

Telecommunications Regulatory Affairs Advisory Committee

Re-establishment of the Next Generation Network Working Group

Purpose

This paper seeks Members' support and endorsement for the re-establishment of the Next Generation Network Working Group (NGN WG).

Background

2. At the 3rd meeting of the former Regulatory Affairs Advisory Committee (RAAC) on 31 August 2009, Members supported the setting up of the NGN WG to conduct studies on the relevant issues pertaining to the technical and regulatory aspects of NGN. The NGN WG was subsequently established in October 2009.

3. Between 2009 and 2011, a total of six NGN WG meetings were held and the following issues had been studied –

- universal service obligation;
- numbering, naming and addressing;
- emergency call services;
- network security;
- standardisation and interoperability;
- interconnection regime and quality of services (QoS); and
- carrier-to-carrier charging principles under the NGN environment.

The NGN WG had also set up two subgroups to specifically address issues relating to emergency call services and NGN interconnection trial. During the period, the NGN WG had made considerable progress on various fronts. In April 2010, the NGN WG deliberated the “Security Guidelines for NGNs”, which was subsequently adopted and issued by the former Telecommunications Authority. In June 2011, the subgroup on emergency call services produced a report entitled “Provision of Emergency Call Services Towards the Era of Next Generation Network”, which summarised the key discussion areas on matters relating to handling of emergency calls in NGN environment. Another subgroup on NGN interconnection trial worked out the detailed test plan and test items for NGN interconnection trial. Two network operators had successfully conducted trial test while others are making preparation to carry out the NGN interconnection trial in accordance with the test plan.

NGN Consultancy Study

4. In early 2011, the former Office of the Telecommunications Authority commissioned Plum Consulting (the consultant) to conduct a consultancy study in relation to implications of NGN on regulation of telecommunications services in Hong Kong. The study was completed in January 2012. In the consultancy report¹, having taken into account the local situation in Hong Kong and overseas development, the consultant made a number of recommendations on different areas, including interconnection, next generation access, network security and emergency call service. At the 10th meeting of the RAAC on 13 January 2012, Members were briefed on the recommendations made by the consultant. A summary of major recommendations made by the consultant is given in **Annex A**.

¹ The consultancy report can be obtained at <http://tel.archives.ofca.gov.hk/en/report-paper-guide/report/consultancy.html>.

Re-establishment of the NGNWG

5. It is proposed to re-establish the NGNWG under the Telecommunications Regulatory Affairs Advisory Committee (TRAAC) to continue the studies on the relevant issues pertaining to the technical and regulatory aspects of NGN and to follow up the recommendations and works as made by the consultant. The NGNWG will also follow up the works done by the former NGNWG and will monitor the development of the issues relating to NGN in overseas economies as well as promote the deployment of/migration to NGN by the industry. Proposed terms of reference of the NGNWG are given in **Annex B**.

Composition, Working Procedures and Deliverables of the NGNWG

6. The NGNWG will be chaired by the Office of the Communications Authority (OFCA). Members of the TRAAC may nominate themselves or a representative from their company to participate in the NGNWG. OFCA may also invite other professional bodies and organisations to join the NGNWG on a need basis. Ad-hoc subgroups may be set up to address special issues when required. OFCA will provide the necessary secretarial and logistic support for the meetings. The NGNWG will produce regular reports on the works done and the latest development of NGN in Hong Kong.

Advice Sought

7. Members are invited to consider the proposal and endorse the recommendation on the re-establishment of the NGNWG under the TRAAC.

**Office of the Communications Authority
July 2012**

Summary of Major Recommendations of the Consultant

Interconnection

Drawing on the experience of the withdrawal of regulatory guidance for fixed-mobile interconnection charge (and the fact that mobile-mobile interconnection charge has long been determined by the market absent any regulatory guidance), the consultant is of the view that there is a strong case for withdrawing the regulatory guidance for fixed-fixed interconnection charge. Under this scenario, the consultant considers that an outcome of bill and keep arrangement would be resulted, thereby obviating the need for cost allocation in estimating the cost of voice termination on a multi-service NGN. In a longer term, the consultant recommends that a review of section 36A of the Telecommunications Ordinance (TO) be conducted with regard to the basis for determining interconnection charges, e.g. determination of charges which can reflect economy efficiency.

2. On NGN interconnection architecture and standard, the consultant recommends OFCA to start discussion with the industry on –
 - (a) the most appropriate interconnection architecture for NGNs in Hong Kong;
 - (b) the appropriate standards profiles for Hong Kong to enable interoperability between NGNs;
 - (c) signalling standards as well as specifications for reservation of transport capacity, which enables effective prioritisation of delivery of emergency calls over NGNs (see also paragraph 5 of this annex below); and
 - (d) the quality classes Hong Kong might use to enable minimum quality of service for end-to-end services involving interconnected NGNs.

Next Generation Access

3. To facilitate effective sharing of in-building telecommunications systems among fixed carriers for the provision of high-speed broadband services to end customers within the building, the consultant recommends that technical standards be developed at the relevant interfaces for sharing. When such opportunity arises, the consultant also recommends to review section 14 of the TO such that fixed carriers will have the access right to common parts of “single-owner” buildings, in the manner similar to that for “multiple-owner” buildings.

Network Security

4. While Hong Kong has already security guidelines for NGN and other measures for enhancing network security in place, the consultant recommends that a set of minimum standards be established as well as a mechanism for ensuring compliance with these standards.

Emergency Call Services

5. Based on public interest ground, the consultant recommended that NGN operators, same as existing operators, should provide the public with free access to emergency call service. To ensure that emergency calls can be reliably and immediately delivered across their networks and network gateways to the emergency call centres, the consultant recommends that relevant NGN signalling standards as well as specifications for reservation of sufficient transport capacity in NGN be developed for prioritisation of emergency calls.

Universal Service Obligation (USO)

6. The consultant recommends that the existing USO policy and procedures be maintained in the short term. The consultant recommends

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OFCA to consider whether the implementation of the existing USO policy needs to be adapted in the short to medium term to deal with problems which may arise in estimating the net universal service costs and cost sharing basis, following the migration to NGNs.

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**Proposed Terms of References of the NGN WG
under the TRAAC**

- (a) To assess the feasibility of and identify the issues in adopting the consultant's recommendations in relation to –
- interconnection architecture for NGNs;
 - minimum quality of service for end-to-end services involving interconnected NGNs; and
 - minimum standards of network security as well as a mechanism for ensuring compliance with these standards.
- (b) To oversee all the issues related to the standardisation and interoperability of NGN and to liaise and refer relevant issues to the Radio Spectrum and Technical Standards Advisory Committee and the industry for the promotion and adoption of relevant standards and practices for the implementation of the NGN in Hong Kong.
- (c) To follow up the works done by the previous NGN WG and monitor the development of the following issues relating to NGN in advanced economies and relevant organisations:
- universal service obligation;
 - numbering, naming and addressing;
 - emergency call services;
 - network security;
 - standardization and interoperability;
 - interconnection regime and quality of services; and
 - interconnection charging.
- (d) To recommend solutions and develop action plans for consideration by the TRAAC on (a), (b) and (c) above, including the identification of issues that should be dealt with by the industry and the lead agency that will take up the issues.

Anticipated Activities and Targeted Deliverables of the NGN WG

- (a) Prepare and recommend appropriate instruments including codes of practices, guidelines or industry best practices for regulating the relevant aspects of the deployment of NGN.
- (b) Identify the technical standards related to NGN that should be discussed and formulated by the relevant advisory committee of OFCA.
- (c) Set up subgroups and task forces to conduct studies on specific issues that fall within the terms of reference of the NGN WG.

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