

# Evolution to a Global ISP

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# Introduction

- Thank you for the invitation to speak at MENOG.
- Currently, I am a network engineer at Internet Solutions.

# Agenda

- Brief History of IS
- Early Challenges
- What worked for us
- Lessons learnt

# In the Beginning...

- Started in 1993 by 3 graduate students at a local university
- No commercial ISPs at the time.
- 64kbps single link to the US

# The Early Years

- The WWW becomes a reality
- Spin-offs created
  - Trusted Network Solutions
  - IS Commercial
  - ICON (Dialup)

# 1997 - A year of firsts!

- Onsite Hosting of Client Servers
- IS PoP in NYC
- DS-3 IP Transit to AT&T
- Client 'CLR' services
- Tax paying job for Nishal :-)

**Building an  
international PoP is not  
cheap!**

# But it gives you lots of benefits!

- Consolidated bandwidth meant more efficient use of our IPLCs.
- Connecting directly to international peering exchanges became a reality
- Enhanced service delivery (CIR)
- Marketing, Marketing, Marketing :-)



# Cost drives our builds

- Bandwidth was (and still is) our largest operational expense.

# The .za market

- (until recent) very restrictive
- 60% state owned telco monopoly
- covering telephony, fixed-data, satellite,...

# Building a .za ISP?

- (back then) No options for picking and choosing telco providers
- Bandwidth is our life-blood, squeeze too hard, and things go numb...

**Telco owned ISPs can  
sell services cheaper :-)**



# How did we succeed?

- Confession: in no small part it is because the local community are largely sick of the incumbent; people favour the underdog
- Vanity and practical factor; clients want to be connected to a global network and IS built that primarily to deal with our expensive international bandwidth and to be able to resell a QoS model as earlier as 1997.

# How did we succeed?

- Community support; active supporter of ISPA and JINX
- Key customer accounts; banks, government institutions, news-houses, all helped to build a broad client base
- ISP in good standing means that we've been able to maintain long-term good standing relationships with international content distributors.

# How did we succeed?

- Selling unorthodox and unique services
  - overseas hosting
  - operate multiple backbones for diversity
- Largest footprint before 1996 (SAIX), so practically, we had a lot (the most?) to lose. it's a necessary evil; we fight, because we must, and we were large enough to maintain our litigious relationship with the incumbent.
- No framework for the incumbent to say 'no'





# Lessons learnt

- It helps to have a Telco Big Brother :-)
- Value-adds sell!
- Clients appreciate service; cheaper <> better.
- Unmanaged complexity is the enemy of scalability. (but customers with unique requirements drive innovation!)

# Moving Forward

- Unbundling the local loop.
- Ongoing standardisation
- Africa is a good place to be :-)

**Thank you!**

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