International Telecommunication Union

ITU-T activities on NGN

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NGN in ITU-T (before 2004)

Main study groups addressing NGN:

- SG 11
  - Network Signalling and Control functional architectures in emerging NGN environments
  - Signalling and control requirements and protocols to support user attachment in NGN environments
- SG 13
  - Functional requirements, services and architectures
- Special Study Group
  - Vision for IMT-systems
  - Mobility Management
  - Convergence of Fixed and Mobile
- SG16 developed MM Services specifications directly applicable to NGN with the H.323 system, H.248 gateway control protocol, QoS, Security, Services & Applications
- N.B: <u>all</u> SGs have an "NGN" aspect in their work

Joint Rapporteurs Group on NGN (JRG-NGN)

- 4 meetings held in 2003-2004
  - last meeting in June 04
- 11 Recommendations developed
- 2 mailing lists opened to non-ITU-T members

Establishment of the ITU-T Focus Group on NGN

- Following consultations in early 2004 the TSB Director issued a Circular in May 2004 announcing that an NGN Focus Group had been established
- The Circular announced the first meeting of the Focus Group in June 2004 and contained background to the decision, a draft terms of reference and elaboration of the work areas of the Focus Group

Focus Group on NGN (1of 2)

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Terms of Reference

- Nomadicity architecture supporting broadband xDSL access
- NGN activities on QoS Signalling
- IP QoS Signalling requirements
- Authentication
- Security

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Focus Group on NGN (2 of 2)

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- Addressed the market needs for NGN standards
- Created in May 2004 to tackle NGN studies
- Goal – to produce global standards for NGN
- Lifetime 1,5 year
- Reported to TSB Director
- Inherited ~ 11 draft Recommendations from JRG NGN
- Operated in compliance with Recommendation A.7
- Inaugural meeting June 2004, Geneva
- Paperless meetings
- First meeting documents are public available

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WTSA Decisions (October 2004)

- Prior to the WTSA the NGN work had a narrow focus in the ITU-T – now much of the work is centred on NGN
- Study Group 13 (SG NGN) was established by the WTSA to lead the NGN studies including the coordination of NGN-related activities across the relevant study groups
- It also became the parent of the NGN Focus Group which since its inception in May 2004 had reported to the TSB Director

NGN Work Planning and Coordination

- Study Group 13 is developing a Release plan for the ITU-T NGN Recs indicating where the work is being or to be done and by when. (The deliverables being prepared by the NGN Focus Group form an input to the preparation of ITU-T Recs.)
- Web based project management tool is available at www.itu.int/ngnproject/
- Ongoing involvement of other SDOs and regional standards organisations in the NGN planning and standards development activities is essential

Release Concept

A Release is a method of prioritizing by identifying a set of services to be addressed in a certain time frame. The work is progressed by defining the service requirements and capabilities needed to realize the services in addition to defining other associated capabilities as needed to facilitate a NGN in a first Release. The adoption of a release-based approach does not prevent other work, such as the development of more generic (release independent) capabilities, and the collation of services, requirements and issues for later releases.

Next Steps

The May 2005 Study Group 13 meeting agreed the following:

- The NGN Focus Group to continue until the end of 2005 in order to complete, as far as possible, its current work. Then the NGN Focus Group will be closed (by end of 2005).
- All the work in progress will be distributed among the existing SGs

Selected deliverables of FG NGN

- General aspects of QoS and network performance in NGN
- NGN Release 1 Scope
- NGN Release 1 requirements
- Requirements & Architecture for NGN
- Functional Requirements for NGN Mobility
- IMS for Next Generation Networks (IFN)
- Requirements and framework for end-to-end QoS in NGN
- Resource and admission control functions
- Performance measurement and management for NGN
- Signalling requirements for IP QoS
- Security Requirements for Release 1
- Evolution of Networks to NGN
- Guidelines for NGN Security
- Problem Statement
- High Level Architecture
- Candidate Technologies

From NGN FG to NGN-GSI

TSB Circular 47, September 2005, announced

"NGN Global Standards Initiative (NGN-GSI)"

to

replace "NGN FG"

<u>Goal:</u> to further strengthen the ITU-T's leading role in NGN standard work

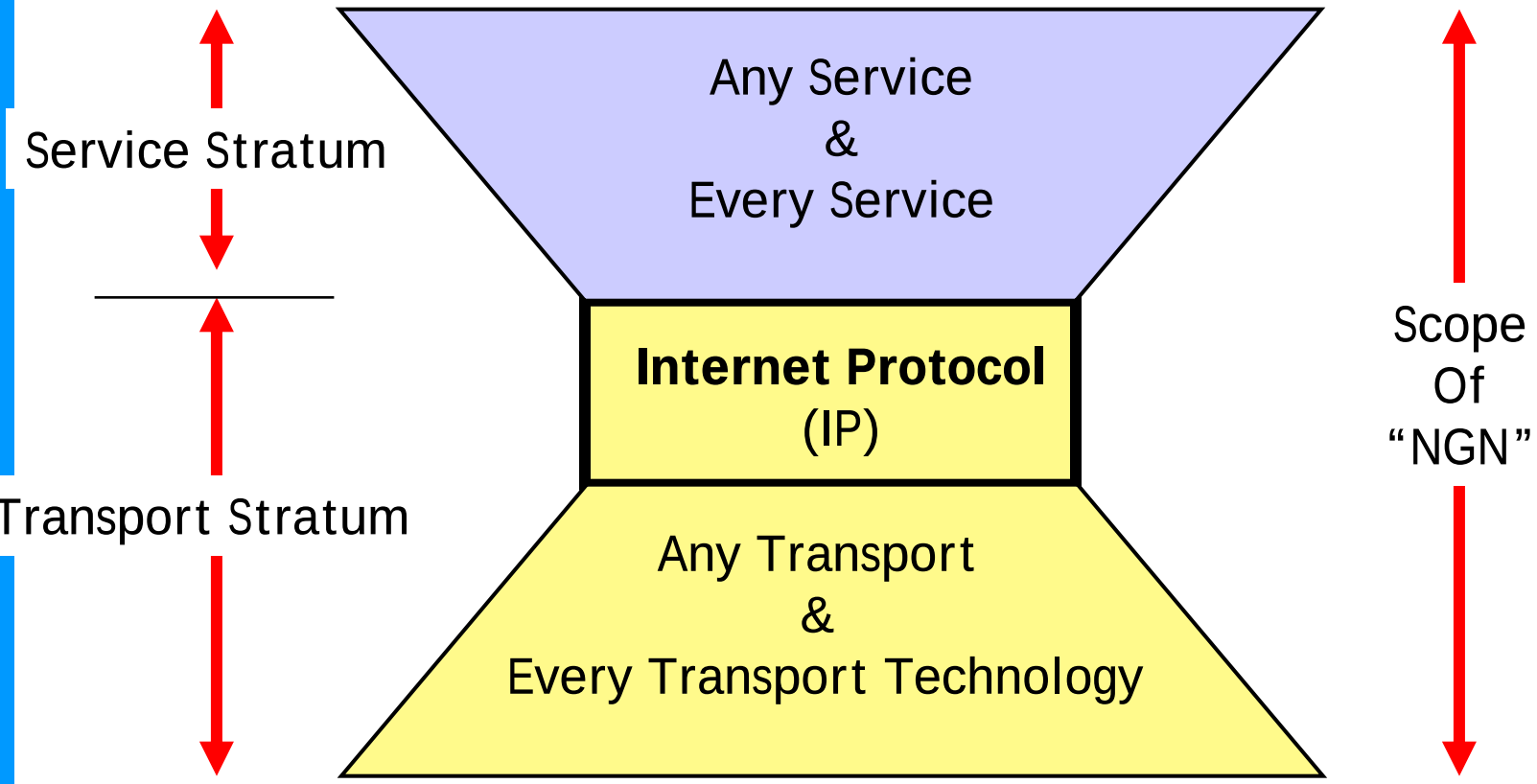
NGN-GSI

- **Four meetings per year:**
  - **Meeting of Study Groups 11, 13 and 19**
  - **Co-located Rapporteur groups of SGs 12, 16 and 17 and SGs 11, 13 and 19**
- **Is coordinated by NGN-JCA (Joint Coordination Activity)**
- **JCA consists of management teams of SGs 11, 13 and 19**

The Transformed Network

- Always on
- Anytime, anywhere and in any form
- Voice and multimedia
- Self service, intuitive
- Simple for the end user
- Secure, trusted and reliable

NGN in general



Other ITU-T initiatives in relation with NGN

- NGNMFG
- IPTV
  - IPTV Focus Group established in April 2006
  - IPTV GSI established in Dec 2007
- Network aspects of Identification systems
  - Joint Coordination Activity (JCA NID) established in July 2006
  - Extended in 2007 to include sensor networking
- Identity Management (IdM)
  - IdM Focus Group established in Dec 2006
  - GSI on IdM established in Dec 2007
- Home Networking
  - JCA HN established in March 2005

SG 13, January 2008 results

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Y.2000–Y.2099 – Frameworks and functional architecture models

Y.2006	Description of capability set 1 of NGN release 1
Y.2012 C1	Functional requirements and architecture of the NGN, Corrigendum 1
Y.2012 A1	Functional requirements and architecture of the NGN, New Appendix III, Instantiation of NGN reference points
Y.2014	Network attachment control functions in Next Generation Networks
Y.2051	General overview of IPv6-based NGN
Y.2052	Framework of multi-homing in IPv6-based NGN
Y.2053	Functional requirements for IPv6 migration in NGN
Y.2054	Framework to support signalling for IPv6-based NGN
Y.2091	Terms and definitions for Next Generation Networks

Y.2200–Y.2249 – Service aspects: Service capabilities and service architecture

Y.2205	Next Generation Networks – Emergency telecommunications – Technical considerations
Y.2212	Requirements of managed delivery services

Y.2700–Y.2799 – Security

Y.2702	NGN authentication and authorization requirements

Y.2800–Y.2899 – Generalized mobility

Q.1707/ Y.2804	Generic framework of mobility management for Next Generation Networks

Supplement 3 to Y-series Recs – ITU-T Y.2000-series, Supplement on service scenarios for convergence services in a multiple network and application service provider environment

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SG 13, May 2008 results

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Y.1900-Y.1999 – IPTV

Y.1910	IPTV architecture

Y.2100–Y.2199 – Quality of Service and performance

Y.2173	Management of performance measurement for NGN
Y.2174	Distributed RACF Architecture for MPLS Networks

Y.2200–Y.2249 – Service aspects: Service capabilities and service architecture

Y.2213	NGN service requirements and capabilities for network aspects of applications and services using tag-based identification
Y.2234	Open service environment capabilities for NGN applications

Y.2900–Y.2999 –

Y.2902 A1	Y,2902, Carrier grade open environment components, Annex A - The diameter client CGOE component
Y.2902 A2	Y.2902, Carrier grade open environment components, Annex B - The diameter server CGOE component

Supplement 5 to Y-series Recommendations – ITU-T Y.1900-series, Supplement on IPTV service use cases

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For more information, please visit our web site http://www.itu.int

1. SG 13 web page

   http://www.itu.int/ITU-T/studygroups/com13/index.asp

2. NGN GSI web page

   http://www.itu.int/ITU-T/ngn/

3. NGN Project management tool web page

   http://www.itu.int/ngnproject/

4. NGNMFG web page

   http://www.itu.int/ITU-T/studygroups/com04/ngn-mfg/index.html

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Tashkent, Uzbekistan, 11 June 2008