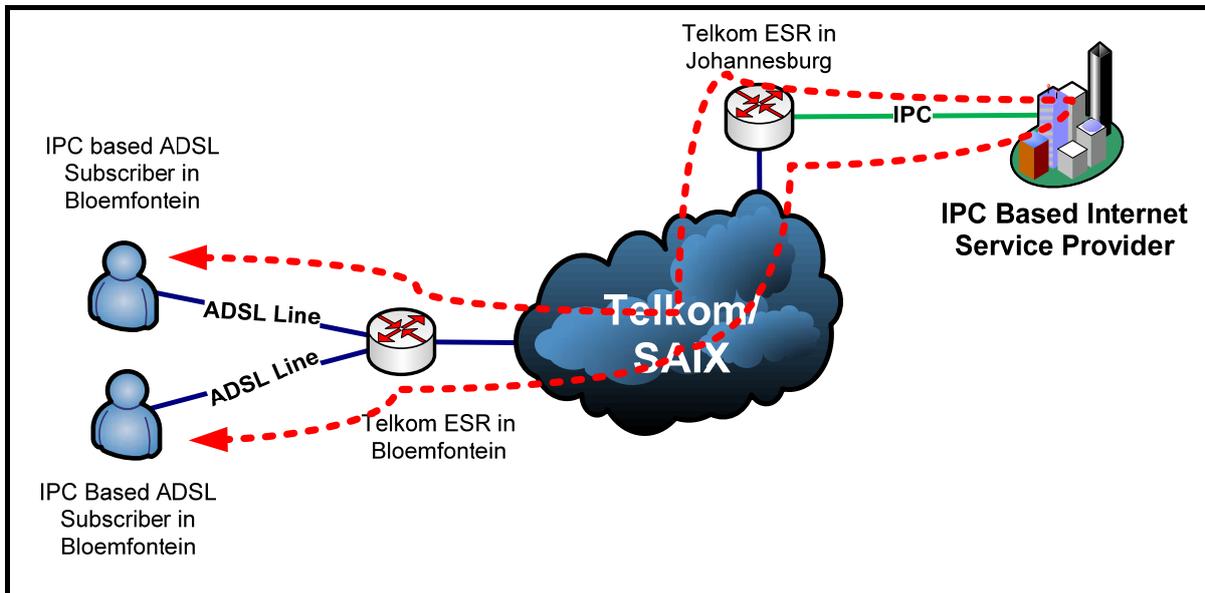


Figure 4 IPC Based ADSL traffic flow

From the two examples illustrated above, it is evident that the ISP using the Telkom (SAIX) ADSL solution has a clear advantage in performance over the ISP using the IPC ADSL solution.

Below is a schematic illustration of the current IPC model, which we will also compare schematically to IP Bitstream, ATM/ ME Bitstream and Shared Local Loop in this document.

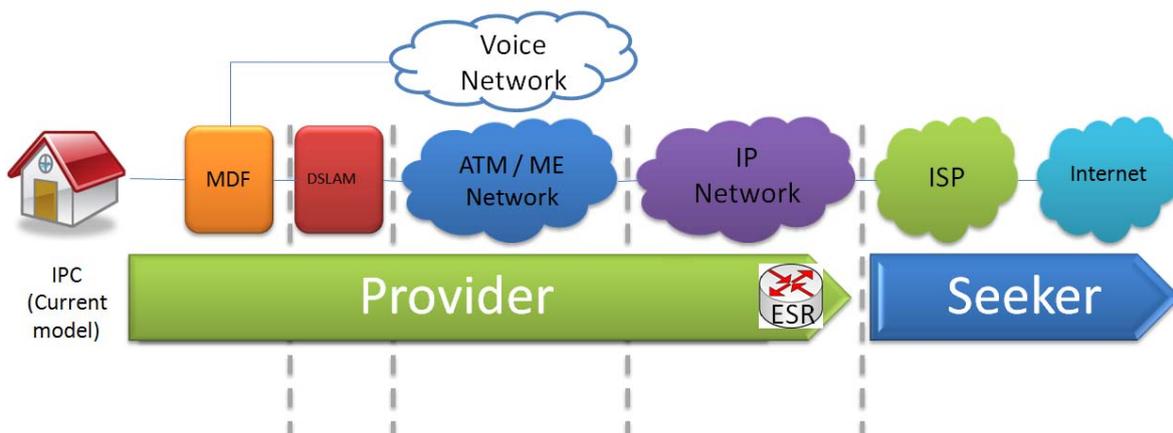


Figure 5 Current IPC Model

Phase 1: IP Bitstream continues below...

4.3 Phase 1: IP Bitstream

This phase is a significant improvement on the current IPC option provided by Telkom as an ADSL wholesale model. The ADSL subscriber's session will terminate on Edge Service Routers (ESR's) in the access seeker's network, the access seeker can therefore provide differentiating product features and control cost and service levels more effectively. The access seeker provides one or more aggregation points to terminate all broadband sessions for all its customers. These aggregation points are provided and managed by the access seeker, while the backhaul network is provided and managed by the access provider in the case of IPC.

Aggregation can be done on a single national platform to serve all the access seeker's broadband subscribers on a national basis, or on a regional basis to serve the access seeker's subscribers per region. In the case of the regional aggregation, the cost should be lower, since the national IP backbone of the access provider is being bypassed. This aggregation platform is implemented in the access seeker's network, which is then connected to the access provider's network. The access provider then provides a broadband service on its own infrastructure, except for the aggregation point on the access seeker's network, giving the access seeker national reach. This solution is relatively simple to implement and does not depend on potential problematic issues like facilities leasing.

The benefit for the ISP is that it gives them better control over the end user experience and also offers better product differentiation opportunities.

In all the scenarios there is still the problem where the network from the end user (consumer) to the ERS may be congested. This solution when implemented will have to address the access provider's reporting, upgrading and fault finding obligations and service level commitments. It also needs to ensure that all parties are treated as equals on the network.

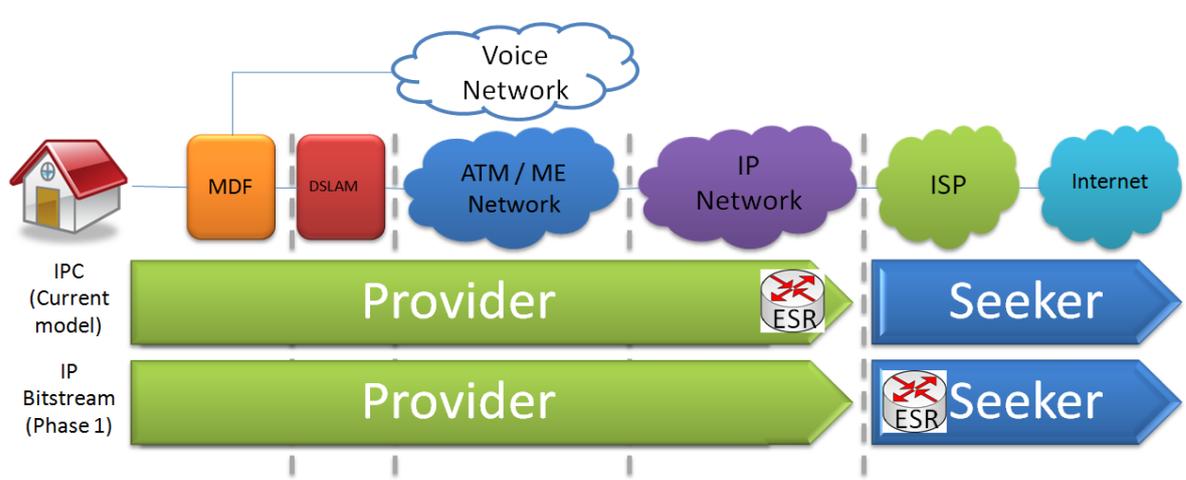


Figure 6 IP Bitstream – Phase 1

4.4 Phase 2: ATM/ME Bitstream

The access provider uses either Asynchronous Transfer Mode (ATM) or Metro Ethernet (ME) to connect its ADSL infrastructure in each region to the IP backbone. This phase makes this regional network available to the access seeker as a point of interconnect, bypassing the IP core network of the access provider in the process and improving the quality of service that the access provider can provide. In this phase the access seeker connects its regional aggregation point to the regional ATM or ME network of the access provider via a network link. All the access seeker's ADSL sessions in that region are then terminated on the regional aggregation point, while the IP Bitstream (Phase 1) option can be used in conjunction to terminate ADSL sessions for the rest of the country. Once facilities leasing has been resolved, this regional LNS can also be co-located in the exchange on the access provider's network. This configuration is used in many EU countries, including Austria, Belgium, Denmark, Ireland, Italy, Portugal, Spain, Sweden and the United Kingdom.

For the access provider this solution greatly reduces the cost of its national backbone as a large number of traffic is removed from its network.

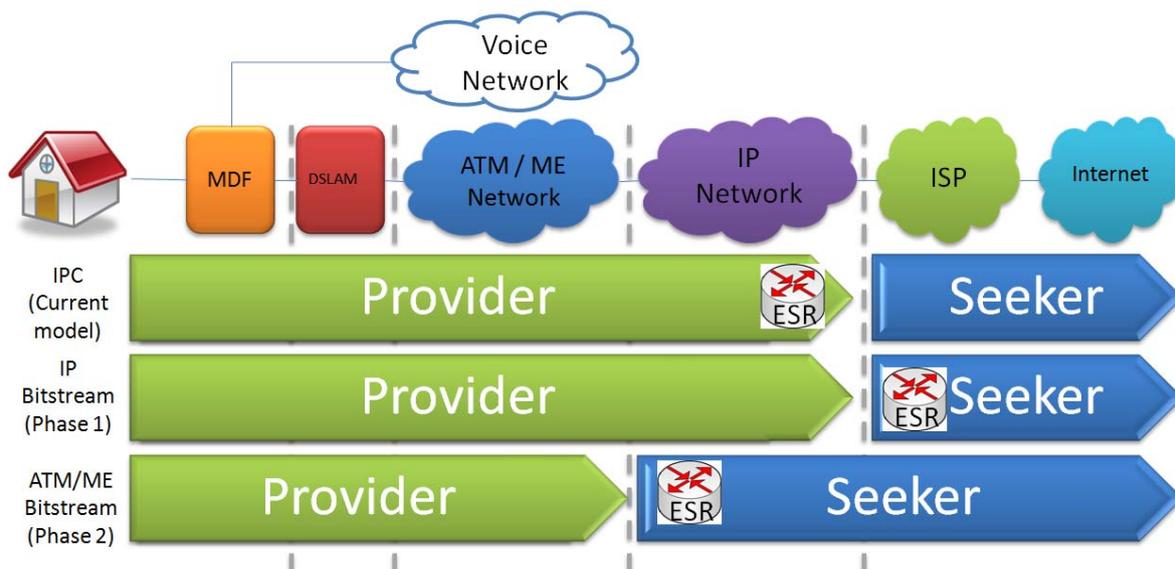


Figure 7: ATM/ME Bitstream (Phase 1 and 2)

4.5 Phase 3: Shared Local Loop

In this case the access seeker provides its own DSLAM, which connects to the access provider's Main Distributions Frame ("MDF"). This configuration requires co-location and provides more control to the access provider, and at the same time requires a significant investment from the access seeker. Shared Local Loop is expected to be the most complex to implement and therefore left to be implemented last.

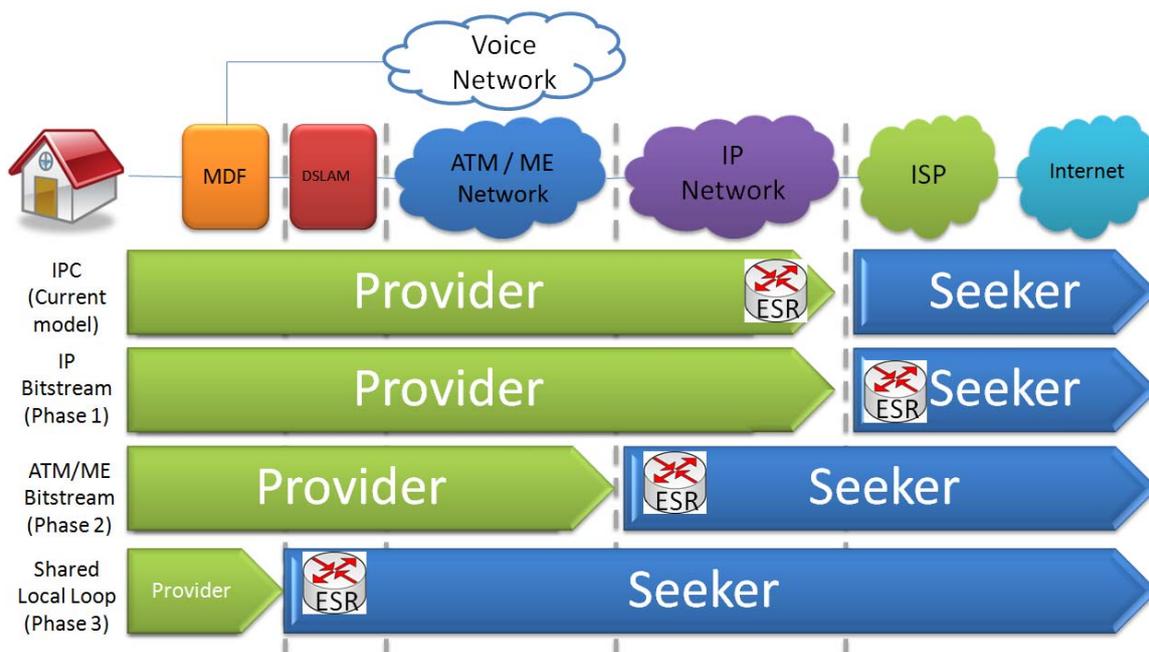


Figure 8: Shared Local Loop (Phase 1, 2 and 3)

4.6 Wireless

Right now the 'wholesale' mobile offerings are architecturally similar to the IPC model described above, however the pricing increases as volumes increase and as stated above, it is not possible for ISPs or other operators to resell mobile broadband at competitive prices. It is proposed that a Bitstream solution be implemented for the wireless networks as well. In this solution, the subscriber's session terminates on a Gateway GPRS Support Node (GGSN) that is managed by the access seeker. The access provider provides the backhaul network to the subscriber with a service level agreement at a cost determined by LRIC of an efficient operator. This should be done as a first step while, as with the fixed last mile, ultimately moving to Shared Local Loop.

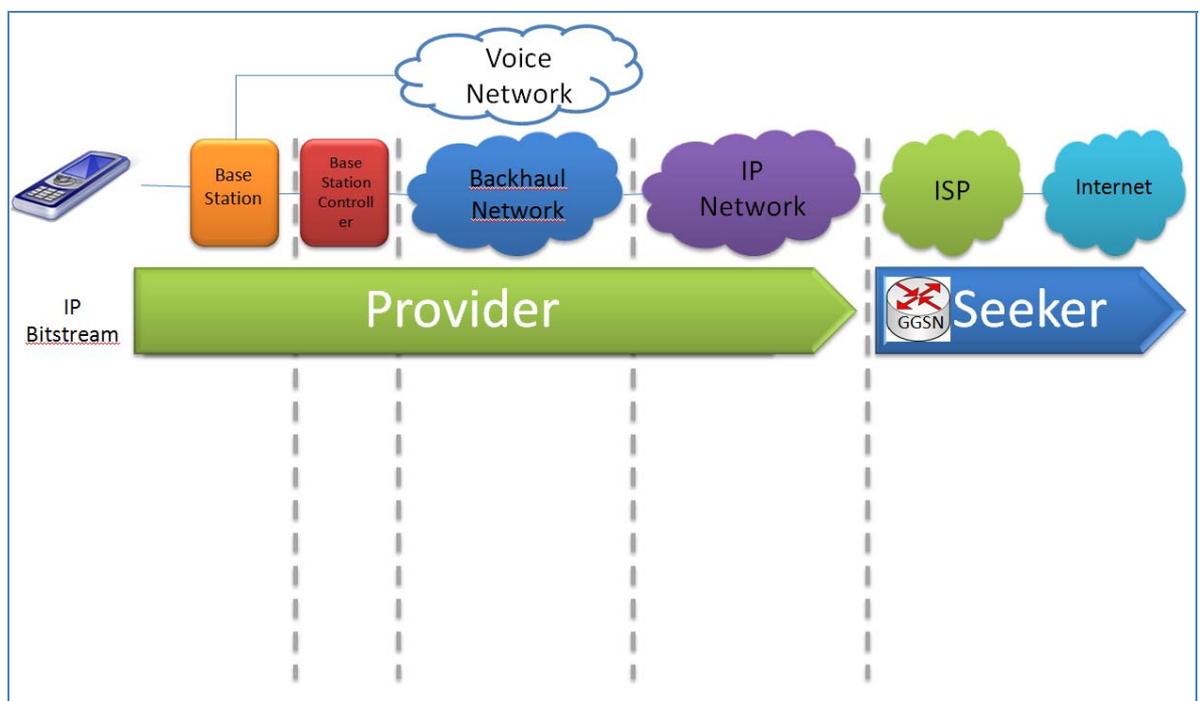


Figure 9 Wireless Bitstream

5. Regulatory

- 5.1 While MWEB is not completely convinced that the current Facilities Leasing Regulations will sufficiently provide for the proper implementation of LLU, we recognise that drafting new LLU regulations may delay the implementation of LLU significantly and we therefore support the use of the Facilities Leasing Regulations in the interim.
- 5.2 However, in order for the Facilities Leasing Regulations to be used effectively, government needs to ensure that the current problems, delays and frustrations access seekers experience under the Facilities Leasing Regulations are addressed. (MWEB will provide the Authority with some practical examples of difficulties experienced with requesting access to electronic communication facilities upon request.)
- 5.3 We have summarised some of the provisions of the ECA and Facilities Leasing Regulations and the action we think is required to ensure proper implementation of LLU:

ECA and Facilities Leasing Regulations:

Section in ECA	Action required
43 (1) provides that an electronic communications network service licensee must, on request, lease electronic communications facilities to any other licensee, unless such request is unreasonable	The Authority needs to ensure that disputes around the reasonableness of a request are determined on an urgent basis. Failure to do this will result in access seekers' requests being unreasonably delayed.
43(7) provides that electronic communications facilities leased must not be of a lower technical standard and quality than the technical standard and quality provided by such ECNS licensee to itself	The Authority needs to ensure that this can be effectively measured and enforced
43(8) provides that the Authority must prescribe a list of essential facilities, including but not limited to: (a) electronic communications facilities, including local loops, sub-loops and associated electronic communications facilities for accessing subscribers and provisioning services; (b) electronic communications facilities connected to international electronic communications facilities such as submarine cables and satellite earth stations; and (c) any other such facilities	It is critical that the Authority prescribes a list of essential facilities for purposes of LLU and that the Authority review such list frequently. Due to the rapid change in technology, we do not believe that every 36 months, as contemplated in the ECA, will be sufficient.

47 provides that the Authority may prescribe regulations establishing a framework for the establishment and implementation of wholesale rates applicable to specific types of electronic communication facilities and associated services taking into account the provisions of Chapter 10 (Competition matters)	It will be crucial for the Authority to establish such pricing regulations (taking into account LRIC pricing). [The establishment of pricing regulations is critical to our discussion around the cost of IPC and mobile APN] It is equally important for the Authority to establish which licensees have significant market power and have control of essential facilities as contemplated in Chapter 10.
Sections in Facilities Leasing Regulations	
4 and 5 which provide for financial feasibility and technical feasibility	The Authority needs to ensure that any disputes around financial or technical feasibility are resolved on an urgent basis. There should be an effective manner for access seekers to ensure compliance with timelines set out in the Facilities Leasing Regulations. Failure to do this will result in access seekers' requests being unreasonably long delayed.
10 provides that electronic communications facilities must be sufficiently unbundled	The Authority needs to ensure that this section is expanded and properly implemented

6. Conclusion

6.1 MWEB proposes that LLU be implemented in increasingly complex and costly phases, incorporating:

- Quick wins: Naked ADSL; Reduced cost for IPC; Open mobile Networks to operators in different locations at prices that is less than current retail pricing
- Phase 1: IP Bitstream
- Phase 2: ATM/ME Bitstream; and
- Phase 3: Shared Local Loop.

6.2 MWEB believes that a phased approach to LLU will result in immediate 'quick wins' for the industry by starting with simple changes which will develop into the most complex Shared LLU, while progressively providing more access for the access seeker to the access provider's facilities and infrastructure. MWEB believes that this approach is more achievable for both the access provider and access seeker.

- 6.3 While the benefits of Shared LLU at the first number of DSLAM's are great, the benefits diminish for the access seeker as the network is built out to sparsely populated areas. By combining Bitstream and Shared LLU, an environment is created where the access provider and access seeker compete in densely populated areas, while they collaborate in sparsely populated areas. The table below illustrates this.

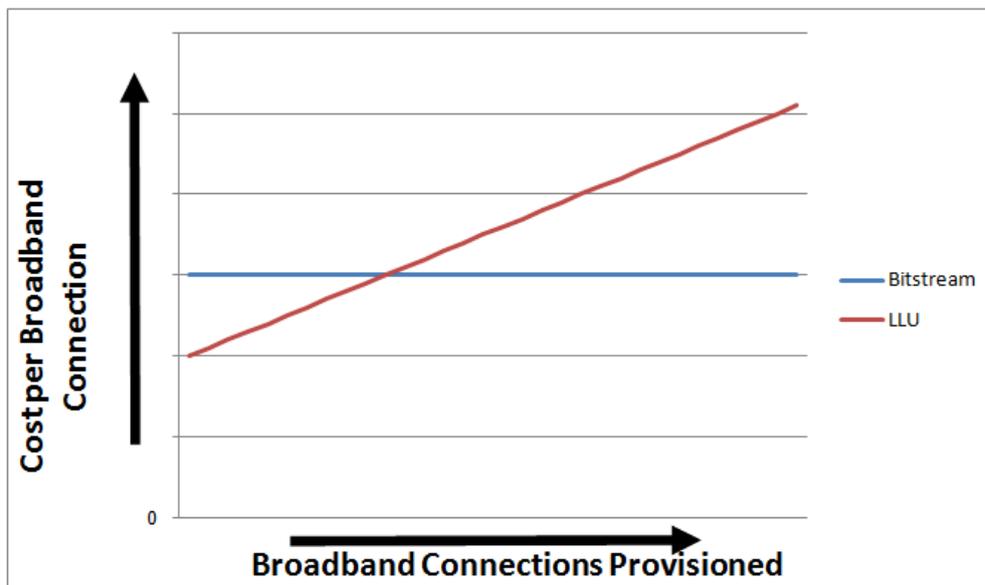


Figure 10: Relative Cost per Broadband Connection vs. Number of Connections Provisioned

- 6.4 Finally, we believe that there is no reason to differentiate between the fixed and mobile last mile and that it is critical for the growth of broadband in South Africa that the principles describe above be applied to both.
- 6.5 MWEB thanks the Authority for the opportunity to comment on the LLU Discussion Document and we look forward to further interaction with the Authority around LLU.

SCHEDULE 1

ILLUSTRATION OF INADEQUATE IPC PRICE REDUCTION FOR ADDITIONAL POPS

The default IPC scenario usually involves a single IPC connection across which all the traffic for the ISPs subscribers are sent. Telkom then carries the traffic from the terminating ESR (in Johannesburg in the example below), to wherever the ADSL subscribers are. To carry the traffic down to Cape Town, Telkom incurs costs on their backbone. In the scenario below, the ISP purchases a total of 7000 Mbps of IPC capacity @ R1827.79 per Mbps, costing the ISP a total of R12.79 million per month.

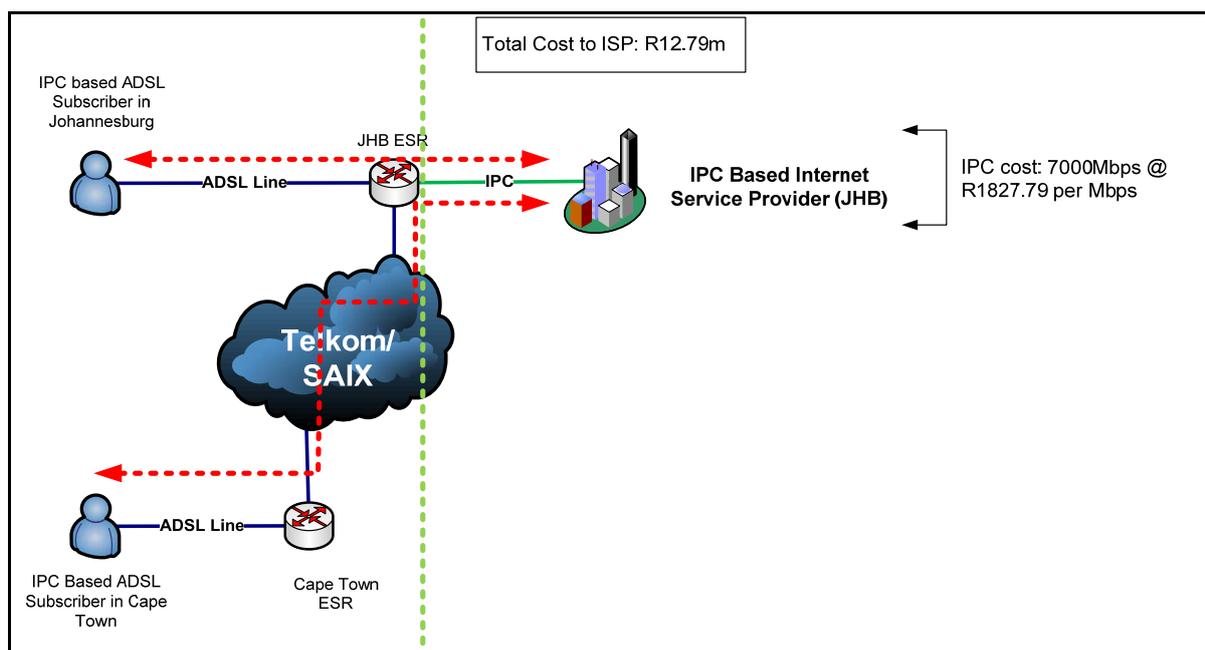


Figure 11: ISP costs for Single POP scenario

As the ADSL traffic grows, Telkom's backbone becomes congested and it became attractive for both Telkom and the ISP to establish another IPC connection in Cape Town. The additional IPC link in Cape Town off loads all the ISP's traffic from the Telkom backbone, but the ISP needs to incur a cost on its own backbone to carry the traffic between Johannesburg and Cape Town. The ISP therefore expects Telkom to provide a discount on the IPC cost and that the total of the discount will balance the additional cost incurred by the ISP on its own backbone. This is unfortunately not the case. Telkom offers a 5% discount on the IPC costs for the additional POP in Cape Town, but the ISP's total cost per month increases by total of 9%. This 9% increase includes the 5% reduction in the IPC cost and the cost of the backbone link, provided by Telkom at Telkom rates. This indicates that the 5% decrease in IPC costs for having a second IPC POP should have been 14% in order for the ISP to break even in the 2-POP scenario. (see Figure 11 below)

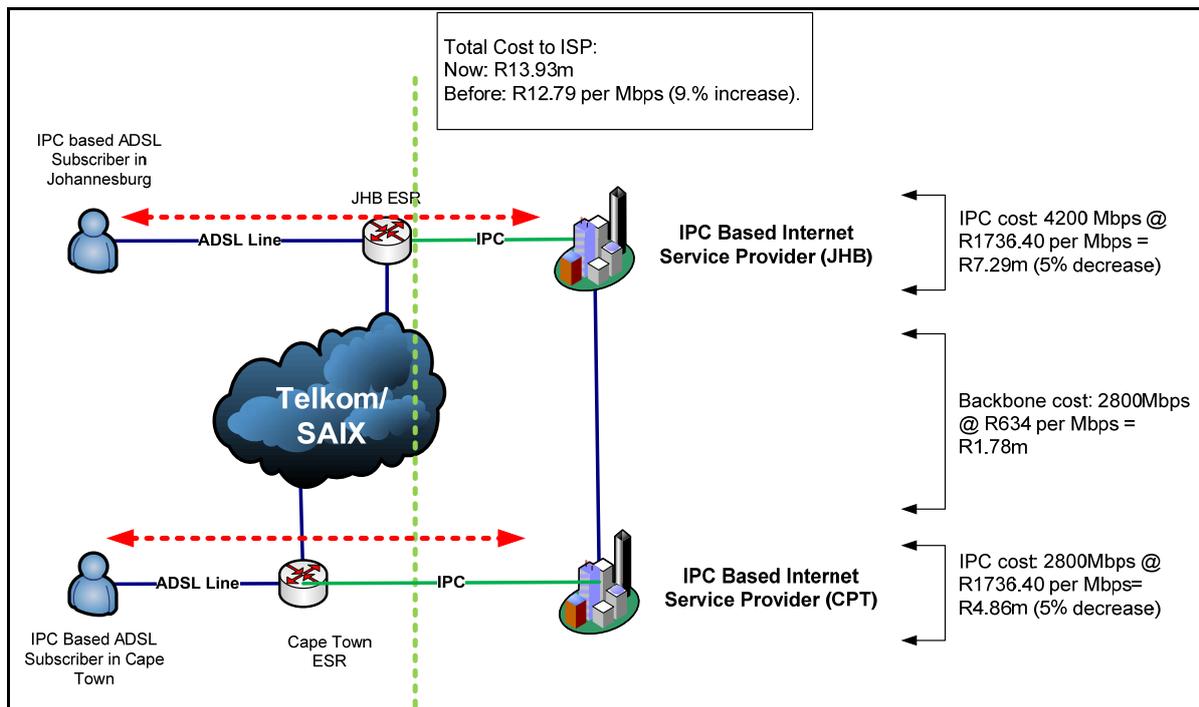


Figure 12: ISP costs increase by 9% in 2-POP scenario

In the same way, Telkom offers a further reduction of 5% on the IPC costs should the ISP establish a 3rd POP in Durban. However, in the 3-POP scenario, the ISP's monthly costs increase by 8% to R13.8 million. This means that Telkom's price reduction for a 2nd POP should have been 14% and 5% for the 3rd POP in order for the ISP to break even.

MWEB will provide the Authority with more detailed information on a confidential basis upon request.