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

Multi-facility competition

Service compet.

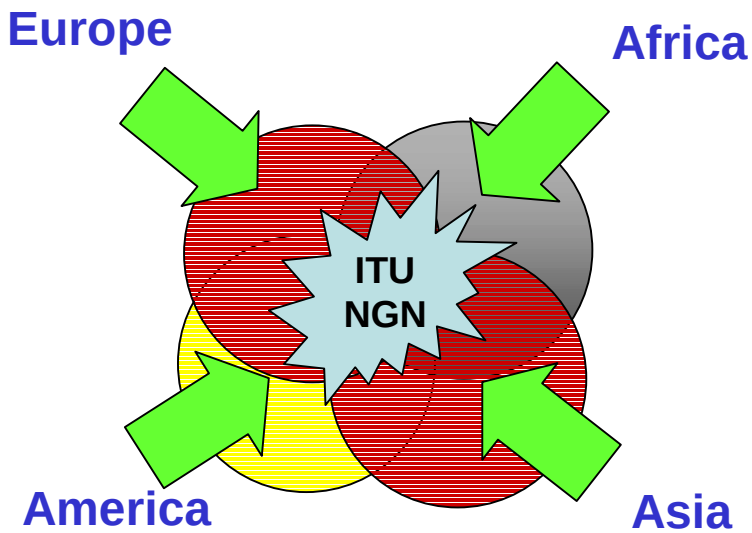
- Strengthened process of convergence
  - Technology, Market
  - Services, Institutional

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

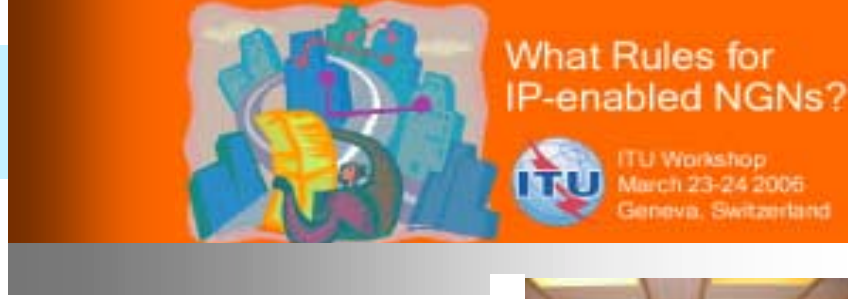
A NGN is a **packet-based network** able to provide telecommunication services and able to make use of **multiple broadband**, **QoS-enabled** transport technologies and in which **service-related functions** are **independent** from underlying **transport-related technologies**. It enables **unfettered 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.

FG NGN →

NEXT GENERATION NETWORK
NGN-GSI
GLOBAL STANDARDS INITIATIVE ITU-T

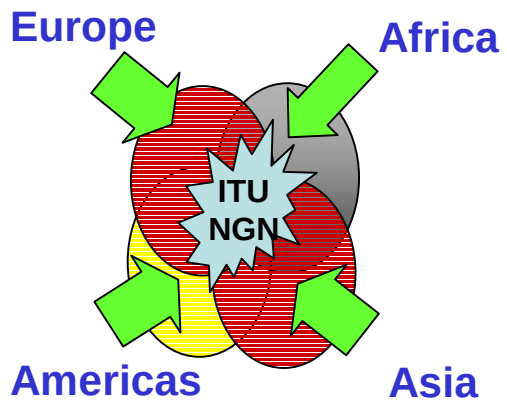
SG: 11, 13, 19, 2, 12, 16, 17

NGN: Global issue



Regulatory considerations

- Three background papers
  - Rulling new and emerging marekts
  - 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

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 contnet 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 the 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 paradigme 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)
  - What Rules for IP-enabled NGNs? (2006)
  - Digital Transformations in the Information Society (2006)
  - Regulatory Environment for Future Mobile Multimedia Services (2006)
  - Future of Voice (2007)
- Many other activities... **http://www.itu.int/spu**