



INTERNATIONAL TELECOMMUNICATION UNION

**TELECOMMUNICATION  
STANDARDIZATION SECTOR**

STUDY PERIOD 2001 - 2004

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**ITU-T Special Study Group on "IMT-2000 and Beyond"**

**CHAIRMAN'S LETTER TO EXTERNAL ORGANIZATIONS**

**TITLE: REQUEST FOR INFORMATION FOR PROPOSED ITU-T TECHNICAL REPORT BEING DEVELOPED BY THE SPECIAL STUDY GROUP ON "IMT-2000 AND BEYOND"**

**TO: 3GPP, 3GPP2, TTA, TTC, ARIB, CWTS, ETSI (EP BRAN, EP DECT, EP TETRA, EP TIPHON), Committee T1 (T1P1), TIA (TR45.2, TR45.3, TR45.5, TR45.6) and UWCC**

**COPY: ITU-R WP 8F, OHG (for information)**

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26 February 2001

Dear Colleagues:

Question 1/SSG (Service and network capability requirements and network architecture) has the mandate within the ITU-T SSG to develop a long term vision in "IMT-2000 and Beyond." The first draft of a Technical Report ready for SSG approval is targeted for 4Q 2001. We are beginning the process of developing this deliverable. (Enclosure 2 provides the text for Q.1/SSG.)

ITU-R WP 8F is developing its own vision document. It is available at [http://www.itu.int/itudoc/itu-r/sg8/docs/wp8f/2000-03/contrib/8f\\_184e.html](http://www.itu.int/itudoc/itu-r/sg8/docs/wp8f/2000-03/contrib/8f_184e.html) (requires ITU TIES access, and is being updated during the 21-27 February 2001 ITU-R WP 8F meeting.) The SSG is initiating close cooperation

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with ITU-R WP 8F to formalize an informal discussion already underway between the Chairman of ITU-R WP 8F (Mr. Stephen Blust) and the Chairman of the ITU-T SSG (myself.) Various possibilities in developing a joint "Vision" in a co-operative and collaborative manner are being explored, and it is my intent to keep you informed on how this progresses.

In order to assist this work and, in particular, to assist in an analysis of gaps between near term IMT-2000 and the "Vision" that we are collectively working to define, we are seeking some specific but limited support from your group. We have tried to minimize the demands that we are placing on you since we know that you have a very full agenda and near term objectives that are consuming much of your time.

We have developed a brief and simple questionnaire that we would ask you to complete in order to assist us in this effort. We believe that this questionnaire can be completed with only a very limited time investment on your part while providing substantial value to us.

It is our goal to use the results of our work to provide value to all interested parties in helping to promote a single and unified target for evolution of existing and planned near future systems. This will provide benefits to all parties through facilitating global roaming, network interoperability, etc.

If you need additional information please do not hesitate to contact me.

With best regards,

A handwritten signature in black ink, appearing to read "John Visser". The signature is written in a cursive style with a large, sweeping initial "J".

John Visser  
Chairman, ITU-T Special Study Group on "IMT-2000 and Beyond"

## Enclosure 1

### Questionnaire – Service and network capability requirements

1. Which specifications or other documents available from your organization provide a substantive description of the services and capabilities currently available in deployed systems?
2. Which specifications or other documents available from your organization provide a substantive description of the services and capabilities currently planned for future releases?
3. If you have a “Vision” document, where can this be obtained so that we may ensure your views are included in the work we are doing?
4. What additional resources or inputs available from your organization may be useful to the work we are doing, and where may we obtain copies?

To assist you and to provide some focus for your response, following is a proposed outline of the technical report which is planned under Q.1/SSG. Please complete the second column.

- Summary
- 1 Scope
- 2 References
- 3 Definitions
- 4 Abbreviations and acronyms
- 5 Introduction

Section Title	Identities and locations of relevant documents
6. General Aspect	
6.1 End User Needs	
6.1.1 Service capabilities offered in the next two years	
6.1.2 Service capabilities planned for the next two to five years	
6.1.3 Service capabilities envisioned for beyond the next five years	
6.2 Market	
6.2.1 Characteristics of the customer user market in the next two years	
6.2.2 Characteristics of the customer user market in the next three to five years	
6.2.3 Characteristics of the customer user market	

Section Title	Identities and locations of relevant documents
beyond the next five years	
7. Specific IMT-2000 Family System Aspect	
7.k Family System K (k=1, 2, 3, 4, 5,...) 7.k.1 Technology 7.k.1.1 Radio technologies offered in the next two years 7.k.1.2 Radio technologies planned for the next three to five years 7.k.1.3 Radio technologies envisioned for beyond the next five years 7.k.2 Network 7.k.2.1 Network capabilities offered in the next two years 7.k.2.1.1 Radio technology dependency 7.k.2.1.2 System architecture 7.k.2.1.3 Wireless Fixed Access application 7.k.2.1.4 Security, QoS, and OA&MP 7.k.2.1.5 Migration plan from current systems	
7.k.2.2 Network capabilities planned for the next three to five years 7.k.2.2.1 Radio technology dependency 7.k.2.2.2 System architecture 7.k.2.2.3 Wireless Fixed Access application 7.k.2.2.4 Security, QoS, and OA&MP 7.k.2.2.5 Migration plan for the next three to five years	
7.k.2.3 Network capabilities envisioned for beyond the next five years 7.k.2.3.1 Radio technology dependency 7.k.2.3.2 System architecture 7.k.2.3.3 Wireless Fixed Access application 7.k.2.3.4 Security, QoS, and OA&MP 7.k.2.3.5 Migration plan for beyond the next five years	
7.k.2.4 Views on Wireless and Wired Network Convergence 7.k.2.4.1 Plans for network convergence, if any	
7.k.3 Standardisation Requirements 7.k.3.1 Standardisation activities in the next two years 7.k.3.1.1 Any assistance needed from ITU-T 7.k.3.2 Network capabilities planned for the next three to five years 7.k.3.2.1 Any assistance needed from ITU-T 7.k.3.3 Network capabilities envisioned for beyond the next five years 7.k.3.3.1 Any assistance needed from ITU-T	
8. Other Relevant Systems 8.x System X (x=1, 2,3, ..., X= 1, 2, 3, ...) 8.x.1 Network	

Section Title	Identities and locations of relevant documents
<p>8.x.1.1 Network capabilities offered in the next two years</p> <p>8.x.1.1.1 Radio technology dependency</p> <p>8.x.1.1.2 System architecture</p> <p>8.x.1.1.3 Security, QoS, and OA&amp;MP</p> <p>8.x.1.1.4 Migration plan from current systems</p> <p>8.x.1.2 Network capabilities planned for the next three to five years</p> <p>8.x.1.2.1 Radio technology dependency</p> <p>8.x.1.2.2 System architecture</p> <p>8.x.1.2.3 Security, QoS, and OA&amp;MP</p> <p>8.x.1.2.4 Migration plan for the next three to five years</p> <p>8.x.1.3 Network capabilities envisioned for beyond the next five years</p> <p>8.x.1.3.1 Radio technology dependency</p> <p>8.x.1.3.2 System architecture</p> <p>8.x.1.3.3 Security, QoS, and OA&amp;MP</p> <p>8.x.1.3.4 Migration plan for beyond the next five years</p> <p>8.x.1.4 Views on Wireless and Wired Network Convergence</p> <p>8.x.1.4.1 Plans for network convergence, if any</p>	
<p>8.x.2 Standardisation Requirements</p> <p>8.x.2.1 Standardisation activities in the next two years</p> <p>8.x.2.1.1 Any assistance needed from ITU-T</p> <p>8.x.2.2 Network capabilities planned for the next three to five years</p> <p>8.x.2.2.1 Any assistance needed from ITU-T</p>	
<p>8.x.2.3 Network capabilities envisioned for beyond the next five years</p> <p>8.x.2.3.1 Any assistance needed from ITU-T</p>	

- 9. Gaps Identified, If Any
  - 9.1 Unaddressed Customer User Needs
    - 9.1.1 Unaddressed Service Capabilities
  - 9.2 Unaddressed Market Aspect
  - 9.3 Unaddressed Technology Trend
    - 9.3.1 Over-looked New Technologies
    - 9.3.2 Over-looked Network Capabilities
    - 9.3.3 Over-looked Network Convergence Trend
  - 9.4 Unaddressed Standardisation Requirements
    - 9.4.1 Could be Addressed by ITU-T SSG
    - 9.4.2 Could be Addressed by Other ITU-T SGs
  - 9.5 Over addressed Standardisation Requirements
    - 9.5.1 Duplicated work in ITU-T SSG

## **Enclosure 2**

### **Question 1 – Service and network capability requirements and network architecture**

#### **Reasons for the question**

The increase of mobile communications has been explosive, and the number of mobile subscribers has surpassed those of traditional communication services in some areas. The increasing desire for accessing services such as those available from Internet on the move has created new fields of services such as “mobile multimedia,” etc.

3<sup>rd</sup> generation mobile systems – IMT-2000 – will be introduced in early of 2000s in the market to realize high speed, high capacity, and global mobility services.

The emergence of multi-operator environments in a number of countries and the increasing liberalisation of networks and infrastructure will stimulate an open competitive environment. Such an environment underlines the need for customers to generally expect the same service presentation irrespective of the access and core networks used to deliver such services.

The Virtual Home Environment (VHE) is an environment, which presents the user with a common look and feel interface and service experience regardless of location, terminal type and network. It applies to both mobile and fixed networks, for both circuit switched and packet switched services.

However, users have indicated the desire for faster multimedia services, higher QoS, and consistent service availability, service interoperability, etc. regardless of the types of networks or the location of the user. How to expand network capabilities to support the above service expectations is an important topic for network design.

In order to continue technical work, e.g., protocol design, etc, clear vision for future mobile services and network capability requirements is required to ensure that the direction is correct.

#### **The question**

What Services and Network capability requirements, and the long-term architecture are needed to support services and applications beyond IMT-2000?

#### **Task objectives**

The major focus of this question is to develop, in close cooperation with relevant organizations within and without ITU, service and network capability requirements for beyond IMT-2000 systems. The task objectives for the question are:

- 1) Prepare a document summarising the findings of a gap analysis on the current status and trends in customer user needs, technology, market, and standardisation requirements, if any.

First deliverable expected: a technical report ready for approval - 4Q 2001.

- 2) Develop “IMT-2000 and Beyond” aspects of service capability requirements, including VHE, for realising applications in item 1) above.

First deliverable expected: a draft new Recommendation ready for AAP Consent - 2Q 2002.

- 3) Develop network capabilities requirements for realizing item 2) service requirements. First deliverable expected: a draft new Recommendation ready for AAP Consent - 4Q 2002.

- 4) Develop the long-term high-level network architecture for beyond IMT 2000 systems.

- a) Develop definition of functional entities (FEs) and allocation of functional capabilities to FEs,

- b) Develop interfaces model among FEs and a network architecture model of beyond IMT-2000,

First deliverable expected: a draft new Recommendation ready for AAP Consent - 2Q 2003

- 5) Assist the relevant protocol groups to identify the protocol changes needed to support VHE in a mobile network, which will facilitate services transparency to users across different access networks.

Expected completion: Task completion dates are in accordance with task objectives.

### **Relationships**

The execution of tasks of this question will require close co-ordination and collaboration with :

- ITU-T SG 2, 11, 12, 13, 16
  - ITU-R Working Party 8D & 8F (especially WG-Vision)
  - Relevant ITU-D SGs
  - Other relevant organisations including SDOs, IETF, etc.
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