Dear colleagues,

NEXT GENERATION NETWORK STUDIES

At the recent meeting of ITU-T Study Group 13 held in Geneva, 21 July to 1 August, a considerable time was spent on NGN issues. Just prior to the Study Group 13 meeting an ITU-T workshop on NGN had been held. This was very successful and provided many pointers to the issues to be addressed and the studies required. During the Study Group 13 meeting we held a 'futures session' as a start to the process of identifying future work within the scope of Study Group 13. This debate together with the workshop conclusions led us to the view that it was vital that the ITU-T quickly develop some 'foundational' Recommendations on NGN to act as a platform for the further standardisation work. In order to respond to this Study Group 13 has set up a Joint Rapporteurs Group on NGN (JRG-NGN) which will work intensively up to the February 2004 meeting of the Study Group.

The background, objectives and working methods of the JRG-NGN are described in the first attachment. Whilst the target is to develop Recommendations for Study Group 13 approval they will also lay the foundation for related work in other Study Groups. I would therefore like to invite you to appoint some NGN experts from your Study Group to assist in the JRG-NGN which will formally start work at a kick-off meeting at the end of September. (The email list will be active prior to the meeting to prepare inputs and will be used to provide further logistical information on the meeting arrangements in due course).

A second decision of Study Group 13 in the area of NGN was to propose the setting up of a new Y.2000 series for NGN related Recommendations. This proposal is described in the second attachment.

The Study Group 13 meeting also updated the NGN-2004 project. This information is being sent to Study Groups in a separate Liaison Statement.

I look forward to working together on this important area of work.

Regards,

Brian Moore

Chairman of ITU-T Study Group 13.

ATTACHMENT 1:

Establishment of a Study Group 13 Joint Rapporteur Group on Next Generation Networks (JRG-NGN)

1. Background

In order to progress the necessary standardisation work on the ITU-T in support of Next Generation Networks Study Group 13 has established an NGN-2004 project. The current version of the project can be found at http://www.itu.int/ITU-T/studygroups/com13/ngn2004/index.html which takes account of the outcome of an NGN-2004 project management meeting held on 11 July 2003 and the July 2003 Study Group 13 meeting.

The intention of the NGN 2004 Project is to coordinate all ITU-T activities related to the establishment of implementation guidelines and standards for the realisation of a Next Generation Network. The major task of the Project is to ensure that all elements required for interoperability and network capabilities to support applications globally across the NGN are addressed by ITU-T standardization activities.

At the ITU-T Workshop on NGN held in Geneva 9 to 10 July 2003 (details at http://www.itu.int/ITU-T/worksem/ngn/index.html) a very strong conclusion was the need for the ITU-T to prepare some 'foundational' Recommendation on NGN in order to provide a platform for the ongoing standardisation work in support of NGN.
This was also confirmed a 'futures session' held during the July 2003 Study Group 13 meeting. Taking account of its responsibilities for future network studies Study Group 13 has agreed that actions be taken to accelerate the work leading to the approval of NGN 'foundational' Recommendations in the first half of 2004.

2. Establishment of a Joint Rapporteur Group on NGN

In order to give the desired impetus to the NGN work Study Group 13 agreed to establish a Joint Rapporteur Group on NGN (JRG-NGN) which will work up to the February 2004 meeting of Study Group. The JRG-NGN will involve Questions 1, 5, 6, 10, 11, 15 and 16/13.

2.1 Working Methods

The JRG-NGN will work primarily by correspondence using an email reflector plus two face-to face meetings. The list name will be tsg13ngn-jrg and may be joined using the TIES procedures.

- The first 'kick-off' meeting will be held 29 September to 2 October 2003 in Munich at the kind invitation of Siemens.
- The second meeting will be held just prior to the February 2004 Study Group 13 meeting to finalise draft texts for submission to the Study Group. (Either during the week of 5th January or of 12th January 2004. The details will be finalised at the kick-off meeting.)

Participation in the JRG-NGN will involve the Study Group 13 management team, the concerned Study Group 13 Rapporteurs and editors and will be open to Study Group 13 NGN experts interested in helping in the detailed drafting work. In addition it is proposed that other ITU-T Study Groups be invited to nominate NGN experts to assist Study Group 13 in the preparation of these Recommendations and that the ITU-R and ITU-D and other organisations involved in NGN standardisation work also be invited to assist.

The JRG-NGN will be led by Mr. B. Moore Chairman of Study Group 13 assisted by Mr. C-S Lee, Vice-chairman of Study Group 13 who will moderate the email list and will coordinate the preparation of the draft texts for submission to the February 2004 Study Group 13 meeting.

2.2 Requirements for the next steps in the NGN work

Under increasingly complex business situations we are confronted with growing challenges from deregulation, new competition, cost pressures, emerging technologies and a constant requirement to develop and deploy new services to meet customer demands. As the next step in the NGN work, it is very important to identify the views of the study requirements and their directions. The followings are some of the requirements for the NGN work which were identified in the Study Group 13 Futures Session.

Heterogeneous and multiple layers network architectures and protocols to provide:
- economical transporting of large scale IP-based traffic including multi-QoS traffic,
- interoperable network-node to network-node interfaces and protocols,
- synergy with the existing network services and their evolution
- manageable networking and simple operation.

Value added premium services with:
- multi-level of QoS and the end-to-end QoS,
- integration of mobility,
- IPv4 and IPv6,
- multicast capability.

Open service platforms including APIs to allow:
- quick deployment of new services under increasingly multi-vendor circumstances,
- open service management,
- flexible business operation.

Home gateway functions and interfaces with the networks to realize:
- enhanced session control with QoS, authentication and security,
- harmonization with the network resource management.

Nomadicity:
- support of nomadism across heterogeneous environments with consistent presentation and execution of services.

2.3 Objectives

The objective is to prepare 'foundational' draft Recommendations on NGN for approval by Study Group 13 in the following areas. Also consideration will be given to terminology aspects of NGN.

- **General Reference Model of the NGN**
  Preparation of a framework to identify all elements (functions and roles) that could be used in the NGN. It will be based on identification of architectural requirements in horizontal and vertical aspects of Telecommunication influencing heterogeneity of the NGN environment.

- **Business Model, Service Architecture and Scenarios for NGN**
  Based on GII enterprise and value chain models, a possible business model under the NGN environment will be investigated. Following this model, architectures providing services can be identified and various scenarios for each service, such as voice service over fixed or mobile or WLAN etc., developed which will provide a framework for finding functional gaps between current services and the NGN services.

- **Functional Requirements and Architecture of the NGN**
  Identification of functions and functional groups which are required to provide the NGN services and their OAM&P, not only for operators and system providers point of view but also for users and regulators. Then develop functional configuration models, which will show arrangement of each

function, and functional architecture models explaining relationships among different functions in horizontal and vertical aspects.

- Identification requirements for the NGN

Clarify significance and value of current identification systems (e.g. numbering, addressing and naming etc.). Specify a simple as possible user identification scheme which could be used for all types of services from user's point of view. Find ways to enhance its value through combined use of the different identification schemes and linkage among different systems with user ID which will be requested and identified for user services.

- Mobility requirements and mobility management architecture

Identify requirements in various aspects of mobility, not only mobile aspects but also extended to various mobility behaviours such as nomadicity. Clarify architectural requirements to support these mobility requirements and develop an architecture model to arrange various functions for management of mobility.

- QoS Requirements and end-end QoS Architecture of the NGN

Classify various classes of quality which are available in an NGN environment and specify requirements for which capabilities could be supported. Develop architecture models, based on the service architecture and scenarios, which are applicable to indicate end-end aspects of QoS.

- Reference Service Model for MPLS Based Reliable and Manageable IP Network

Define the characteristics of a reliable and manageable IP based network and develop reference service models based on MPLS technology. This will specify service architecture and service capabilities for a "Reliable and Manageable IP network" as well as reference service configurations.

- Migration of networks (including TDM Networks) to NGN

Define NGN concepts to provide a way to use e.g. TDM resources in the NGN arena. Also develop migration scenarios and relevant functional requirements for moving from e.g. TDM to NGN.

- Technical issues and layer models useful for "regulatory" considerations

Investigate technical issues of the NGN which are having regulatory implications. Develop layer models for describing those technical issues and explaining their relationships from a regulatory implication point of view and to provide a reference for regulatory considerations by the appropriate bodies.

ATTACHMENT 2:

Proposed new Y.2000 Series of Recommendations for Next Generation Networks

In order to give visibility to Recommendations related to NGN it is proposed to add a new series of Recommendations on NGN aspects to the Y.Series.

The title of the Y.Series would become 'Global Information Infrastructure, Internet Protocol aspects and Next Generation Networks'.

It is proposed to start a new Y.2000 section with a structure as follows which is based on the study areas in the ITU-T NGN-2004 project:

Y.2000 Series	NGN Frameworks and Functional Architecture Models
Y.2100 Series	Quality of Service and Performance
Y.2200 Series	Service Aspects
Y.2210 Series	Service Capabilities and Service Architecture
Y.2250 Series	Interoperability of Services and Networks in NGN
Y.2300 Series	Numbering, Naming and Addressing
Y.2400 Series	Network Management
Y.2500 Series	Network Control Architecture(s) and Protocols
Y.2700 Series	Security
Y.2800 Series	Generalised Mobility
Y.2900 Series	(Spare)

As with the rest of the Y.Series double numbering will be allowed in order that Recommendations related to NGN prepared by other Study Groups can be included in the Y.Series as well as in their own Recommendation series'.