Policies and Challenges on the Brazilian National Broadband Plan

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Brazil

Pretoria, November 12th 2013

Ministry of Communications

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Summary

A brief background

Wholesale Network Model – Telebras

Retail approach: “Popular” Broadband Plan

Tax incentives and funding models

Spectrum Availability

Final remarks

A brief background

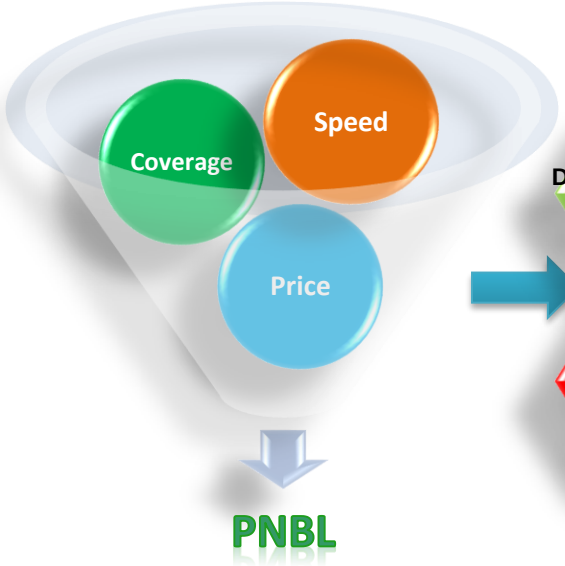
Variables	Brazil	South Africa	
Area	8.5 mi sq km	1.2 mi sq km	7x
Population	200 million	53 million	4x
Households	60 million	14.5 million	4x

Different countries facing different challenges

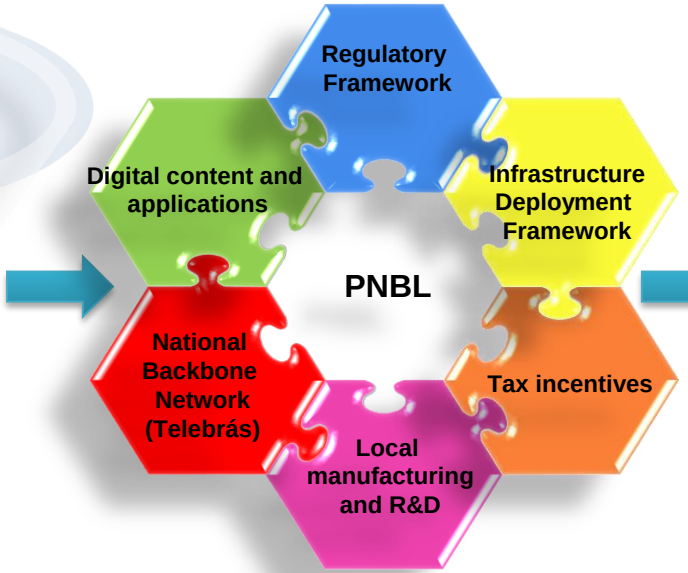
Network level	Brazil (2010)	South Africa (2013)
Backbone	X	
Backhaul	X	
Access		X

A brief background - National Broadband Program (PNBL)

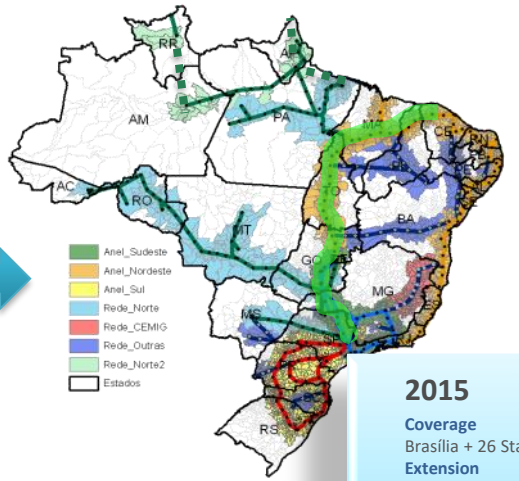
1 Mbps for R$35 (~US$15)



May 2010



Ministry of Communications – MC
National Regulatory Agency – Anatel



Goal: 40 million households by 2015 (~70%)

Wholesale Network Model – Telebrás

Wholesale Network Model – Telebrás: wholesale capacity to local ISPs

Dark Fiber from state-owned companies

Local ISPs: last-mile partners

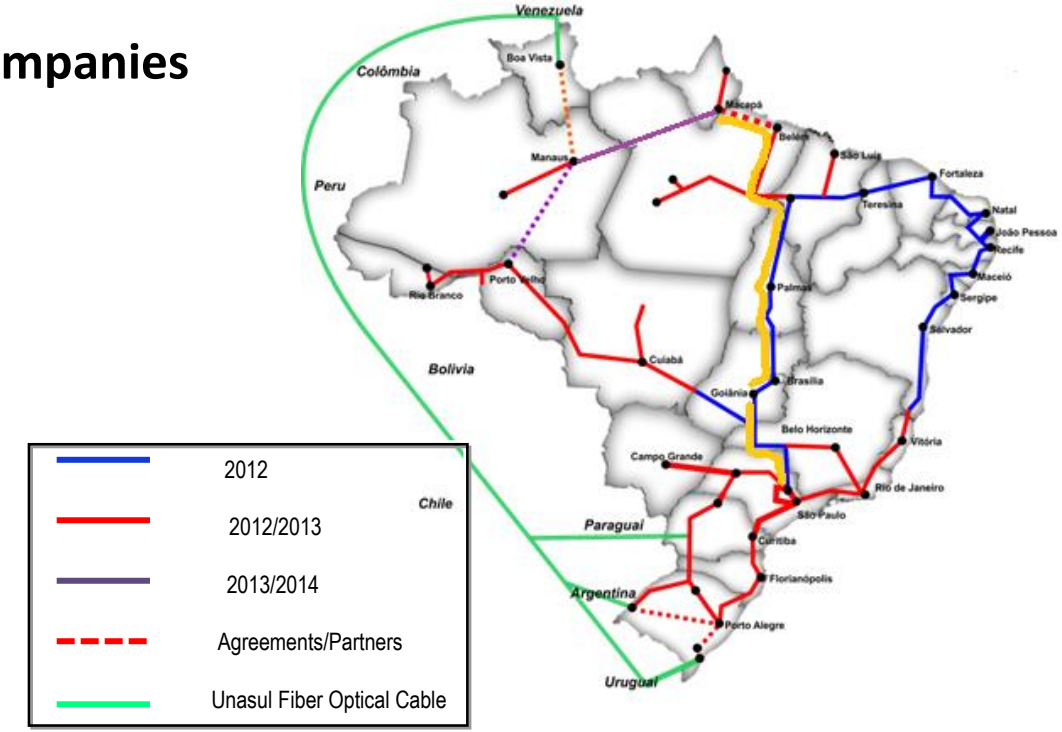
May 2010:

Formally started its activities

Goal: +4.200 cities until 2014

June 2011:

First ISP connected



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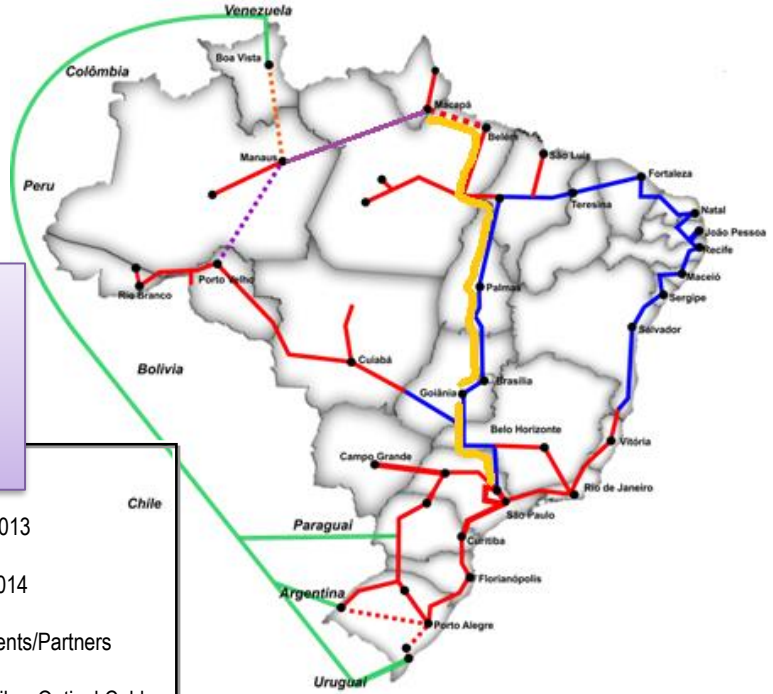
Audit Courts, local licenses and low workforce delayed the network deployment

ISPs needed to provide retail service



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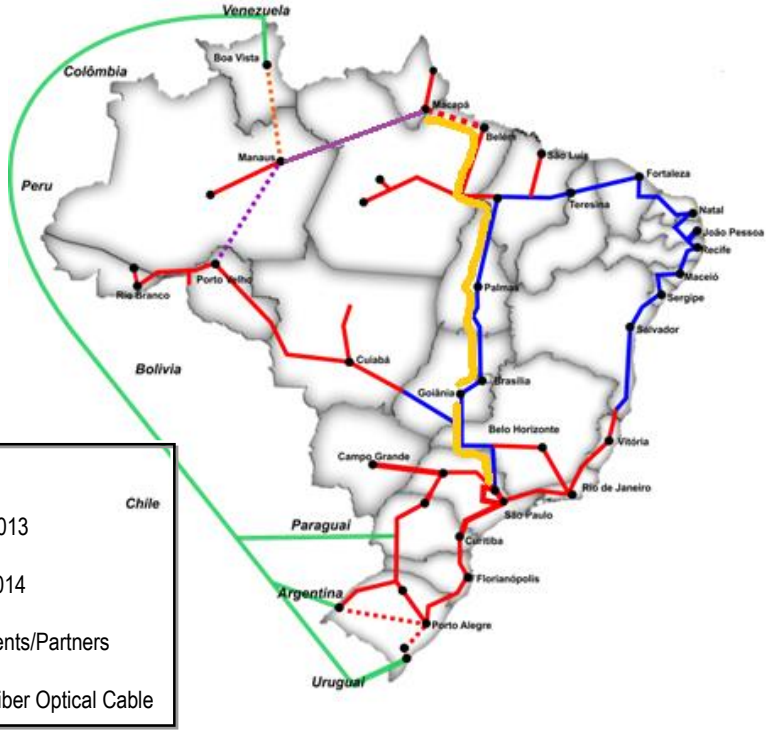
1 Mbps (clear channel): From US$ 400 => US$100

2.500 ISPs (2010)



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Retail approach: “Popular” Broadband Plan

Retail approach: “Popular” Broadband Plan – 1 Mbps for R$ 35 (US$ 15)

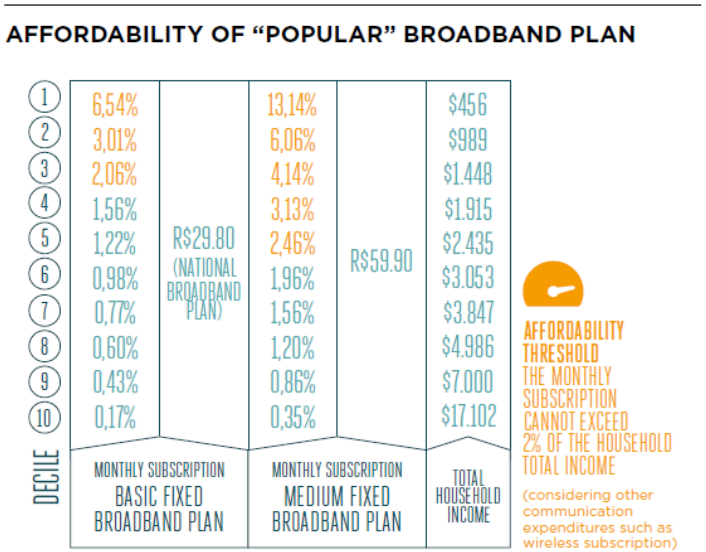
June 2011:

Incumbents agreed to provide a Popular Broadband Plan to all cities until 2014

June 2013:

2 million accesses (~10%)

3.214 cities covered



70% of households in BR can afford a R$ 30 monthly subscription

Source: Anatel. July 2013. / GSMA. Mobile Broadband at the Bottom of the Pyramid In Latin America. June 2013.

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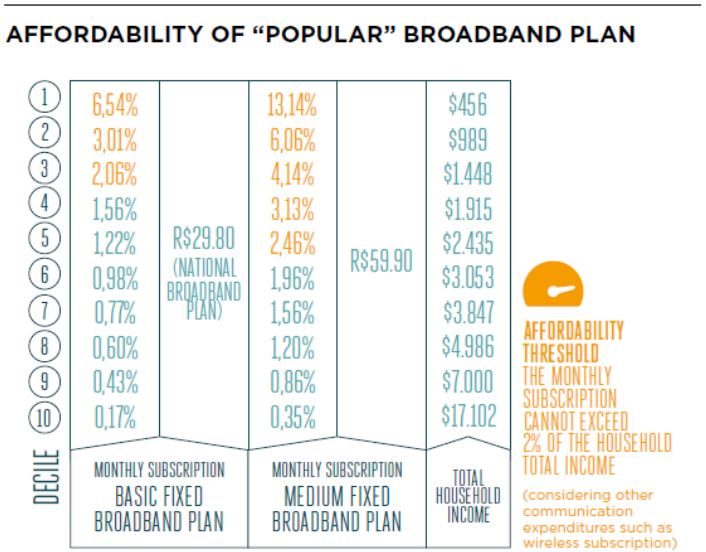

NGOs argue that most people can´t actually buy it

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Tax incentives and funding models

Tax incentives and funding models

Universal Service Fund – USF: US$ 600 mi/y

But not available to broadband

Fixed BB price and taxes in 2012		
	Value	%
Retail Price	R$ 76,81	100,00%
Taxes	R$ 24,11	31,39%
Federal	R$ 3,59	4,68%
State	R$ 20,52	26,71%

ICT Devices:

No federal taxes applied to smartphones

Special Tax Regime:

Tax incentives only to projects approved by the Ministry

7 billion dollars already submitted by now

Spectrum Availability

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Spectrum bands: 2,5 GHz, 450 MHz and 700 MHz

3,5 GHz

450 MHz

Local licenses needed

4G Services and Rural Coverage

- Telcos paid in 2012: US$ 1,5 bi
- Estimated Investiments: US$ 6-8 bi until 2018
- Rural coverage – 30 km from urban areas
  - **91% of rural households**
  - 96% of 80.000 rural schools connected by 2015

LTE Specs on 450 MHz

- 3GPP has established the standard for LTE using 450 MHz band – 35 Mbps download speed (peek)

Sweden, Norway, Russia, Hungary...

Spectrum bands: 2,5 GHz, 450 MHz and 700 MHz

Transition to Digital TV

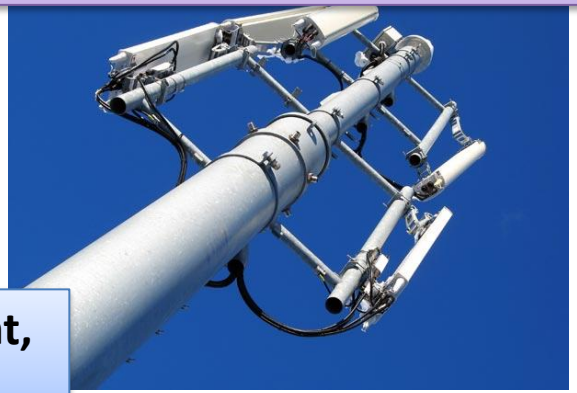
- Turn-off initially planned for 2016
- Progressive turn-off starting from 2015
- Allocating Broadcasters has been a challenge in biggest cities!

Spectrum for Mobile BB

- APT Standard (45 MHz + 45 MHz)
- April 2014

Focused on infrastructure deployment, especially to underserved areas

- **Broadcasters raise interference issues**
- **Low income families do not own a Digital TV**
- **Mobile Operators argue that:**
  - **Auction will take place "too soon"**
  - **High cost of "cleaning" spectrum is a problem**



Final Remarks

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Final remarks

Wholesale Network Model – Telebras

- **Ready-to-use infrastructure takes longer than expected**

Retail approach: “Popular” Broadband Plan

- **Retail service provision is critical**

Tax incentives and funding models

- **Tax incentives may be easier to use in developing countries than USF**

Spectrum Availability

- **Relying upon one single frequency band is a risk**

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