



# **IP and NGN Projects in ITU-T**

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# ITU-T activities on IP

- o SG13 is responsible for studies relating to interworking of heterogeneous networks encompassing multiple domains, multiple protocols and innovative technologies with a goal to deliver high-quality, reliable networking. SG13 is also Lead Study Group for IP related studies.
- o As such, SG13 has developed **an ITU-T IP Project** with the objective to cover all ITU activities on IP standardization.
- o The IP Project has **a strong link with IETF**:
  - To avoid duplication of work and divergent standards
  - To collaborate where appropriate



# IP Project

- o The IP Project is defined in the Project description document
- o Current version 7 has been issued in Nov 2002  
(*ITU website <http://www.itu.int/ITU-T/studygroups/com13/ip/index.html>*)
- o The IP Project is divided in **13 work areas** :
  - Area 1 - Integrated architecture
  - Area 2 - Impact to telecommunications access infrastructures of access to IP applications
  - Area 3 - Interworking between IP based network and switched-circuit networks, including wireless-based networks
  - Area 4 - Multimedia applications over IP
  - Area 5 - Numbering and addressing



# IP Project

- Area 6 - Transport for IP-structured signals
- Area 7 - Signalling support, IN and routing for services on IP-based networks
- Area 8 - Performance
- Area 9 - Integrated management of telecom and IP-based networks
- Area 10 - Security aspects
- Area 11 - Network capabilities including requirements for resource management
- Area 12 - Operations and Maintenance (OAM) for IP
- Area 13 - Utilisation of IP v6 in telecommunication networks



# Satellite aspects in IP Project

- o There is no area dedicated to satellites in the IP Project, but satellite issues are addressed in specific areas :
  - Area 1 : architectural aspects (application of satellites in the evolving network environments)
  - Area 2 : issues related to access to IP applications via satellite
  - Area 6 : efficient ATM multicasting on satellite
  - Area 13 : IPv6 satellite access network



# NGN 2004 Project

- o NGN (Next Generation Network) is a concept widely used by network designers to describe future networks which should cope with the emerging situation in telecommunications :
  - Open competition, total deregulation of markets,
  - Explosion of data traffic due to the general use of Internet,
  - User demand for new multimedia services and for mobility...
- o SG13 decided in Feb. 2002 to start the preparation of a new ITU Project on NGN, with the objective to respond to the demand from the market for standards, on a worldwide basis.



# NGN 2004 Project

- o The Project should cover all ITU activities on NGN standardisation, with active collaboration of involved SGs -> Target date for first set of Recommendations on NGN is **mid-2004** (end of study period)
- o The view of SG13 that the NGN should be seen as **the concrete realisation of GII** (Global Information Infrastructure) concepts which are defined in Recommendations from the Y series
- o The Project has been launched at the SG13 meeting in Nov. 2002, where a Project description document has been prepared  
(*ITU website <http://www.itu.int/ITU-T/studygroups/com13/ngn2004/index.html> )*)



# NGN 2004 Project

- o A first task identified is to establish a common definition of "NGN"
- o **Fundamental characteristics** are proposed for defining NGN :
  1. Packet-based transfer
  2. Separation of control functions for bearer - call/session - service application
  3. Decoupling of services and network, provision of open interfaces
  4. Support for a wide range of services (RT/ streaming/ non-RT/ multimedia)
  5. Broadband capabilities with end to end transparency, including access network utilization considerations
  6. Interworking with legacy networks
  7. Generalized mobility
  8. Unfettered access from users to competing SPs and services





# NGN 2004 Project

o **Objectives** for NGN 2004 Project are:

- Promote fair competition
- Encourage private investment
- Meet various regulatory requirements
- Provide open access networks
- Ensure universal provision of and access to services
- Promote equality of opportunity to the citizen
- Promote diversity of content
- Recognize necessity of worldwide cooperation



# NGN 2004 Project

- o A list of **capabilities of NGN** is provided:
  - Creation, deployment and management of all kinds of services using all kinds of media
  - Architecture reflecting a clear decoupling between service functions and transport
  - Functional entities controlling policy, sessions, media, resources, service delivery and security to be distributed over the infrastructure
  - Interworking between NGN and existing networks to be based on gateways
  - Support of existing and NGN aware terminals
  - Migration of voice services with QoS and security
  - Generalized mobility (users and terminals)



# NGN 2004 Project

- **Seven study areas** have been identified in the Project  
:
  1. General framework models for the NGN
  2. Functional architecture models for the NGN
  3. End to end Quality of Service
  4. Service platforms (APIs)
  5. Network management
  6. Security
  7. Generalized mobility



# Satellite aspects in NGN 2004 Project

- o In the draft version of the NGN 2004 Project description document, satellite aspects are not clearly addressed, because the description of study areas is still very general at this stage.
- o The draft has been transmitted to all concerned Study Groups in T and R sectors, with the goal to encourage their collaboration with SG13 on NGN.
- o Comments back are expected from them, in order to improve and to complete descriptions of study areas of the Project in their respective fields.
- o **As far as satellite aspects are concerned, outcomes from this Workshop will be taken into account, to better organize our future collaboration in the field IP/ NGN/ satellite.**



Thank you for your attention