



Examining the Opportunities and Challenges for ISPs in Developing Countries

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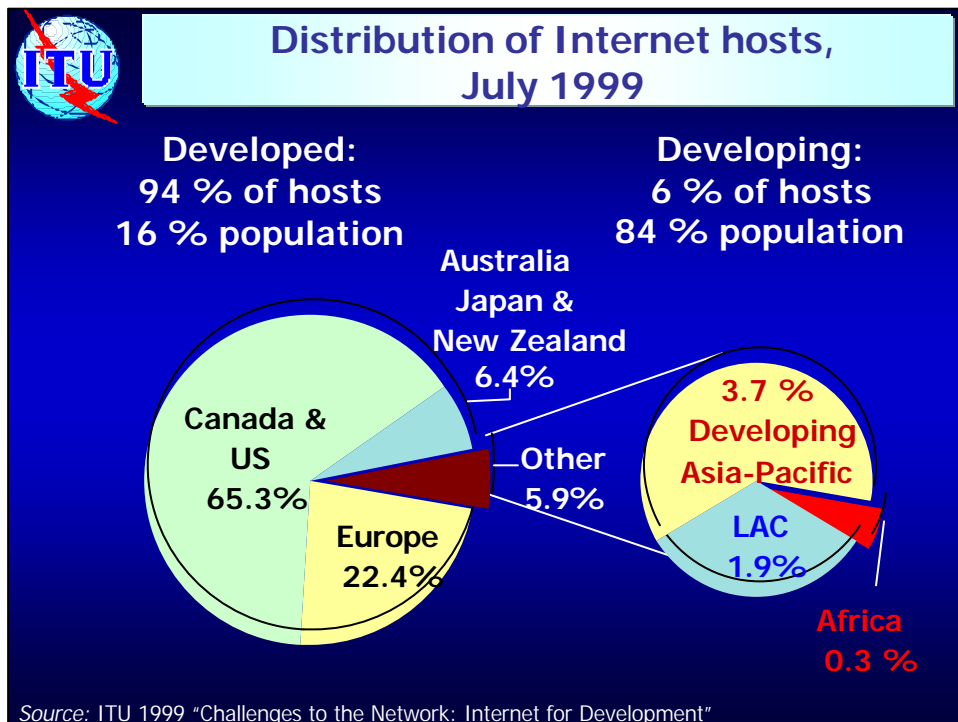
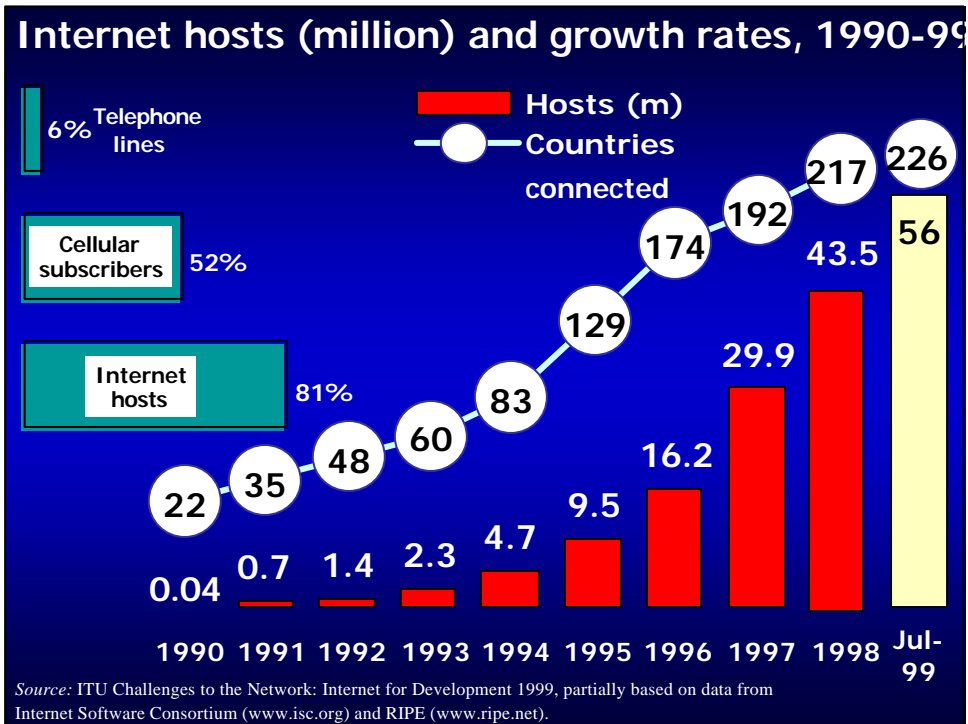
Amsterdam, 30 November 1999

Note: The views expressed in this paper are those of the author and may not necessarily reflect the opinions of the ITU or its membership. The author can be contacted at Laura.Mannisto@itu.int.



Agenda

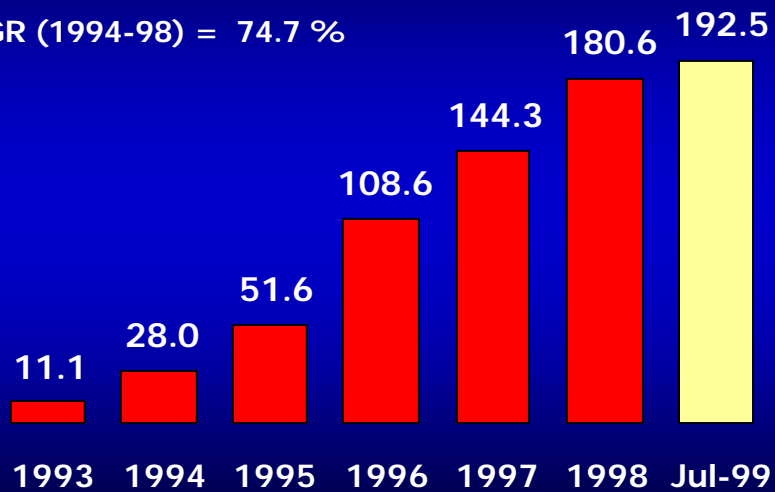
- **The Status of Internet in developing countries**
- **Issues of Internet regulation**
- **Challenges to e-commerce**





Internet hosts, Africa, In thousands

CAGR (1994-98) = 74.7 %



Source: ITU Challenges to the Network: Internet for Development 1999.



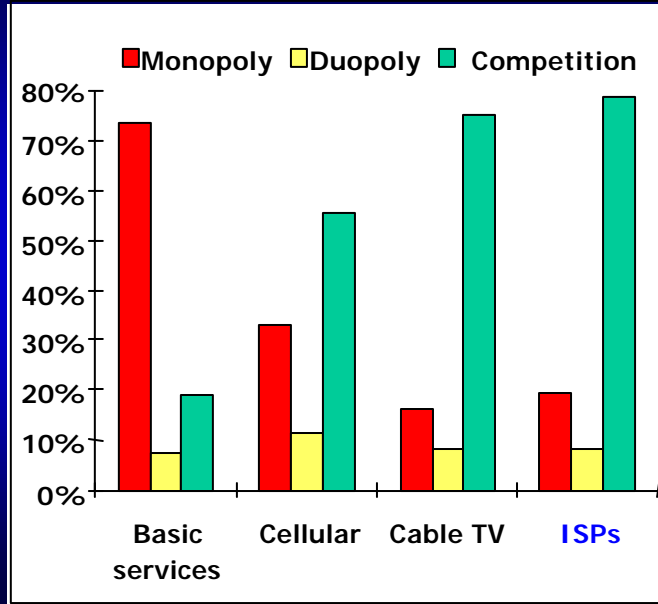
Status of Internet usage in developing countries

- **Who is connected?**
 - Wealth
 - education
 - age
 - location
 - gender
- **Problems connecting**
 - Prices of net access (retail and wholesale)
 - market structure
 - infrastructure
 - content and language



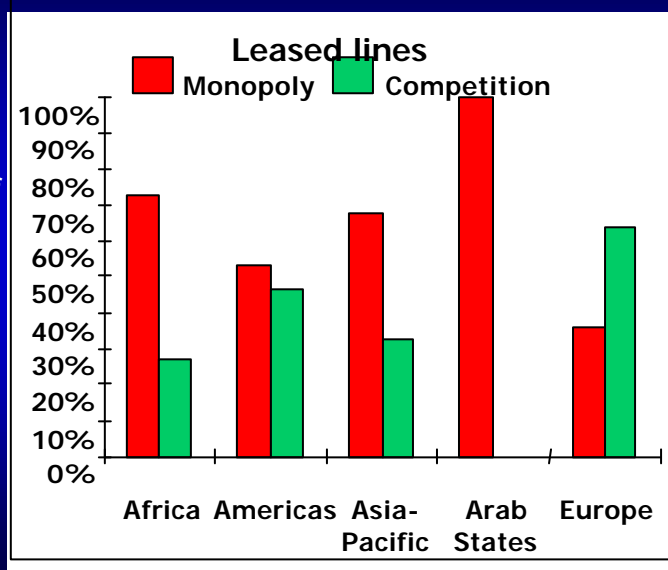
Competition in ISP markets compared to other markets, 1999

- 81 % of countries allow competition in Internet markets in 1999
- In more than 73 % of cases there are three or more ISPs



Competition in leased lines, by region, 1999

- Despite the competition in ISP markets, prices remain high because of the lack of competition in leased line supply.
- 60 % of the leased line markets remain under monopoly control



Source: ITU Trends in Telecommunication Reform: Convergence and regulation 1999

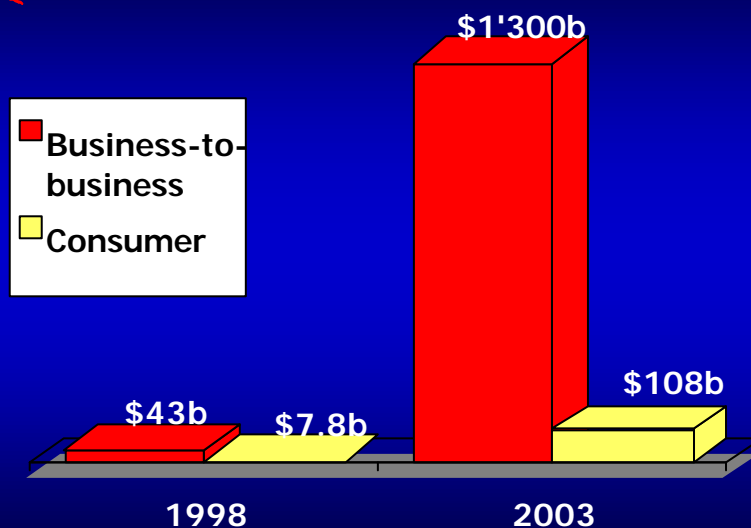


Barriers to Internet Development

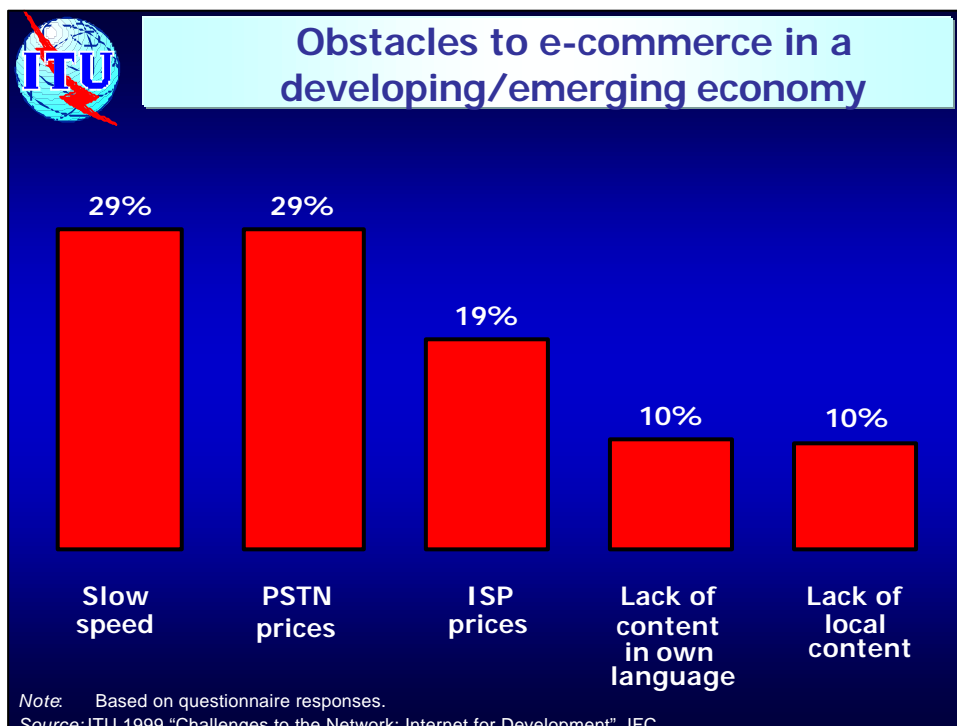
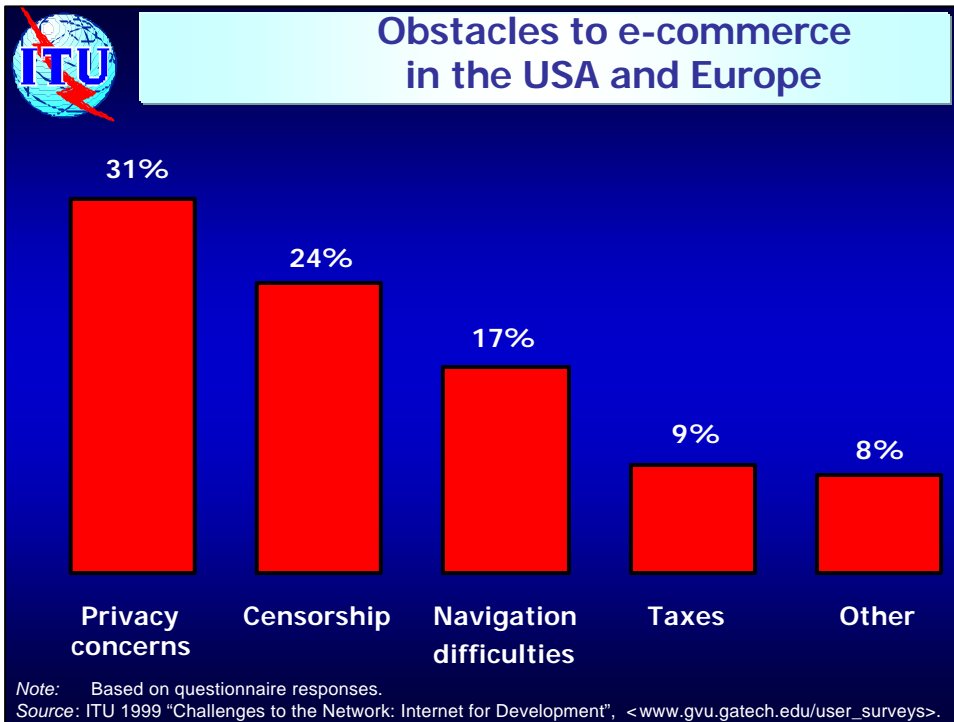
- **Transmission supply side**
 - *National level:* Lack of competition in the leased line market
 - *Global level:* Due to concentration, the IP Backbone market remains much less competitive than the retail side
- **Services restrictions: e.g. IP telephony**
 - Almost 90 ITU Member States have banned call-back and may restrict IP telephony



E-commerce forecast 1998-2003 In billions (US\$)



Source: Forrester Research, Inc. 1999





Challenges to E-commerce in a developing country

- Telecom and IT Infrastructure
- E-commerce Infrastructure (e-payments, shipping etc.)
- Pricing
- Content and market size
- Awareness, education
- Human resources, know-how
- Legal System
- National and Regional Endorsement



Discussion

- What are the key opportunities and challenges for ISPs in developing countries in the areas of:
 - Policy & infrastructure
 - Electronic commerce & other value added services