Regulatory challenges in new and emerging services

Dr Tim Kelly, Head, Standardization Policy Division (ITU-T)

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

The views expressed are those of the author and do not necessarily reflect those of the ITU or its membership. The author can be contacted by e-mail at tim.kelly@itu.int.
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
  - 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?

<table>
<thead>
<tr>
<th>Today’s PSTN network</th>
<th>Next Generation Networks</th>
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<tr>
<td>• Circuit-switched.</td>
<td>• Packet-based, based on Internet Protocol (IP).</td>
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<td>• Limited mobility of end-user services.</td>
<td>• Broad-based ‘generalised mobility’.</td>
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<td>• Vertical integration of application and call control layers, with dedicated networks.</td>
<td>• Horizontally-integrated control layers, with simultaneous delivery of applications. Service-related functions independent of transport-related technologies.</td>
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<td>• Non-responsive network.</td>
<td>• NGN will be able to identify and adapt to user needs in real-time.</td>
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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: OFCOM
Source: EU Commission (12th report)
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 more information, see:

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