What regulatory paradigm for IP-enabled NGNs?

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Agenda

- TeleCommunications in Transition
- What are IP-enabled NGNs?
- Different Visions - Common Goals
- National, Regional and International Proceedings
- New and Emerging Markets
- Interconnection in IP Environment
- Open Character and Reality
- Next Generation Universal Service
TeleCommunication Sector in Transition

- Migration to the IP-environment
  - Fixed telecommunications
    - Incumbents: British Telecom, DT AG, KPN
    - Newcomers: Dialog, Metropolitan Networks
  - Wireless communications
    - Mobile telecommunications: from 2G to 4G
    - WiFi, MiMax
  - Cable TV
  - Broadcasting
  - Service and content providers

- Strengthened process of convergence
  - Technology, Market
  - Services, Institutional

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<th>Multi-facility competition</th>
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<td>Service compet.</td>
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- Regulatory Implications
TeleCommunication Sector in Transition

- Meaning and character of communications
  - Voice, Video, Data, SoD

- New sell and prices strategies coming from IP-enabled flexibility on operational level
  - NGS: N-play services
  - Falling prices of communication services and access
  - Traditional services lose strategic meaning
  - Personalization and customization

- Regulation
  - Less regulation / blurred boundaries
  - Migration from vertical to horizontal approach
  - Technological neutrality becomes meaningful
**NGN: Global issue**

**Challenges**
- Multimedia
- Generalized mobility
- Convergence
- Integrity
- Multi-layer orientation
- Open character

**ITU-T SG 13: Rec. Y.2001**

A NGN is 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: Global issue

Regulatory considerations

- Three background papers
  - Ruling new and emerging markets
  - Interconnection in an IP-enabled NGN Environment
  - Universal Service in an IP-enabled NGN Environment

- Regulatory proceedings
  - National, Regional, International level

Study Group 1

- Tariff policies, tariff models and methods of determining the costs of services on national telecommunication networks, including next-generation networks
- Regulatory impact of next generation networks on interconnection

http://www.itu.int/osg/spu/ngn/
NGNs as a national issue

- Broad framework on interconnections and general regulatory framework
  - United Kingdom: Interconnection and Developing
  - India: Recommendations on Issues pertaining to Next Generation Networks
  - USA: Hearing on network neutrality

- Selected issues
  - Germany: e.g. IP Interconnection
  - Netherlands: e.g. Emerging markets

- Advisory forums
  - Australia: Industry Forum to Advise on Convergence Issues
  - Japan: Next Generation Network promotion forum
  - UK: NGN Industry Body
  - India: Joint Consultative Committee & NGN Coordination Committee
Needs for a new regulatory paradigm under regional and intl. discussion

- ERG: 2006 Common Positions
  - Principles for IP interconnection
  - Regulatory principles for NGNs

- CEPT
  - Consultations on interconnection model
  - Many activities related to non-economic regulation

- CITEL and APEC-TEL
  - Convergence, NGN, VoIP

- OECD
  - Studies on IP related issues

- WTO
  - First considerations on Agreement on Basic telecommunications

- ITU
  - Global discussion
  - What rules on the IP-enabled NGNs? (March 2006)
New and emerging markets

- SMP concept
  - Fundamental regulatory questions confronted with long term goals of the economic and industrial policy
  - Discussion on implications of the regulatory holidays

- Relevant markets
  - Wholesale - New access technologies do influence in particular broadband definitions
  - Retail - all market may be redefined

- New balance between ex-ante regulations and ex post remedies

- Effectiveness of self correcting forces in a competitive marketplace
Interconnection in IP environment

- Distinctions in periods
  - Transitional and mature

- Competition oriented regulation
  - It is possible that in NGN environment the intervention in setting the interconnection agreements will be smaller

- New model?
  - Conflict between technology independence, cost based regulation, and significant market power. For the migration phase zero or low rate model for call termination may be advantageous. In the long term new model (see ECC 2005) with full separation of services provision and connectivity.
Open character and reality

- Telco Model versus Internet Model
- Similar to the internet
  - NGN offers horizontally integrated model with separated NGN services and NGN Transport layer
- Market structure
  - Very different
- Who determines the openness
  - Vertically integrated services and network operators together with regulatory obligations
- Meaning of the content providers still underestimated in the discussion
Next Generation Universal Service

- Definition of the universal service and the scope of the services to be included
  - Inclusion of the broadband in Europe triggered very difficult debate

- Possible change of approach
  - Migration to the universal access approach

- Unified prices and affordability

- NGN is much more efficient
  - CAPEX and OPEX up to 40% lower
  - More services on the network

- Universal service funds
  - Possible sources of financing

- Customer protection
Customer interests protection

- Universal service and access
- Consumer emergency calls (E112/E911)
- Consumer protection and privacy (e.g. SPAM, SPIM)
- Quality of services
- Authenticated caller or sender identification
- Disability assistance
- Data protection and privacy issues
Conclusions

- NGN will bring **significant changes** for the regulatory framework
- The changes will be implemented rather in a way of **natural evolution** then drastic revolution
- **Competition** is key to the NGN; on the other hand NGN fosters competition
  - new entrance opportunities for operating companies as well as newcomers / NGN creates new markets and reinforce position of some market players
- New balance between ex-ante regulations and ex post remedies
Conclusions

- Effectiveness of self correcting forces in a competitive marketplace
- The tempo of the NGN deployment depends on effective regulation
- Regulatory proceeding determine incentives to invest for both new entrants and incumbents
- Regulatory policy should take into account the dynamic efficiencies to be achieved in the ICT sector
- Balance between facility based competition and service based competition should be preserved
Implications for developing countries

- NGNs may **develop much faster** in countries with poor infrastructure
- Regulatory **harmonization** and pro-active participation in the debate on the future regulatory paradigm is crucial
- It diminishes **investment risk** that is very high in developing economies anyway

Please do not wait and give your voice to this debate!
Thank you very much for your attention

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Resources

- Full version of this presentation and others focusing on NGN: www.itu.int/osg/spu/presentations/

- NGN regulatory and policy resources: http://www.itu.int/osg/spu/ngn/ngn-policy-regulatory-resources.html

- ITU activities on NGN: www.itu.int/spu/ngn
ITU’s Strategy and Policy Unit

- New Initiatives Programme
  - Digital Bridges (2005)
  - Ubiquitous Network Societies (2005)
  - Today’s Networks Tomorrow (2005)
  - Future of Voice (2007)

- Many other activities... [http://www.itu.int/spu](http://www.itu.int/spu)