Regulatory challenges in new and emerging services

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Telecommunications:
Commemorating the 10th anniversary
of the Fourth protocol to the GATS

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Key issues in 1998 ….

- **WTO Negotiations on Basic Telecoms**
  - Foreign investment and ownership
  - Liberalization of satellite services
  - Fear of "one-way bypass"
  - Accounting rates
- **ITU World Telecom Policy Forum on trade in telecoms**
  - FCC "Notice of Proposed Rulemaking" on int'l settlements
  - Creation of a Focus Group on accounting rates
  - Relations between ITU and WTO
  - Regulatory reference paper incorporated in WTPF Opinion A

In the aftermath of the negotiations…

- **MCI/WorldCom**
  - Nov 1997 merger created company worth >US$100 bn
  - Filed for bankruptcy in July 2002 amid financial scandal and lawsuits
- **AT&T**
  - In 1998, was world's most profitable int'l carrier with income of US$6.4bn and US$53bn revenues
  - Following collapse of share price, sold for just US$16bn to SBC in 2005
- **Sprint**
  - In Oct 1999, a planned US$129 bn merger with MCI, was blocked for competition policy concerns
  - Following heavy losses, reinvented itself as wireless provider following merger with NEXTEL in 2005

Aftermath …satellite services

- **Global Mobile Personal Communications by Satellite (GMPCS) Operators**
  - **Iridium, launched on 1 Nov 1998, but filed for bankruptcy on Aug 13 1999**
  - **Globalstar, launched in Feb 1998, but filed for bankruptcy on Feb 15 2002**
  - **Teledesic, gained some 500 MHz of spectrum from ITU WRC, but ceased satellite construction in Oct 2002**
- **Traditional Geostationary satellite operators**
  - **INTELSAT, spun-off New Skies in Nov 1998 and privatized in Jan 2001. Acquired its major competitor, PanAmSat in July 2006**
  - **INMARSAT, was "corporatized" in 1999, and is now diversifying away from traditional maritime focus**
  - **Thuraya, launched service in 2001 as an Arab States regional operator and now has over 250'000 subscribers**

Some future regulatory challenges that have trade implications

- Development of Next-Generation Networks (NGNs)
  - IP-based networks replacing circuit-switched ones
  - Bundled service packages available
- Liberalization of spectrum markets
  - Spectrum trading will allow much greater flexibility in the allocation and use of wireless spectrum
- Access to addressing/numbering resources
  - Non-geographic telephone numbers and non-country code Internet addresses
- Convergence
  - Is it possible to separate the medium from the message?
  - Implications for trade in audiovisual and multimedia services
- E-commerce
  - Why should Internet-based trade be exempt from taxes?

What is an Next Generation Network?

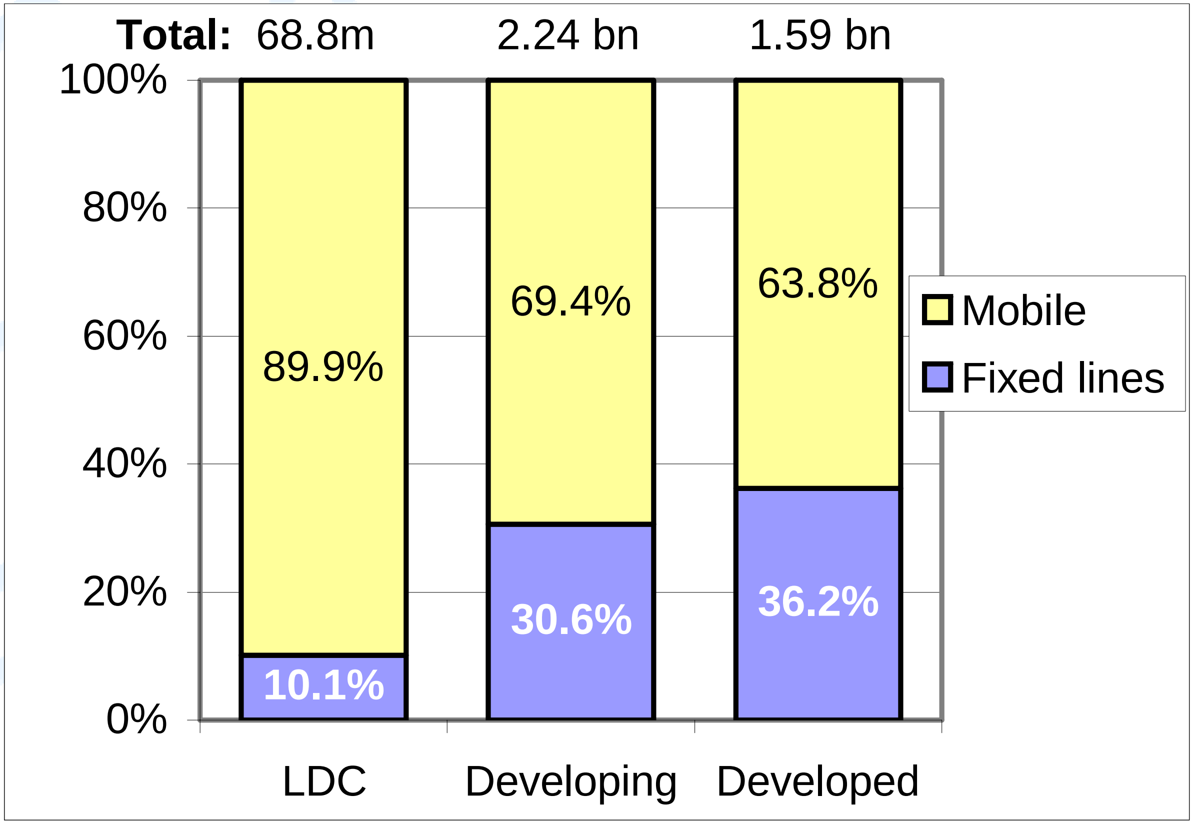
Today's PSTN network	Next Generation Networks
• Circuit-switched.	• Packet-based, based on Internet Protocol (IP).
• Limited mobility of end-user services.	• Broad-based 'generalised mobility'.
• Vertical integration of application and call control layers, with dedicated networks.	• Horizontally-integrated control layers, with simultaneous delivery of applications. Service-related functions independent of transport-related technologies.
• Non-responsive network.	• NGN will be able to identify and adapt to user needs in real-time.

Source: ITU Internet Reports 2005: The Internet of Things

NGN in developing countries

- **More likely to be leveraged off mobile than fixed-line networks**

Percentage of mobile users and fixed-lines, 2006, by type of country

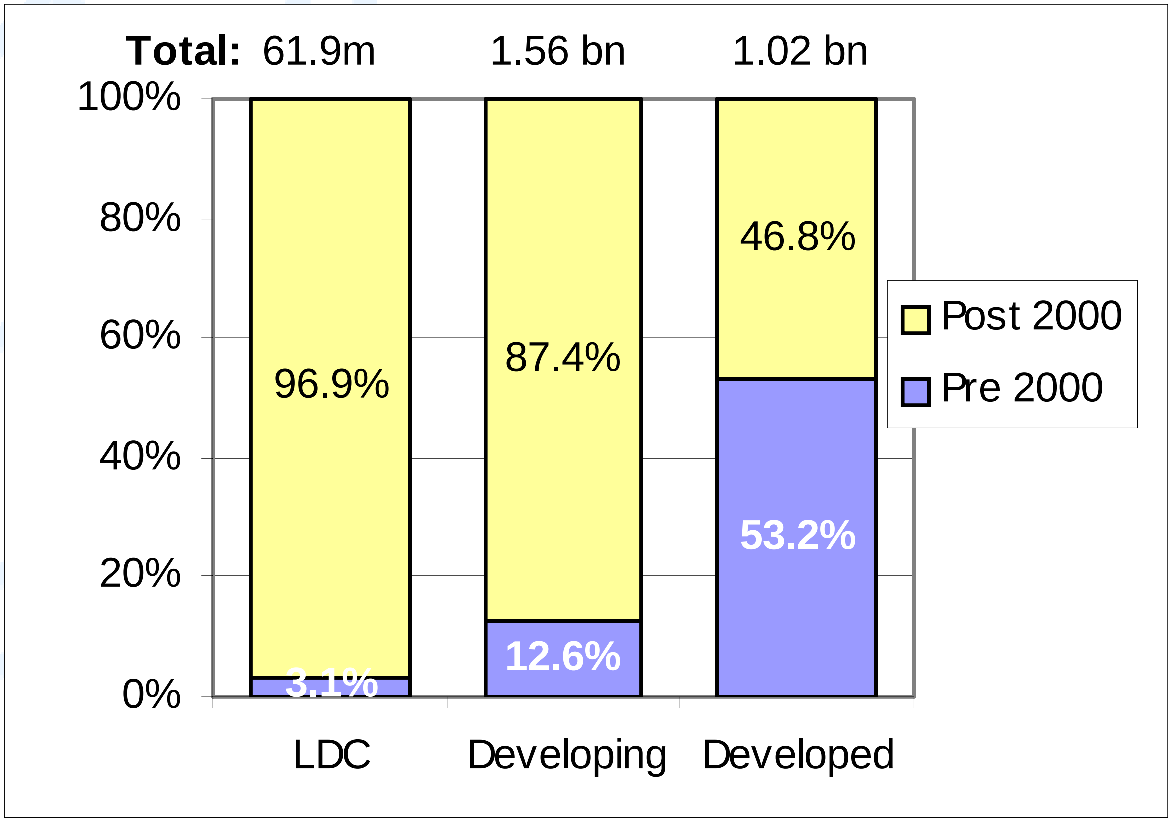


Source: ITU World Telecom Indicators Database.

NGN in developing countries

- More likely to be leveraged off mobile than fixed-line networks
- More likely to be a new build than an overlay

2006 Installed base of mobile users, pre and post 2000



Source: ITU World Telecom Indicators Database.

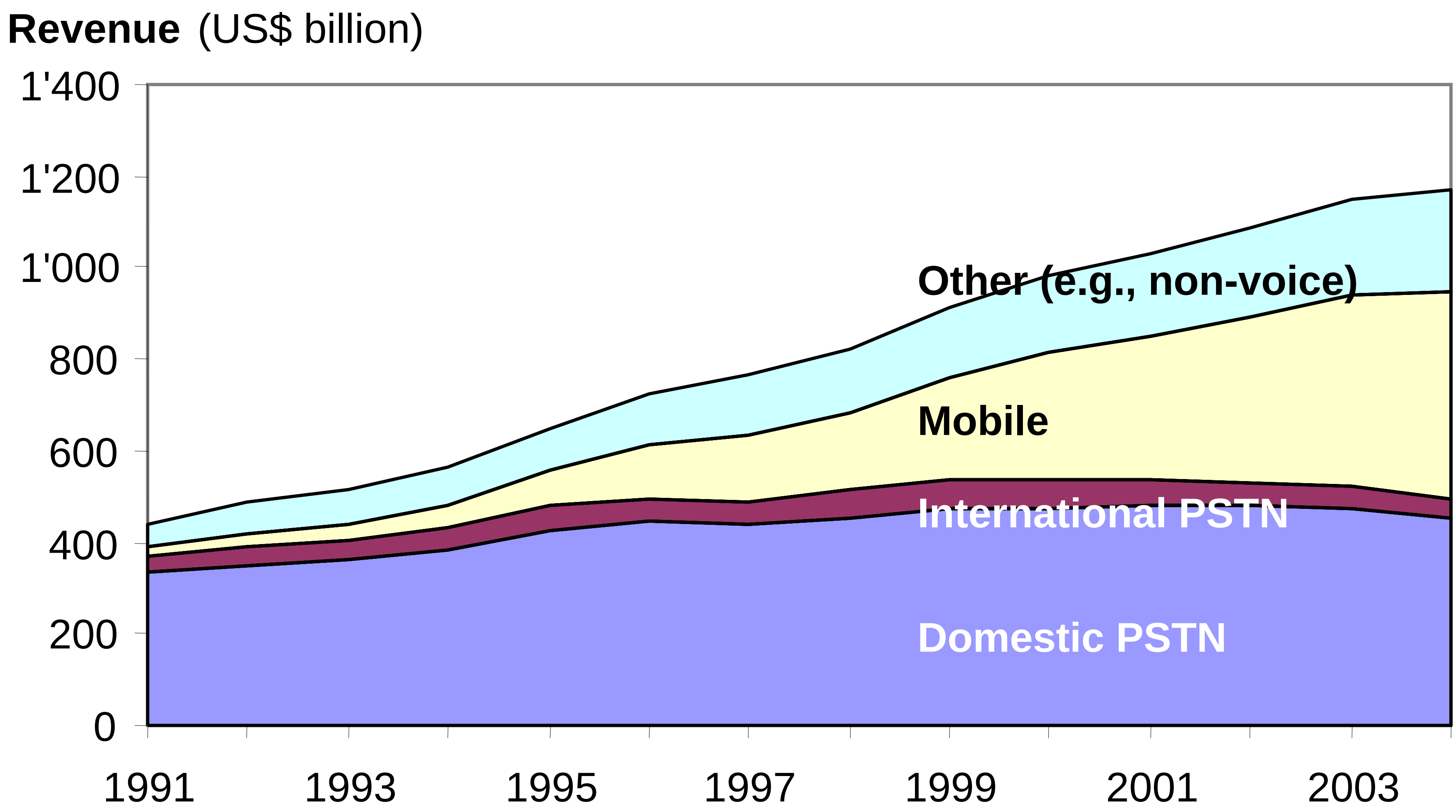
NGN in developing countries

- **More likely to be leveraged off mobile than fixed-line networks**
- **More likely to be a new build than an overlay**
- **More likely to be driven by cost savings**

Examples

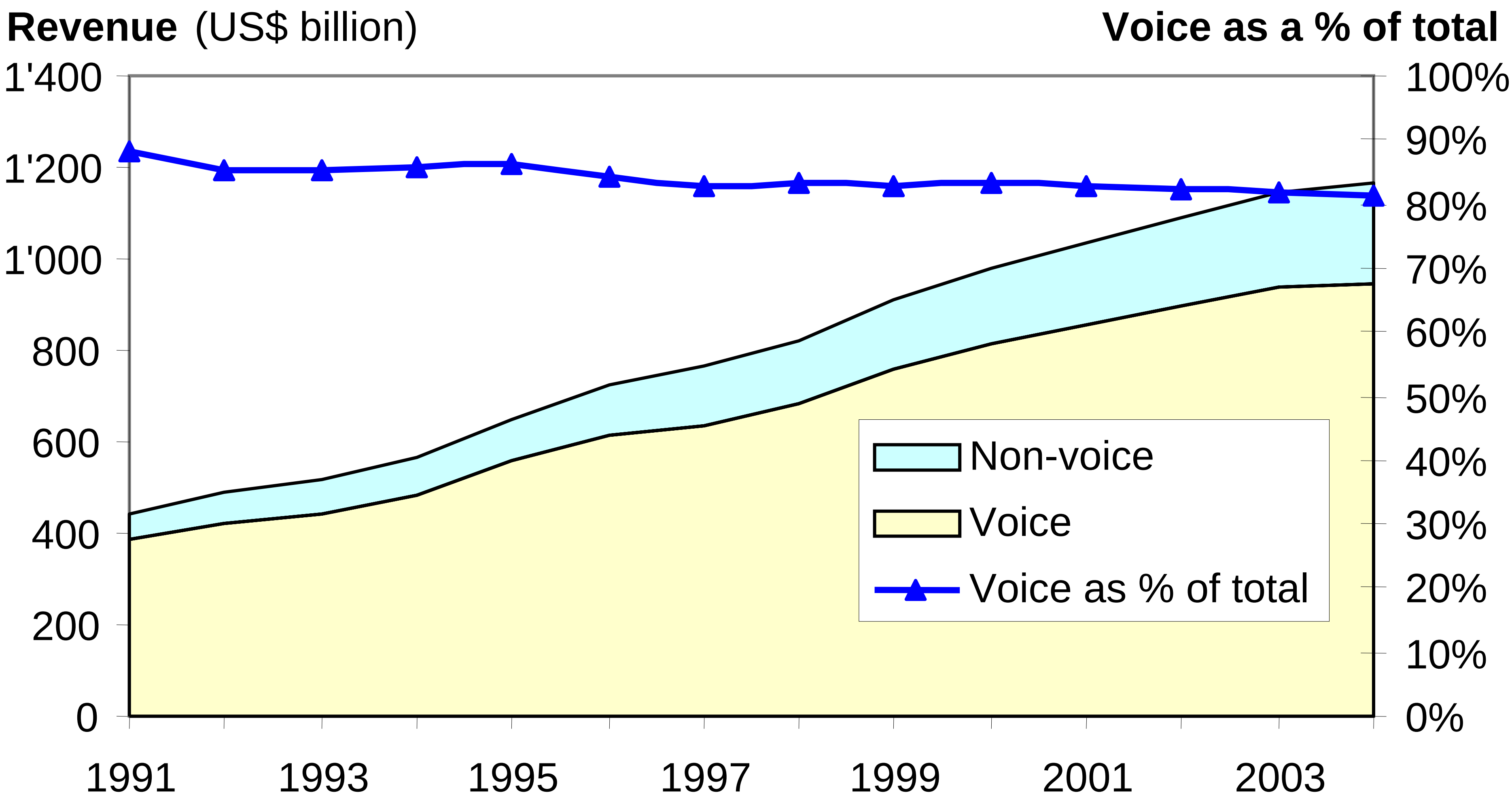
- **In Chile, VTR is offering triple play services to 2.2m residential subscribers**
- **In Sudan, Canar Communications has launched an IP-based NGN network in 2005, including voice and wireless Internet bundles**

Long-term telecom revenue trends



Source: ITU Information Society Statistics Database.

Revenues from voice-oriented networks are relatively stable as % of total telco revenue



Source: ITU Information Society Statistics Database.

Some regulatory challenges of NGNs

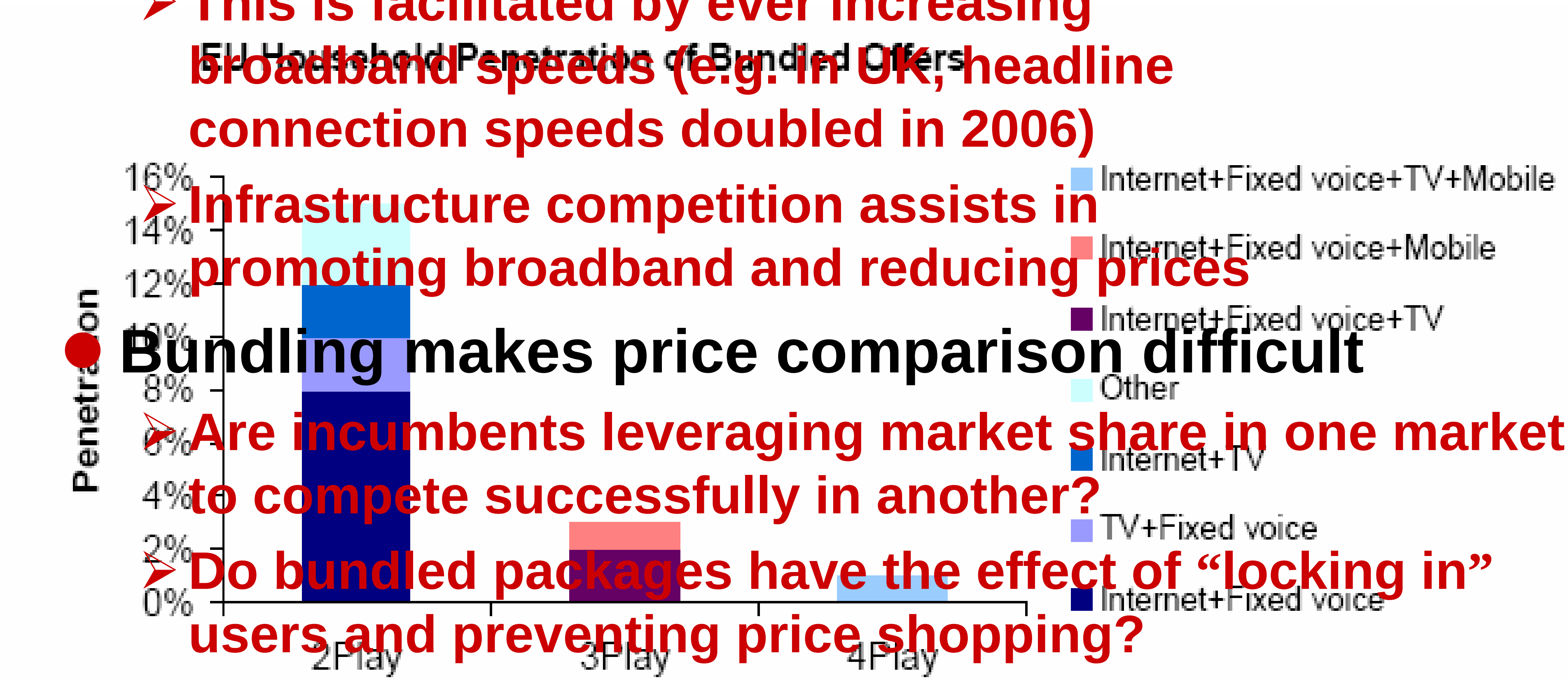
- **Pricing:** Will NGN offer prices that are significantly lower than those available today?
- **Bundling and billing:** How to distinguish the real price of services when they are bundled?
- **Interconnection:** Will current interconnection models (based on per-minute settlement) work in an NGN?
- **Security:** If much greater capacity is available at the edges of the network, how to guarantee security?
- **Investment:** Will unbundling discourage new infrastructural investment? Infrastructure sharing?
- **Traffic prioritization:** Is the Net really “neutral”?
- **Emergency services:** What level of universal service obligation to impose?
- **Competition policy:** Significant market power will not disappear in an NGN environment
- **Consultation:** compensation for stranded assets?
- **Identity management and privacy:** What rules for data retention?

Triple-play bundles: The example of Free.fr (Iliad)

- **Freebox: 29.99 Euros per month (US$40)**
- **ADSL2+ Internet up to 28 Mbit/s (down) 1Mbit/s (up)**
- **Unlimited VoIP calling to 49 countries worldwide (+domestic calls and line rental in France)**
- **100 video channels (+ 150 options)**
- **But … only available in France**

Regulatory implications of bundling

- Clear trend towards multiple-play
  - In EU, around 15% of households take a bundled package
  - This is facilitated by ever increasing broadband speeds (e.g. in UK, headline connection speeds doubled in 2006)
  - Infrastructure competition assists in promoting broadband and reducing prices
- Bundling makes price comparison difficult
  - Are incumbents leveraging market share in one market to compete successfully in another?
  - Do bundled packages have the effect of "locking in" users and preventing price shopping?



Source: EU Commission (12th report)

Source: OFCOM

Key issues for trade negotiators

- **Shift from circuit-switched to IP networks**
  - **Geographical locus of activity less relevant (reducing the effectiveness of national laws)**
  - **But, mobile interconnection & roaming still a hot issue**
- **Finite resources**
  - **Spectrum will be major source of wealth creation in coming century, and increasingly traded**
  - **Governance of numbering, addressing & ID resources**
  - **Trading of carbon-offsets using ICT networks**
- **Convergence**
  - **Network-specific regulations less relevant**

Relevant upcoming ITU events

- March 2009: 4th World Telecom Policy Forum
  - On theme of convergence and the impact of NGNs
  - Also covering Internet-related public policy issues, and other emerging policy issues
- 2012: World Conference on International Telecommunications (WCIT) ?
  - Treaty-making conference to revise International Telecommunication Regulations (ITRs)
  - ITRs includes (by reference) procedures for settlement of international telecom accounts
- 2015: Review of implementation of World Summit on the Information Society (WSIS)

Thank you.

For <u>more information</u>, see:

- **ITU Internet Reports 2007: Digital.Life at www.itu.int/digitallife**

- **ITU New Initiatives Workshop "What rules for IP-enabled NGNs?" (March 2006) at: http://www.itu.int/spu/ngn**

- **Trends in Telecom Reform: The road to NGN (2007) at: http://www.itu.int/ITU-D/treg/**