Building a case for interconnection and peering in Africa

by Michele McCann - Teraco
African Rumours Reviled
Mobile Wars

MTN Advert

Dear Cell C. You are right.
You said that we are making billions, and that is correct. We are also guilty of investing 83% of those billions, back into South Africa. We’re guilty of inventing PayAsYouGo, a world-first product that opened the world of cellular connectivity to South Africans from all walks of life, instead of just the wealthy. We’re also guilty of playing a major role in the success of Africa’s first World Cup. We’re guilty of being a major taxpayer who contributes to the creation of employment for thousands of South Africans. We’re guilty of introducing Mahala calls to South Africa, which forced our competitors to cut their prices. We’re guilty of not wanting to fight with you, because there are millions of South Africans that we’d rather fight for.

We believe they deserve better. They deserve a network that works. A network that hardly ever drops their calls. A network that offers access to world-class Internet, all across our country.

A truly South African network that creates lasting infrastructure, investments and even wealth.
For everyone.

P.S. We’ve never stopped doing what’s right for the people of South Africa and we never will. Turn to page 9 to see what we mean.

Cell C Response

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Innovation at it’s best - Fibre Art
A view of Africa

There are more middle income households in Africa than there are in India. (*KPMG)
Myriad business opportunities

Estimated size of ICT enterprise services market in 2013 – c. $9b

KEY DRIVERS FOR GROWTH:

• Demand for connectivity and data
• Continued growth in mobile sector
• Mobile money
• Content (media, broadcasting)
• Mobile advertising set to grow

Source
PwC Research Centre, 2013
Capacity is here

Africa’s international bandwidth jumps to 1,479 Tbps in Dec 2012
Terrestrial Fibre

- Increased investments by Governments and Private sector

- July 2012, Africa’s total inventory of terrestrial transmission networks reached 732,662km

- Fibre now reaches 40% of the African population

- 313m people were within reach of a fibre node

- Expected to reach 50% of population with completion of planned projects
A growing ICT sector rapidly getting into shape

Estimated size of the ICT enterprise services market 2013 – c.$9b

Large African markets with comparatively high ARPU or high subs growth are likely to remain Africa’s key telecoms growth drivers

Net mobile market revenue potential ($m)
- < 100
- 100-200
- > 200

2013-14
Ecosystem Growth

INTERCONNECT GROWTH

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African Transit Landscape

$120.00 - FIBRE CROSS
CONNECT

$120.00 - FIBRE CROSS
CONNECT

$70.00 PER 1MPBS

$70.00 PER 1MPBS

PROVIDER A
EXCHANGE POINT

PROVIDER B

PROVIDER C
African IXP Effect: Neutral Facilities Needed
NAPAfrica: Member Case Study

[Graph showing zero settlement peering over time]
De-regulation is Key = True Innovation

- **1996**: Telecommunications Act
- **2005**: VoIP liberalised
- **2008**: Altech ruling introduces 300+ potential networks
- **2009**: Seacom lands Neotel launches
- **2010 - 2011**: Mobile interconnect rates slashed, 10 new network operators launch EASSY and WACS land
African Interconnection Challenge

- Limited amount of active IXP’s in Africa both – only 26 IXP’s of which 18 IXP’s are active (AU – AXIS Project)
- Cost of Bandwidth at $50.00 per 1Mbps reduces opportunity for global new entrants
- **Majority of “eye balls” do not have technical skills or assets therefore still heavily reliant on transit**
- Majority of countries still operate within a monopoly managed by governments
- Limited marketplace to obtain members – new members generally need to be convinced to let go of existing transit arrangements
- Existing ASN application process very slow and expensive for new entrants
- **Larger networks hanging onto legacy transit revenues therefore generally do not join the exchange and if join polices are very selective**
- **Interconnection costs very high in non neutral data centres**
- Interconnection costs between facilities very high ave. of $18000.00 1Gbps fibre non redundant
- Lack of collaboration between African IXP’s – all exchange points compete for content and members: AF-IX Key
- Technical peering skills required;
- **Routing anomalies caused due to political issues, cross border costs still high and concerns on IXP stability.**
- Content scramble on service provider networks has a negative impact
African Requirements

- Standard, open and unrestricted interconnection policies - Everybody plays by the same rules.
- Always-on, reliable, open hosting facility and infrastructure - Nobody wants content that is not always available.
- Reliable, high quality structured cabling systems and procedures - Physical interconnection in the same facility should take hours, not weeks.
- Multiple peers and unrestricted market-place – Carriers, ISPs, CDNs, Banks, Enterprises – An exchange cannot grow without peering members.
- Scalable space and infrastructure for content growth. Moving a successful exchange is a complex, and costly exercise. Always plan for growth.
- No government involvement on regional exchanges – Let the market decide!
Peering & Interconnection is Key

Neutral Facilities and IXP’s

Key Content Drivers – Education, Broadcasting, Financial, E-government growth required

Improved Product Offerings

Reduced IP transit fees – innovation required

Source
World Wide Worx
Thank you

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