Meeting Objectives:
ITU-T Point of View

- Continue and enhance cooperation and collaboration for IMT-2000 global standards:
  - Set the scene for continuing cooperation and collaboration for IMT-2000 global standards
  - Inform SDOs of 3GPPs about WTSA discussions and decisions on the new Special Study Group on IMT-2000 and beyond
  - Re-initiate interaction with SDOs of 3GPPs for mutual benefit
  - Discuss how and where ITU-T's new SSG on "IMT-2000 and beyond" can add value, with the aim of reaching an agreement on responsibility split between ITU-T and SDOs:
    - Identify and define work items
    - Set timetable for when results are needed
    - Identify and initiate realistic and workable mechanisms for maintaining and enhancing ongoing collaboration and cooperation
Outline:
ITU-T IMT-2000 and Beyond

- Past: what has ITU-T done so far?
- Present: what is ITU-T doing now?
  - NNI (Core Network to Core Network Interface)
- Future: why create this study group?
  - Growth of Wireless Access, Internet
  - Correlation of Wireless Access and Internet
- Why is the SG special?
  - Recommendation A.9 Provisional Working Procedures
  - Management Team
- Going forward
  - Mandate and organization of work
  - Emphasis on collaboration, cooperation, partnering
  - Going beyond IMT-2000

IMT-2000: Pre-WTSA-2000

- Radio Communications
  - ITU-R
  - SG 8
  - Mobile
  - WP 8F
- IMT-2000 Radio Aspects
  - WP 3/11
- ITU-T
  - SG 11
  - Signaling & Protocols
- Telecomms. Standards
  - Lead SG IMT-2000
- Other IMT-2000 Activities in ITU-T
  - Services (SG 2)
  - Numbering & Identities (SG 2)
  - OAM (SG 4)
  - Security (SG 7)
  - Interworking (SG 13)
  - Speech & Video coding (SG 16)
IMT-2000: Pre-WTSA-2000

- ITU-R External Fora
- Program Manager
- WPs of SG 11 other ITU-T SGs

**Signaling Requirements**
- Functional Architecture
- Radio Interface
- Network Interface

**Protocol Choices**
- Radio Interface (L2)
- Service Control
- Mobility Management
- Call/Bearer Control
- Management (with SG 4)
- Security (with SG 7)

* JQG: Joint Question Group

**ITU-T IMT-2000 Specifications: Structure**

- Framework for IMT-2000 networks
- Network functional model
- Information flows
- UIM functionality and signalling requirements
- Radio interface technology independent requirements: General Aspects, Layer 2, Layer 3

**Protocols (Q.MMP)**
- Protocols
- Protocol Suite for Common NNI (Mobility Management Protocol)

**Requirements**

- Framework
- Internetwork signalling requirements
- N/A for CS-1
Interpreting the dates:
Recommendations: May 98/Mar 99 = Frozen/Approved
(Resolution 1 Determined/Decided)
Technical Reports: Dec 00 Approved (one step approval)

GSC5 and RAST 8 Resolution 6: Common NNI

The Global Standards Collaboration 5 (GSC5) meeting (Williamsburg, Virginia, 1999) and the Radio Standardization 8 (RAST8) meeting jointly resolve that they recognize the need for the common NNI protocol in a multi-network environment in order to derive benefit from existing ("fixed" and "mobile") investments and supports in principle the ITU-T SG 11 effort in support of global roaming and seamless service provisioning. ...
ITU-T IMT-2000 Interfaces: NNI status

<table>
<thead>
<tr>
<th>Interface</th>
<th>ITU-T Role</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>UIM-MT</td>
<td>Collaborate with SMG9</td>
<td>TR (Q.FSR, Dec 2000)</td>
</tr>
<tr>
<td>MT-RAN</td>
<td>No direct role, ITU-R M.1457 (radio independent aspects)</td>
<td>Reviewed</td>
</tr>
<tr>
<td>RAN-CN</td>
<td>No immediate role</td>
<td>No current activity</td>
</tr>
<tr>
<td>CN-CN</td>
<td>Developing NNI protocol</td>
<td>LMF models agreed, draft Q.MMF progressing: target completion: 2001</td>
</tr>
</tbody>
</table>
SSG - IMT-2000 and Beyond

Why create this study Group?
- growth of wireless access outstripping traditional access
  - soon will be over 50% of all subscribers
  - already the case in some markets
- explosive growth of the Internet
  - strong correlation between wireless access and internet usage
  - leads to “Wireless Internet”
- multiple forums working on 3G systems
  - need to promote harmonization and convergence
  - rapidly increasing importance of globalization

Wireless Internet

("Other Digital" refers to PDC and PHS.)
Source: The Yankee Group, Nortel Networks
Migration towards an IP-based backbone network is taking place

Why is this SG special?

• Given significant freedom in conducting its business:
  – Paperless meetings to maximum extent possible
  – Reduced meeting notice requirements (one month, electronically)
  – Reduced contribution submission deadline
  – All documents to be available on ITU web site
  – Meeting reports to be made available quickly
  – May use teleconferences, other means to conduct work

• A de facto trial of selected reform aspects!

• Plus has the usual powers of a Study Group:
  – Create and approve Recommendations
  – To advise TSAG on effectiveness of new procedures
Why is this SG special?

• Management Team
  – Larger than usual
  – Strength in diversity:
    • viewpoints from vendors, operators and regulators
    • viewpoints from developed and developing countries

SSG IMT-2000 and beyond: Management Team

Director, TSB: Mr. H. Zhao
TSB Engineer: Ms. T. Tchaika
Chairman: Mr. J. Visser (Nortel Networks, Canada)
Vice Chairmen: Mr. M. Briggs (British Telecom, UK)
              Mr. M. Ghazal (MPT, Lebanon)
              Mr. L. Graf (Ericsson, Australia)
              Mr. S. Husain (Motorola, USA)
              Mr. Y.K. Kim (Samsung, Korea)
              Mr. K. Lathia (Siemens, Germany)
              Mr. P.F. Masambu (Comm. Commission, Uganda)
              Mr. H. Nakamura (NTT DoCoMo, Japan)
              Mr. B. Ramos (Anatel, Brazil)
              Mr. K.K. Sirohi (Ministry of Comms., India)
              Mr. Y. Trofimov (NIIR, Russia)
Summary of Mandate (1 of 2)

• Lead SG on IMT-2000 and beyond and for mobility

• Primary responsibility within ITU-T for overall network aspects of IMT-2000 and beyond
  – Work plan
  – Migration path from existing IMT-2000 systems towards systems beyond IMT-2000
    • Long term common IP-based architecture
    • Near term IP-based internetworking
  – Overview road map
  – Interworking functions, if not done elsewhere

Summary of Mandate (2 of 2)

• In addition, will study:
  • Harmonization of IMT-2000 Family members as they evolve beyond IMT-2000
  • Evolution of network aspects utilizing IMT-2000 RTTs as FWA
  • Network aspects of convergence of fixed and wireless networks
  • Standardization of IMT-2000 interfaces where needed

• Work with ITU-D to assist developing countries in applying IMT-2000
• Collaborate with ITU-R 8F (radio) and 8D (satellite)
• Strong cooperative relations and complementary programs with SDOs, 3GPPs
• May develop and approve Recommendations
  • may investigate and make proposals to TSAG on alternative types of output and associated approval process, e.g., normative technical specifications or interim Recommendations
• Make use of provisional working procedures specific to SSG
Assigned Questions

• Q.A/IMT: Network signalling requirements for wireless access to services provided over IP-based networks
• Q.B/IMT: Network signalling requirements for emerging mobility services (IMT-2000 and their evolution) including services over IP-based networks
• Q.C/IMT: Network signalling requirements for the support of Virtual Home Environment (VHE) in mobile networks
• Q.D/IMT: Network signalling protocols for emerging mobility services (IMT-2000 and their evolution), including IP services

Some fine-tuning should be anticipated!

Organizing the Work

Nov 20-21 Nov 26 Nov 27 - Dec 6 Dec 7-8 Dec 11-15

• SSG-IMT First formal meeting
• SG 11 (and WP 3/11?) meeting
• SSG-IMT Management Team meeting

J. Visser
Chairman

tbd
WP Chairman

tbd
Coordinator

tbd
WP Chairman

SSG-IMT and SG 11 Management Teams actively preparing for meetings in 4Q2000
Relationships

- ITU-R
- ITU-D
- 3GPP
- 3GPP2
- IETF
- Regional SDOs
- Other relevant fora
  - OHG
  - 3G.IP
  - MWIF
  - etc.

Approach

**EMPHASIS ON:**
- Collaboration
- Cooperation
- Partnering

**BUT NOT:**
- Duplication of work

How and on what topics can ITU-T SSG on “IMT-2000 and beyond” and 3GPP work together?
Where ITU-T can add value in global IMT-2000 and beyond standardization

• Leadership through coordination, consensus building, and collaborative working arrangements
  – with 3GPPs, SDOs, other relevant fora

• Facilitating adoption of appropriate external specifications as ITU-T Recommendations
  – act as a single source for IMT-2000 and related standards

• Development of requirements and architectural framework Recommendations as needed and appropriate
  – provide context and structure for IMT-2000 related specifications

• Identifying emerging industry needs for global standards
  – propose efficient and coordinated work planning and sharing arrangements with external forums to meet needs

• Facilitating interoperability and interworking between IMT-2000 family members for global roaming, seamless service delivery
  – provide interworking specifications if not done elsewhere

Strawman for collaboration & cooperation: 3GPP SDOs ↔ ITU-T

• Discuss and agree on a framework for cooperation and collaboration on the architectural framework, signalling requirements and protocol aspects of IMT-2000, including the following:
  – revisions and updates of existing framework and signalling recommendations
  – development of the Common NNI for interoperability and seamless global roaming in a multi-network environment
  – work schedule
  – appointment of contact persons for each of the cooperating standards bodies
  – implementation mechanisms (e.g. exchange of meeting reports, holding of coordination meetings, etc.) to ensure maximum degree of efficiency