

***The Role of Policy and Regulation in Attracting Investment and Ensuring Increased Electricity Access: The Potential of Local SMEs***

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# iBasis Background

- Founded in 1996, pioneer of Voice-Over-IP Technology
- Global VoIP Footprint – The iBasis Network
  - >100 countries, >1,000 direct routes, >300 carriers
- Growing Africa Presence
- International Voice Trading
- Retail Services
  - Web-based prepaid offering
  - Disposable calling cards, sold through distributors, available at retail stores throughout the U.S
- Top-ranked International Wholesale Carrier, 2002, 2003, 2004\*

\* Atlantic-ACM, International Wholesale Carrier Report Card – 2002, 2003, 2004

\*\* Deloitte Touche Technology Fast 50 Program

# Thesis and Outline

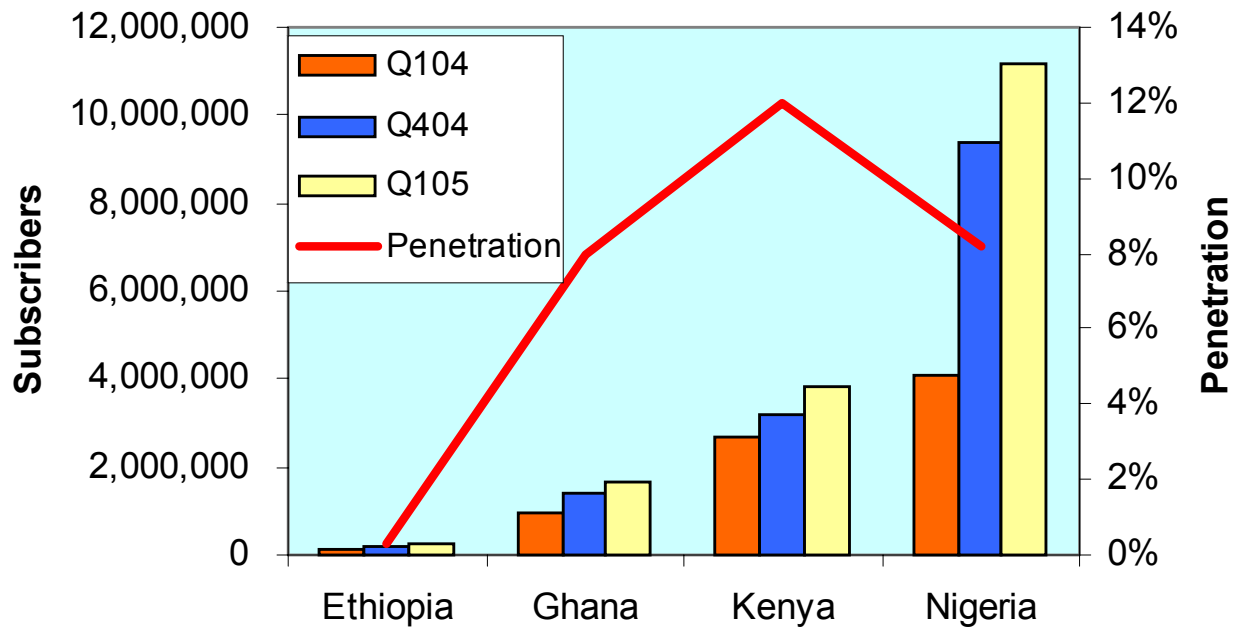
- Thesis: Lessons drawn from the success of telecoms in Africa can be applied to the power sector
- Outline
  - Overview of telecoms and telecom regulations
  - Comparison of telecoms and electricity sectors
  - Growth of telecom-based SMEs
  - Useful lessons and guidance

# Telecoms Overview

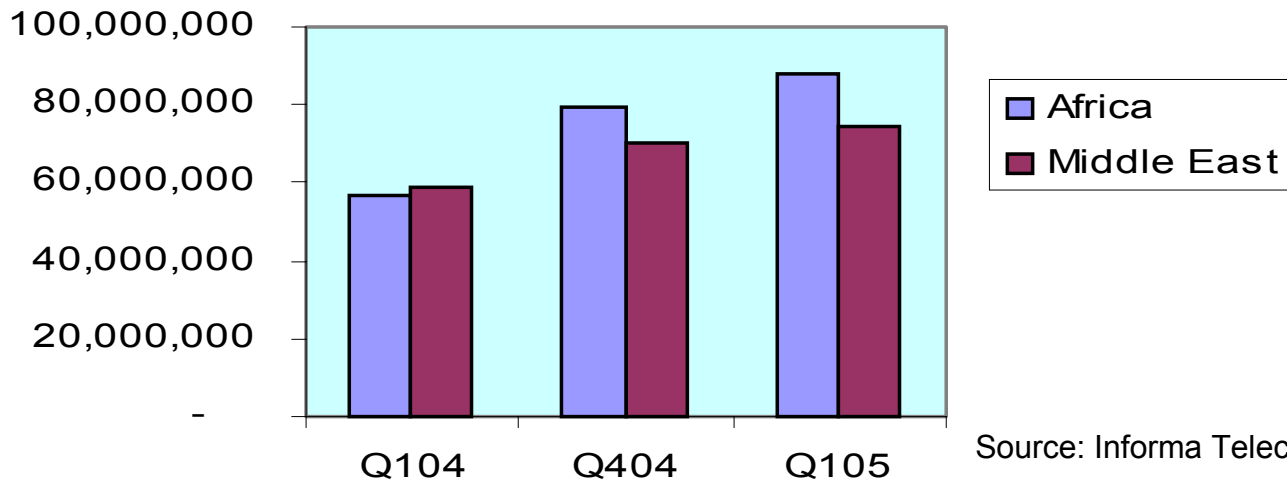
- Africa has fastest growth rates of telecom penetration in the world, at over 100% average since 2001
  - Mostly fueled by cellular growth; fixed line growth is less spectacular
- Many countries are in the process of deregulating, but most remain state-controlled
- There is general correlation between liberalization and cost/availability

# Growth of Telecoms

Cellular Growth and Penetration for Selected Countries

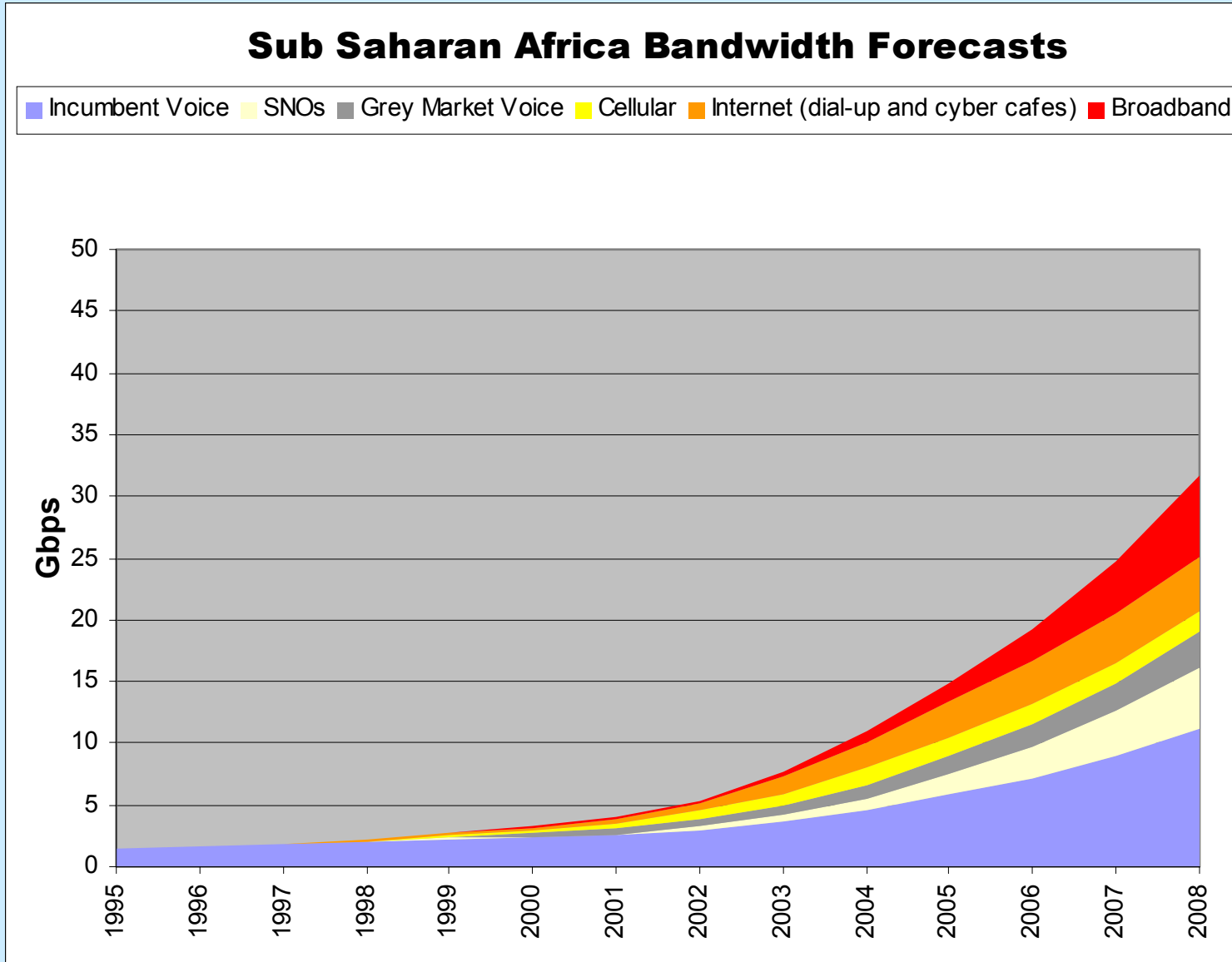


Africa and Middle East



Source: Informa Telecoms & Media 2005

# Growth of Telecoms (2)



# Africa Regulatory Overview

Status	Countries	Examples
Monopolies	40	Ethiopia, Sudan, Guinea Bisau
Liberalized	3	Rwanda, Tanzania, South Africa*
Limited Competition	3	Ghana, Nigeria
Full Competition	6	Mauritius, DRC

- All countries have mobile networks
- Trend is towards full liberalization
- There is generally a big difference between legislation and practice

# Ghana Regulatory Overview

Body	Year Established	Functions
<b>Energy Sector</b>		
Energy Commission	1997	Energy sector regulation, licensing of operators
Public Utilities Regulatory Commission	1997	Pricing, tariffs, consumer protection for water and electricity only
Energy Foundation*	1998	State-sanctioned NGO for research and advocacy
National Petroleum Authority	2005	Fuel pricing and regulation
<b>Communications Sector</b>		
National Communications Authority	1996	Telecom sector regulation, licensing of operators
National Media Commission	1996	Licensing and regulation of broadcast and print media



# Ghana Regulatory Overview (2)

	Energy	Telecoms
<b>Distribution</b>	State-owned monopoly	Majority state-owned incumbent, minority state-owned SNO, 3 private mobile operators
<b>Number of operators</b>	2 state-owned distributors for southern and northern Ghana respectively	2 fixed line operators, 4 mobile operators
<b>Customer base</b>	1,100,000	2,080,000
<b>Main Operator Staff level</b>	4,484	4,800
<b>Subscriber Growth rate (2003/2004)</b>	13%	89%

## Nature of interventions

- Reduce state control by deregulating, divesting and liberalizing
- Put policy functions in government ministries, and regulatory functions in independent bodies
- Retain major state ownership of basic infrastructure (pipes and cables)
- Introduce competition
- Promote universal access
- No major differences in telecom and power

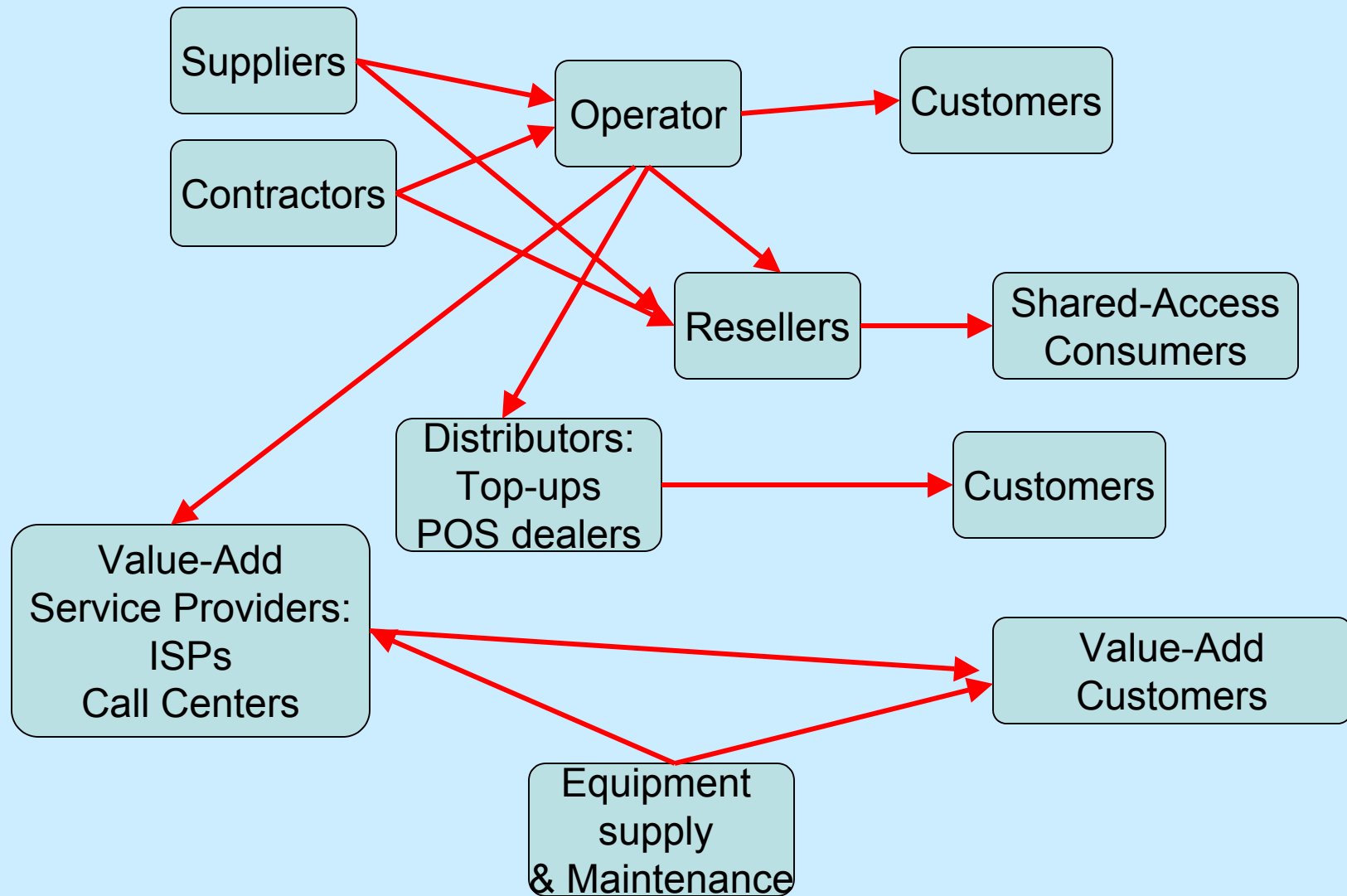
# What Makes Telecom Different?

- Africa's growth is part of a global trend in communications – Internet, mobile telephony, convergence
- Communications demand was suppressed for a longer period than power, since telecoms was seen as a lesser need
- Telecom services have come together with shiny new toys

# Telecom Growth Wasn't All Planned

- The push of technology - Internet and email, mobile phone technology, commercial applications
- Pressure from US FCC on international pricing for all US-based carriers.
- Pressure from grey market international operators
- Regulations catching up with reality – example of Nigeria

# A Mix of Services



# Role of SMEs in Telecom

- New entrants (Fixed and wireless operators)
- Communication Centers (call shops)
- Fixed wireless resellers
- ISPs
- Voice over IP and SIP providers
- Equipment dealers, installers and repairers
- Prepaid card distributors and retailers

# SME Example: “Space to Space” in Ghana

- Retail outlets for fixed wireless telephony
- Own branding
- Usually sole entrepreneur
- Entrepreneur buys handset and stand; large denominations of top-up cards available
- Initial investment of \$600, 6-8 months recovery
- Estimated 10,000 units deployed in urban, peri-urban and rural areas
- Network of handset dealers
- Generated thriving industry for carpenters, signwriters, and umbrella dealers

# SME Example: Cybercafes in Ghana

- Resellers of internet services
- Typically 5-10 PCs and dialup or wireless access
- Estimated 5,000 cybercafes in Ghana, mostly located in urban areas
- Buy access from Ghana Telecom or ISPs (who may buy access from Ghana Telecom)
- Typically employ 2-5 people as attendants and technicians
- Generated business for equipment sales and repair, transportation, and “419”



## **Bad Example: Prepaid Electricity Vouchers**

- Electricity Company of Ghana introduced prepaid meters around 1998
- Many different technologies with unique payment systems were introduced
- Payment can only be made at ECG office responsible for meter, only during working hours, and not on holidays (when consumption is high)
- Prepaid meters are often not available
- No incentive for SMEs

# The Way Forward

- Telecom is not an overall success, but it has some definite signposts
- Give SMEs the opportunity, and they will show the way
- Regulation must be flexible enough to accommodate novel ways of applying the technology
- The biggest opportunities are downstream
- Applications must be simple and easy to appreciate

Thank You!  
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