



ITU-T Workshop

on NGN and its Transport Networks

KOBE, JAPAN, 20-21 APRIL 2006

Introduction

An ITU-T workshop – NGN and its Transport Networks – will take place at the International Conference Center Kobe (ICCK), Japan, from 20 to 21 April 2006. This workshop is organized by ITU-T, hosted by the ITU Association of Japan (NGN Japan Host Committee) and supported by the Ministry of Internal Affairs and Communications (Japan).

NGN standardization work is now well under way in ITU-T and other SDOs. Following the success of the NGN Focus Group and the establishment of the NGN Global Standards Initiative (NGN-GSI) in ITU-T, this workshop will be an opportunity to review the status of the work, identify technology trends, and provide a framework for moving forward standardization work.

This event will provide an overview of the architecture, performance and transport aspects of NGN as well as the market drivers and challenges. Particular emphasis will be given to network technologies, standards that address architecture and the performance aspects of NGN and transport network aspects to support NGN services.

Objectives

- Review the status of the work, especially of Study Groups 13 and 15
- Identify current and future technology trends
- Provide a framework for moving forward standardization work

Exhibition

An exhibition will be running alongside the workshop where the latest technologies related to NGN in Japan will be displayed. This exhibition will be held in the Reception Hall on the 3rd floor of the International Conference Center Kobe from 20 to 21 April 2006.

For more information please see:

<http://www.itu.int/ITU-T/worksem/ngn/200604/index.html>

ITU-T Workshop

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Advance Programme

DAY 1, 20 APRIL 2006

09:00–10:30 SESSION 1: OPENING SESSION

Chairmen: Yoichi MAEDA and Brian MOORE (SG15 and SG13 Chairmen)

Objectives: This session will provide an introduction to the workshop and give an overview of the current developments of NGN-related standards. It will also provide experiences of NGN strategic promotion and network deployment experiences in one of the most advanced countries in terms of broadband network services.

- *Welcome address* – Hiroshi MATSUI (President of the ITU Association of Japan)
- *Opening remarks* – Houlin ZHAO (TSB Director)
- *Key note 1: Japanese strategy for NGN* – Masao MATSUMOTO (Director-General for Technology Policy Coordination of MIC, Japan)
- *Key note 2: Broadband service deployment experiences in Japan* – Yuji INOUE (Chief Technology Officer of NTT)
- *NGN standards overview and workshop objectives* – Chae-sub LEE (FGNGN Chairman)
- *ITU-T standards overview: NGN and its transport networks*
 - *ITU-T SG13 activities on the NGN and its Transport Networks* – Brian MOORE (SG13 Chairman)
 - *ITU-T SG15 activities on the NGN and its Transport Networks* – Yoichi MAEDA (SG15 Chairman)

10:30–11:00 COFFEE BREAK

11:00–12:30 SESSION 2: NGN ARCHITECTURE AND REQUIREMENTS

Chairman: Naotaka MORITA (SG13 Vice-Chairman)

Objectives: This session will review and examine service requirements and capabilities of NGN and its architectural aspects, which were developed by NGN-related groups such as the FGNGN, TISPAN and OMA. Based on the review and examination of the NGN architecture and requirements, the session will discuss and investigate future issues for the realization of NGN. This investigation will also include discussions on the relationship with transport technologies, e.g. service vs transport and access vs core in NGN architecture and requirements.

- *Service requirements and capabilities* – Marco CARUGI (Nortel Europe)
- *NGN: Basic Architecture & Interesting Issues* – Keith KNIGHTSON (Canada)
- *IMS-based NGN Architecture and its application* – Dick KNIGHT (BT, UK)
- *Mobile Applications and Services for NGN networks* – Anett SCHUELKE (NEC Europe, Germany)

12:30–14:00 LUNCH BREAK

14:00–15:30 SESSION 3: NETWORK QoS AND CONTROL

Chairman: Neal SEITZ (SG13 Vice-Chairman)

Objectives: This session will summarize Quality of Service (QoS) and resource control requirements for NGNs, and how those requirements are being addressed in international standards and emerging networks. The session will focus on the “upper layer” controls enabling individual IP packet flows to be established, across IP router networks, among end users and application service providers. It will also explore how upper layer controls may interact with “lower layer” controls, enabling aggregate flows to be established, across optical transport networks, among IP router networks operating as OTN clients.

- *Resource and admission control for NGN* – Hui-Lan LU (Lucent, USA)
- *NGN QoS control architecture and protocols* – Keith MAINWARING (Cisco, USA)
- *Identification and Specification of NGN Service and Control Requirements* – Tobey TRYGAR (Telcordia, USA)
- *NGN OAM Capabilities* – Dinesh MOHAN (Nortel, Canada)

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15:30–16:00 COFFEE BREAK

16:00–18:00 SESSION 4: TRANSPORT NETWORK CONTROL: ASON, GMPLS AND CONTROL PLANE MANAGEMENT

Chairman: Steve TROWBRIDGE (SG15 Vice-Chairman)

Objectives: This session will cover the key control plane technologies that are employed in the evolution to intelligent optical and SDH networks which support the transport layers for NGN. Presentations topics include: business drivers for control plane deployment; IETF activities on development of the base protocols; and control plane signalling, routing and management, including an introduction to the relevant standards.

- *Business drivers* – **Alan McGUIRE** (BT, UK)
- *IETF – base protocols* – **Adrian FARREL** (IETF ccamp co-chair, UK)
- *Distributed Signalling and Multiple Transport Layers* – **Stephen SHEW** (Nortel, Canada)
- *Routing* – **Jonathan SADLER** (Tellabs, USA)
- *Management of ASON-capable Network and its Control Plane* – **Kam LAM** (Lucent, USA)

DAY 2, 21 APRIL 2006

09:00–10:30 SESSION 5: MARKET OPPORTUNITIES AND CHALLENGES

Chairman: Helmut SCHINK (SG13 Vice-Chairman)

Objectives: NGN provides a number of opportunities for various kinds of businesses. These include service providers, application providers, transport providers in the access and the backbone. It provides mechanisms to offer services to customers, residential end users, business users or re-sellers. Challenges arise from a number of sources like competition, cost of implementation, changing market places, complex migration scenarios and regulatory uncertainties. This session aims to provide a state-of-the-art overview on global trends with a focus on the Asia-Pacific region.

- *All-IP migration of telephone network and further evolution toward fixed-mobile network convergence* – **Yasunao MISAWA** (KDDI Corporation, Japan)
- *Opportunities and challenges for a global system vendor* – **John HARPER** (Cisco, USA)
- *Call server-based evolution scenario in China* – **Hui Ling ZHAO** (China Telecom, China)
- *Evolution from PSTN to NGN in China* – **Fan DONGYANG** (SCNB, China)

10:30–11:00 COFFEE BREAK

11:00–12:30 SESSION 6: BROADBAND ACCESS (VDSL ACCESS, PON ACCESS, CABLE ACCESS AND WiMAX)

Chairman: Andrew NUNN (SG15 Vice-Chairman)

Objectives: This session will cover some of the access network technologies that are being deployed to support broadband services and which are evolving to support emerging Next-Generation Networks. The session will provide an overview of VDSL, passive optical networks (PON), cable and WiMAX technologies, as well as an examination of relevant standards.

- *VDSL2 – taking broadband access evolution to the next level* – **Martin SCHENK** (Infineon Technology, Germany)
- *Technologies and applications of Passive Optical Networks (PON)* – **Yukio NAKANO** (Hitachi, Japan)
- *Broadband access technology and standardization for integrated cable TV networks* – **Naoyoshi NAKAMURA** (NHK, Japan)
- *IEEE802.16/WiMAX Broadband Wireless Access* – **Mitsuo NOHARA** (KDDI Corporation, Japan)

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12:30–14:00 LUNCH BREAK

14:00–15:30 **SESSION 7: DATA OVER TRANSPORT NETWORKS (ETHERNET/MPLS OVER TRANSPORT AND ENHANCED ETHERNET OAM)**

Chairman: Malcolm BETTS (SG15 Q.12 Rapporteur)

Objectives: This session will describe how Ethernet is being deployed in carrier networks today. The session will also describe some of the areas that are currently under active discussion in the IEEE and ITU-T. These enhancements, for example provider backbone bridges and OAM, improve the capabilities and manageability of Ethernet in carrier networks applications.

- *Ethernet Services over Transport MPLS* – **Italo BUSI** (Alcatel, Italy)
- *Highly Scalable Ethernets* – **Paul BOTTORFF** (Nortel, Canada)
- *Ethernet OAM and Protection Switching* – **Hiroshi OHTA** (NTT, Japan)
- *Next generation Ethernet network application* – **Alan McGUIRE** (BT, UK)

15:30–16:00 COFFEE BREAK

16:00–17:30 **SESSION 8: REVIEW AND CONCLUSION**

Chairmen: Brian MOORE and Yoichi MAEDA (SG13 and SG15 Chairmen)

Objectives: This session will give an overview of the workshop. It will draw the main conclusions and messages from the various sessions of the workshop and, in particular, identify key issues to be followed up and what new standards may be needed. It will also provide a final opportunity for questions and comments from the workshop participants.

Main conclusions:

- Messages for further activities by ITU-T
- New standards required

Chairmen's conclusion: All session chairmen will summarize the session discussions and will make proposals for future standardization activities.

For updated information, please see: www.itu.int/ITU-T/worksem/ngn

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Organized by:



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