

ITU/APT Workshop on NGN Planning
16 – 17 March 2007
Bangkok, Thailand

SUMMARY REPORT AND OUTCOMES

The Workshop on NGN Planning was jointly organized by the International Telecommunication Union (ITU) and the Asia-Pacific Telecommunity (APT) from 16 to 17 March 2007 in Bangkok, Thailand and followed the 12th ASTAP Forum. The Workshop was hosted by the Royal Government of Thailand. The Workshop was attended by 182 participants representing ITU Member States, ITU Sector Members, APT Members, APT Associate Members, APT Affiliate Members, International Organizations and others.

Session 1 (Opening Session):

The session was chaired by Mr. Ron Box.

The following addresses were delivered at the Opening Session:

Welcome Address by Mr. Kraisorn Pornsutee, Permanent Secretary, Ministry of Information and Communication Technology (MICT), Thailand.
(*Doc. No. ITU/APT-WS-NGN/07/04*)

Address by Mr. Amarendra Narayan, Executive Director – APT.
(*Doc. No. ITU/APT-WS-NGN/07/05*)

Address by Dr. Eun-Ju Kim, Head - ITU Regional Office for Asia and the Pacific.
(*Doc. No. ITU/APT-WS-NGN/07/06*)

Address by Dr. Bob Horton, Chairman – APT Standardization Program (ASTAP).
(*Doc. No. ITU/APT-WS-NGN/07/07*)

Address by Mr. Malcolm Johnson - Director, ITU TSB.
(*Doc. No. ITU/APT-WS-NGN/07/08*)

Session 2: Overview and Strategic Planning

The session was chaired by Mr. Kraisorn Pornsutee.

- 2.1 “Impacts of NGN and Future Direction” was presented by Mr. Chaesub Lee - ETRI, Republic of Korea. (*Doc. No. ITU/APT-WS-NGN/07/PP-01*)
- 2.2 “Regional Overview of NGN” was presented by Dr. Yuji Inoue - NTT, Japan. (*Doc. No. ITU/APT-WS-NGN/07/PP-02*)
- 2.3 “ASTAP NGN Activities” was presented by Dr. Joon Won Lee – TTA, Republic of Korea (*Doc. No. ITU/APT-WS-NGN/07/PP-03*)

- 2.4 “Convergence Strategy and Trends” was presented by Mr. Oscar Gonzalez Soto - ITU. (*Doc. No. ITU/APT-WS-NGN/07/PP-04*)

Session 3: Short, medium and long term planning and deployment of NGN

The session was chaired by Dr. Bob Horton.

- 3.1 “NGN Strategy for Developing Countries” was presented by Mr. Nguyen Quang Hung - MPT, Vietnam (*Doc. No. ITU/APT-WS-NGN/07/PP-05*)
- 3.2 “NGN Technologies and Solutions” was presented by Mr. Kaoru Kenyoshi - NEC, Japan. (*Doc... No. ITU/APT-WS-NGN/07/PP-06*)
- 3.3 “NGN Evolution beyond Distributed Architecture” was presented by Mr. Laurent Perche, Alcatel-Lucent. (*Doc. No. ITU/APT-WS-NGN/07/PP-07*)
- 3.4 “Evolutionary steps towards NGN communications services in Australia” was presented by Mr. Kevin Sutherland -ACMA, Australia. (*Doc. No. ITU/APT-WS-NGN/07/PP08*)
- 3.5 “Insight of NGN Deployment” was presented by Mr. Sean Ng – Huawei (*Doc. No. ITU/APT-WS-NGN/07/PP-09*)

Session 4: ITU Study Groups’ Questions and NGN Architecture

The session was chaired by Dr. Yuji Inoue.

- 4.1 “ITU-D Q.19-1/2” was presented by Mr. Riccardo Passerini - Head, ITU-D Programme 2 on NGN development and Planning. (*Doc. No. ITU/APT-WS-NGN/07/PP-10*)
- 4.2 “Architectural view of NGN in ITU-T SG13” was presented by Mr. Chaesub Lee - ETRI, Republic of Korea. (*Doc. No. ITU/APT-WS-NGN/07/PP-11*)
- 4.3 “ITU-T Q.2-Study Group 13” was presented by Mr. Marco Carugi - Nortel Networks. (*Doc. No. ITU/APT-WS-NGN/07/PP-12*)
- 4.4 “Network Architecture in the evolution towards NGN and IMS” was presented by Mr. Oscar Gonzalez Soto - ITU. (*Doc. No. ITU/APT-WS-NGN/07/PP-13*)

Session 5: NGN Network design and optimization from network operator and service provider’s perspective

The session was chaired by Mr. Yoichi Maeda.

- 5.1 “Planning and design requirements for NGN” was presented by Mr. Oscar Gonzalez Soto - ITU. (*Doc. No. ITU/APT-WS-NGN/07/PP-14*)

- 5.2 “NGN Network Design & Optimization” was presented by Mr. Surapol Kiatiyosakun - TRUE Corporation, Thailand. (*Doc. No. ITU/APT-WS-NGN/07/PP-15*)
- 5.3 “An Introduction to NTT’s NGN and new services in Japan” was presented by Mr. Tadanobu Okada - NTT, Japan. (*Doc. No. ITU/APT-WS-NGN/07/PP-16*)
- 5.4 “Business and Network Migration to NGN” was presented by Dr. Dongmyun Lee - Korea Telecom, Republic of Korea. (*Doc. No. ITU/APT-WS-NGN/07/PP-17*)
- 5.5 “TOT Broadband Vision” was presented by Dr. Kittipong Tameyapradit - TOT, Thailand. (*Doc. No. ITU/APT-WS-NGN/07/PP-18*)

Session 6: NGN Network Planning Tools (from Manufacturer/Vendor’s perspective)

The session was chaired by Mr. Ricardo Passerini.

- 6.1 “Vision for Next Generation Network” was presented by Dr. Masashi Hiraiwa - Hitachi, Japan. (*Doc. No. ITU/APT-WS-NGN/07/PP-19*)
- 6.2 “ITU Partner for NGN Planning Tools – LStelcom” was presented by Mr. Ignat Stanev - ITU. (*Doc. No. ITU/APT-WS-NGN/07/PP-20*)
- 6.3 “ITU Partner for NGN Planning Tools – VPIsystems” was presented by Mr. Ignat Stanev - ITU. (*Doc. No. ITU/APT-WS-NGN/07/PP-21*)
- 6.4 “Migrating separate voice and data services to an NGN platform- NGN Planning Tools” was presented by Mr. Robin James Bailey – Analysys Consulting. (*Doc. No. ITU/APT-WS-NGN/07/PP-22*)

Session 7: Case Studies and NGN for Rural Communications

The session was chaired by Mr. Chaesub Lee.

- 7.1 “Planning of Broadband Wireless Access for Rural and Remote Areas” was presented by Mr. Ignat Stanev – ITU. (*Doc. No. ITU/APT-WS-NGN/07/PP-23*)
- 7.2 “The business case for WiMAX vs DSL in rural areas” was presented by Mr. Robin James Bailey – Analysys Consulting. (*Doc. No. ITU/APT-WS-NGN/07/PP-24*)
- 7.3 “Key Technology Development of BcN” was presented by Dr. Kyungpyo Jun - ETRI, Republic of Korea. (*Doc. No. ITU/APT-WS-NGN/07/PP-25*)
- 7.4 “IMS based application and NGN over Wi-Max (rural communication)” was presented by Mr. Abdul Razaque Memon - Alcatel-Lucent. (*Doc. No. ITU/APT-WS-NGN/07/PP-26*)

7.5 “NGN Case Study, Middle-East” was presented by Mr. Thomas Kessler - Detecon. (*Doc. No. ITU/APT-WS-NGN/07/PP-27*)

Session 8: Way Forward

The session was chaired by Dr. Bob Horton.

Concluding statements were made by Mr Amarendra Narayan, APT, Dr Eun-ju Kim, ITU Regional Office, Bangkok and Mr Malcolm Johnson, ITU, TSB Director. These statements facilitated considerable discussion and interaction amongst attendees and resulted in a range of detailed recommendations and actions attached to this outcome Report as Attachment A.

Attachment A

OUTCOMES OF ITU/APT WORKSHOP ON NGN PLANNING 16 -17 MARCH 2007 BANGKOK

Taking into account:

- a) the objective of the Asia-Pacific Regional Initiative on 'NGN Planning' adopted by WTDC 2006, this Workshop supported the ITU and APT's ongoing initiatives and activities on various aspects of NGN, such as Identity Management, Security, NGN Architecture, Quality of Service, Accounting and Billing, Developing Guidelines on Migration Strategy, IP TV related issues etc;
- b) the fact that operators in the Asia Pacific region have already deployed/ are deploying IP based broadband networks and have set an objective to move towards a complete NGN environment;
- c) the requirement of all countries but, particularly, developing countries to have cost-effective migration solutions;

the Workshop made the following recommendations:

I. Cost-effective migration to NGN in the Asia Pacific region

There is an urgent requirement to take account of Regional needs for cost effective options of Broadband access while finalizing the international standardization framework for NGN. This is particularly important for developing countries and rural and remote areas. Importantly, the Asia Pacific regional needs could be proposed to the ITU-T as a world wide fix. APT Study Groups, ASTAP and the APTs Policy and Regulatory Forum could examine these needs and provide input to the ongoing ITU-T NGN standardization and ITU-D NGN activities.

II. Enabling Policy and Regulatory Framework

- a) A key role for Regulators and Policy Makers is to provide for clear and consistent enabling environments for NGN, and also be involved in the NGN planning, implementation and educational process. This includes implications for competition policy, licensing, jurisdiction and trans-border applications, privacy and security, digital rights management, access and interoperability, common standards, consumer interests, international and domestic governance issues and the scope for industry self-regulation.
- b) Of particular importance to regulators as well as operators is the urgent need for an appropriate interconnection and pricing cost model for an NGN environment, taking into account the change in metrics and teletraffic engineering in the IP world. As IP based networks that form the core of NGN platforms are already widespread in

the Asia Pacific region, the ITU and the APT should take necessary actions to make these tools available as early as possible.

III. Network Planning

a) Looking towards a convergence strategy, there is a real need to develop standardized planning tool(s) to assist developing countries in migration of the PSTN / PLMN/ ISDN networks to NGN (IMS and Non IMS architectures). The tool(s) should take into account the key techno-economical factors, including costing, for business planning and evaluation of convergence alternative solutions; to reap the benefits of the accruing economies of scale. In this regard, the ITU and APT can, and should, assist developing countries in planning the migration through guidelines, available tools, and other assistance such as capacity building. Currently developed tools and guidelines by ITU and its partners are available at <http://www.itu.int/ITU-D/tech/network-infrastructure/index.html>

b) NGN deployment strategies should adopt the concept of Evolution rather than Revolution, as complete replacement of an existing network is not considered to be either advisable or possible. It is recommended that a phased approach be considered for successful and achievable evolution of existing networks to NGN – both IMS-based and non IMS-based NGNs. It is also recommended that, as a first step, a pilot case be implemented before full network migration occurs, to gain experience, evaluate the impact, and make the necessary adjustments.

c) Members from Asia Pacific countries are encouraged to share their deployment experiences with the ITU and APT. In particular, contributions to ITU-D Q 19-1/2 by active participation through ITU-D Rapporteur Groups would enrich the Guidelines on NGN Migration, presently being developed by ITU. A new cooperation mechanism may need to be developed to enhance participation and information sharing among countries in our region. This could then be shared on a global basis.

d) The ITU can and should play an important role in assisting developing countries in NGN planning for migration by using tools appropriate and providing expertise assistance and/or any other resources in the most cost effective manner.

IV. Quality of Service (QoS)

a) There are observations of lower quality of voice in the Mobile and IP environment compared with traditional PSTN / ISDN networks. As a goal service provider should strive for QoS at least equivalent to traditional circuit switched voice networks. Regulators should ensure that service providers meet the agreed quality of service standards.

b) Efforts are already being made by Asia-Pacific Members to develop national frameworks to ensure the quality of Broadband Services. A strong emphasis must be placed on ensuring a high level of Quality of Service while migrating to an NGN environment; both for Network-to-Network and End-to-End User QoS.

c) As consistency in IP approaches, particularly QoS, needs to be ensured across the various interconnected operators, Policy Makers and Regulators are encouraged to introduce and enforce appropriate QoS guidelines within their respective countries based on international standards. The ITU should develop guidelines for service providers and end users on NGN QoS.

V. Security issues in NGN

Requirements for NGN must include the security levels that meet the needs of end users and provide them with the requisite confidence to use the applications and services running over such NGN compliant networks.

VI. Emergency / Locations Based Service

NGN standards should take account of the need to make emergency services / location based services available and reliable, seamlessly across the entire network.

VII. Possible NGN Name Change

Noting that operators in the Asia Pacific region have already deployed/ are deploying IP based broadband networks the name Next Generation Networks is no longer a suitable name. It was suggested ITU consider changing this name to New Generation Networks.

VIII. Regional Collaboration

The success of the Workshop demonstrated a good example of ITU and APT collaboration and this proved to be of practical use and significant benefit to participants and members. This type of collaboration needs to be encouraged, promoted and supported. Further joint ITU and APT, and individual ITU and APT, Workshops/seminars/training in specific matters/issues on NGN migration should be planned for and organized by ITU and APT in the coming years.

IX. The Way Forward

The high level of interest in the ITU/APT Workshop on NGN Planning has demonstrated that there is a need to raise further awareness on the various issues related to NGN planning.

- a) ***Training experts on NGN Planning:*** Since NGN planning is an ongoing process, for all concerned administrations, companies, and organizations in the Asia Pacific region, a core group of experts at every level should be established to handle NGN planning matters. These experts should be trained in various planning and implementation models and should have hands on experience.
- b) ***Making reliable NGN Planning Tools available:*** In order to develop expertise on NGN planning, concerned countries and organizations should develop

partnerships to provide planning tools. These planning tools should be authenticated by the ITU to ensure quality and neutrality and should be frequently updated. The ITU and APT should assist in building capacities by training the group of experts.

- c) ***APT and ITU collaboration:*** Continue collaboration and coordination between APT and the ITU (ITU-T and ITU-D study groups) to implement the ITU ASP Regional Initiatives on NGN Planning and the recommendations provided herein. Bridge standardization gap through close collaboration between TSB, BDT, ASP RO, and APT.
