ICT Market Growth Building on Regulatory, Market and Technology Developments

ICT Subscribers/Users, World

Level of competition in selected services and networks, World, 2006

Note: Service totals are cumulative.
Source: ITU Trends in Telecommunication Reform 2007: The Road to NGNs and ITU World Telecommunication Regulatory Database.
Rise of broadband

Top 25 broadband economies, by total number of subscribers, in millions, 2006

Source: ITU World Telecommunication/ICT Indicators database
Broadband goes mobile

Internet goes mobile but the global distribution has been very uneven

The designations employed and the presentation of material in this map do not imply any opinion whatsoever on the part of the ITU concerning the legal or other status of any country, territory or area or any endorsement or acceptance of any boundary.

Source: ITU Trends in Telecommunication Reform 2007: The Road to NGNs

September 2007
### ICT Overview – disparities between & within regions

**Asia-Pacific’s share of the global total for various services, 2006**

<table>
<thead>
<tr>
<th>Service</th>
<th>Developed</th>
<th>Developing</th>
<th>Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mobile subscribers</td>
<td>37.8%</td>
<td>43.2%</td>
<td>57.0%</td>
</tr>
<tr>
<td>Fixed lines</td>
<td>43.2%</td>
<td>5.4%</td>
<td>47.6%</td>
</tr>
<tr>
<td>Internet users</td>
<td>30.6%</td>
<td>9.5%</td>
<td>39.4%</td>
</tr>
<tr>
<td>Broadband subscribers</td>
<td>28.3%</td>
<td>10.9%</td>
<td>38.8%</td>
</tr>
</tbody>
</table>

**Europe & CIS’ share of the global total for various services, 2006**

<table>
<thead>
<tr>
<th>Service</th>
<th>Developed</th>
<th>Developing</th>
<th>Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mobile subscribers</td>
<td>11.2%</td>
<td>16.3%</td>
<td>29.1%</td>
</tr>
<tr>
<td>Fixed lines</td>
<td>7.5%</td>
<td>17.1%</td>
<td>26.2%</td>
</tr>
<tr>
<td>Internet users</td>
<td>6.4%</td>
<td>18.3%</td>
<td>26.0%</td>
</tr>
<tr>
<td>Broadband subscribers</td>
<td>3.8%</td>
<td>27.3%</td>
<td>31.8%</td>
</tr>
</tbody>
</table>

**Africa’s share of the global total for various services, 2006**

<table>
<thead>
<tr>
<th>Service</th>
<th>Developed</th>
<th>Developing</th>
<th>Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mobile subscribers</td>
<td>0.9%</td>
<td>4.5%</td>
<td>11.1%</td>
</tr>
<tr>
<td>Fixed lines</td>
<td>0.9%</td>
<td>2.1%</td>
<td></td>
</tr>
<tr>
<td>Internet users</td>
<td>2.1%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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Source: ITU Trends in Telecommunication Reform 2007: The Road to NGNs
What are NGNs?
ITU-T Definition of NGN (Y.2001)

- Next Generation Network (NGN): a packet-based network able to provide telecommunication services and able to make use of multiple broadband, QoS-enabled transport technologies and in which service-related functions are independent from underlying transport-related technologies.
- It enables unfettered access for users to networks and to competing service providers and/or services of their choice.
- It supports generalized mobility which will allow consistent and ubiquitous provision of services to users.

NGN currently has different meanings for different People.
On the road to NGN... a sector in transition

➔ From “one network, one service approach” to multi-service IP-native interoperable networks
➔ Convergence of IP-based networks with telephone, mobile and TV networks to build more efficient NGNs
➔ Reduced cost of deploying new networks that have more capabilities (voice, broadband, multi-media)
➔ Towards always on services: anywhere, anytime, anything
➔ Which are going to be the main drivers of the sector?
➔ What regulation in the NGN environment?
Role of regulatory authorities: to establish a sound enabling environment

Regulatory agencies, world (cumulative)

- 1990: 14
- 1995: 43
- 1998: 86
- 2000: 106
- 2002: 124
- 2004: 137
- 2007: 148

Source: ITU World Telecommunication Regulatory Database, www.itu.int/icteye
Is the Regulatory Framework Ready for NGN and Convergence?

Checklist of Issues for Regulators to Consider:

1) Does the regulatory framework present any market entry barriers?
2) Does the current licensing framework facilitate different services over different platforms (i.e., technology neutrality)?
3) How are VoIP and other IP-based services regulated?
4) What are the regulatory policies for these new technologies and services with regard to numbering, spectrum, interconnection, universal service, and rights of ways and shared deployment?
5) Does the regulatory framework promote diversification of access networks?
6) Are institutional and structural changes of the regulatory authority required to address an NGN environment?
7) Does the regulatory framework encourage and facilitate public (municipal) initiatives?
NGN early adopters: different paths to NGN

- **Chile**: IP NGN network to deploy triple play services
- **France**: PSTN to FTTH for IPTV
- **Japan**: NGN for data-rich communications
- **Bahrain**: NGN to enable VoIP & IPTV
- **Sudan**: NGN to provide 3G wireless broadband Internet services
On the road to next-generation regulation
Regulators Roadmap to address NGN migration and meet the WSIS goals

“An enabling regulatory regime can foster innovation, investment and affordable access to NGNs and facilitate migration to NGNs”

- Establish forward-looking regulatory regimes
- Recognizing the need for regulatory flexibility and technology neutrality
- Removing undue regulatory barriers to competition and innovation
- Establish investment-friendly regulation while maintaining a level playing field and protecting consumer interests

The best practice guidelines cover as well authorization, access, interconnection, numbering and NGN identification systems, universal access, quality of service, consumer awareness, security and protection.

GSR 2007 Best Practice Guidelines for Next-Generation Networks Migration
Now launching:
Trends in Telecommunication Reform 2007: The Road to NGN

- Chapter 1: Market Trends
- Chapter 2: NGN - A Regulation Overview
- Chapter 3: Next-Generation Networking Technology
- Chapter 4: Fixed-Mobile Convergence
- Chapter 5: Interconnection in an IP-based NGN environment
- Chapter 6: International Interconnection, NGN and ICT Development
- Chapter 7: NGN & Universal Access
- Chapter 8: Consumer Protection and Quality of Service
- Chapter 9: Enabling Environment for NGN

www.itu.int/ITU-D/treg
Thank you!

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