



Meeting of ITU & 3GPP SDOs: Special Study Group on IMT-2000 and Beyond

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Chairman, SSG IMT-2000 and beyond
November 13, 2000
San Francisco, CA, USA

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



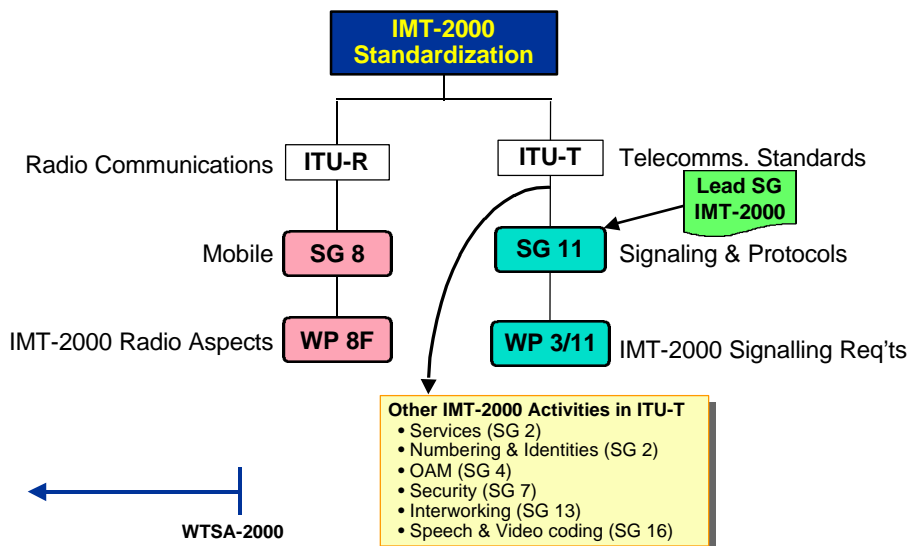
- **Past: what has ITU-T done so far?**
- **Present: what is ITU-T doing now?**
 - NNI (Core Network to Core Network Interface)
- **Future: why create this study group?**
 - Growth of Wireless Access, Internet
 - Correlation of Wireless Access and Internet
- **Why is the SG special?**
 - Recommendation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



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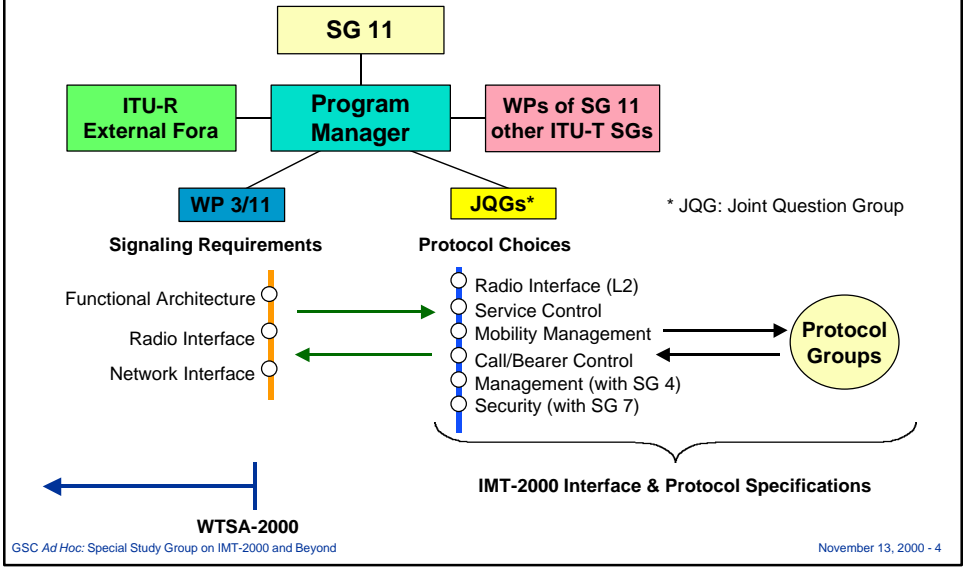
IMT-2000: Pre-WTSA-2000



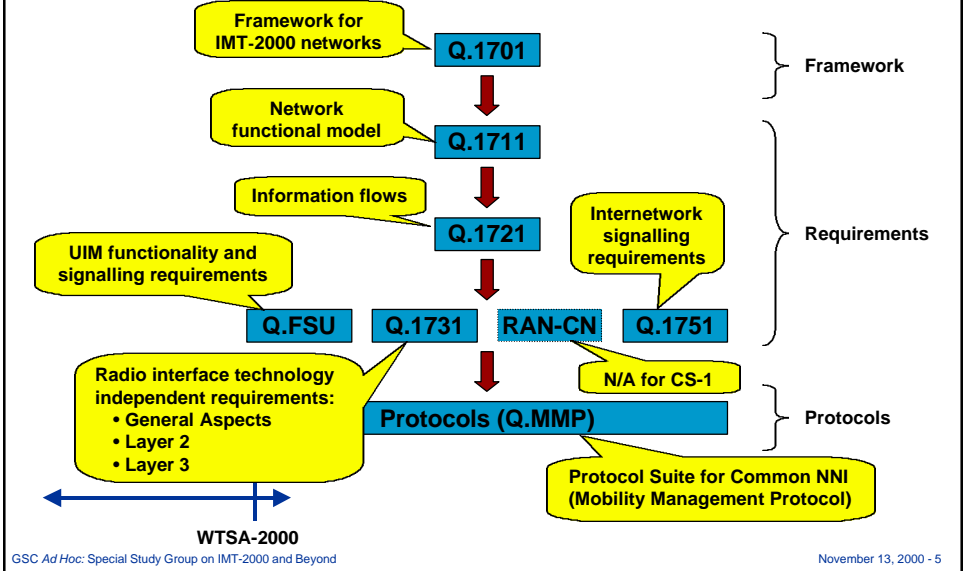
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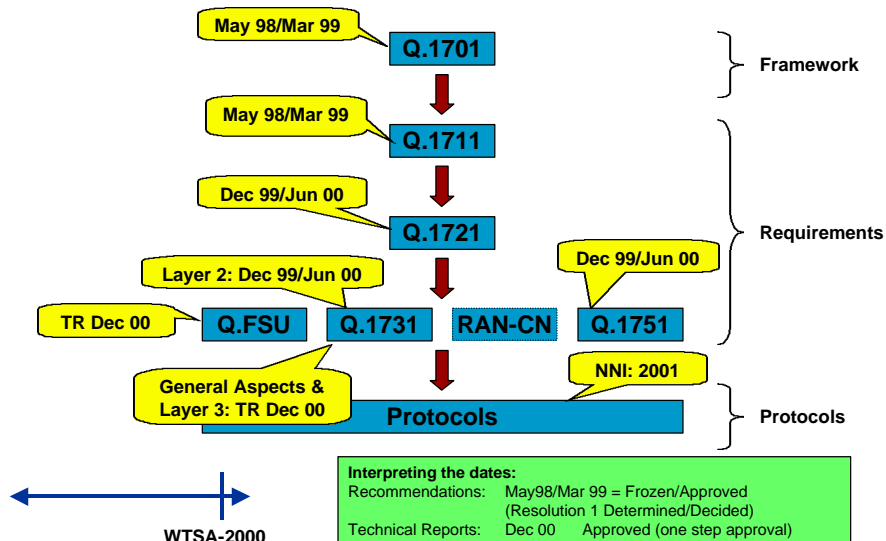
IMT-2000: Pre-WTSA-2000



ITU-T IMT-2000 Specifications: Structure



ITU-T IMT-2000 Specifications: Current Status



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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. ...

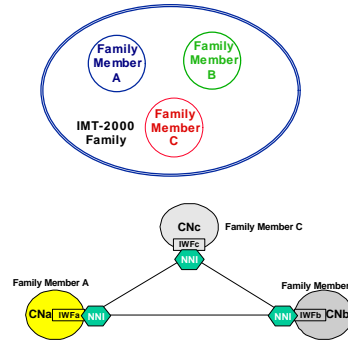
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IMT-2000 Family of Systems and NNI

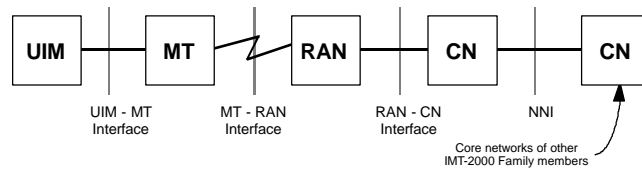
- ITU-T adopted the IMT-2000 Family of Systems Concept with the understanding that IMT-2000 standardization work is to be carried out in close cooperation with regional standards bodies
- Global roaming and seamless service provision to subscribers are key operator targets
- Close cooperation and collaboration between ITU-T and the SDOs developing IMT-2000 Family Member specifications will greatly facilitate the harmonization and timely availability of global standards for the world community



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ITU-T IMT-2000 Interfaces: NNI status



Interface	ITU-T Role	Status
UIM-MT	Collaborate with SMG9	TR (Q.FSR, Dec 2000)
MT-RAN	No direct role ITU-R M.1457 (radio independent aspects)	Reviewed
RAN-CN	No immediate role	No current activity
CN-CN	Developing NNI protocol	LMF models agreed, draft Q.MMF progressing: target completion: 2001

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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



WTSA-2000

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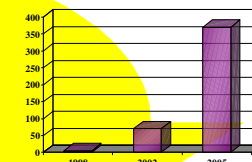


Wireless Internet

Wireless Applications Growth

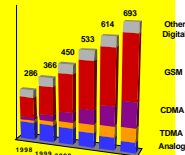


Data Subscriber Growth



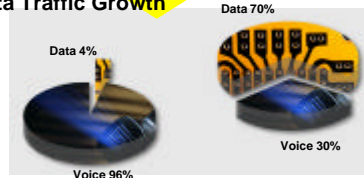
Source: The Yankee Group, Nortel Networks

Subscriber Growth



Source: Strategis Group, World Cellular / PCS Markets, May 1998.
(*Other Digital refers to PCS and PHS.)

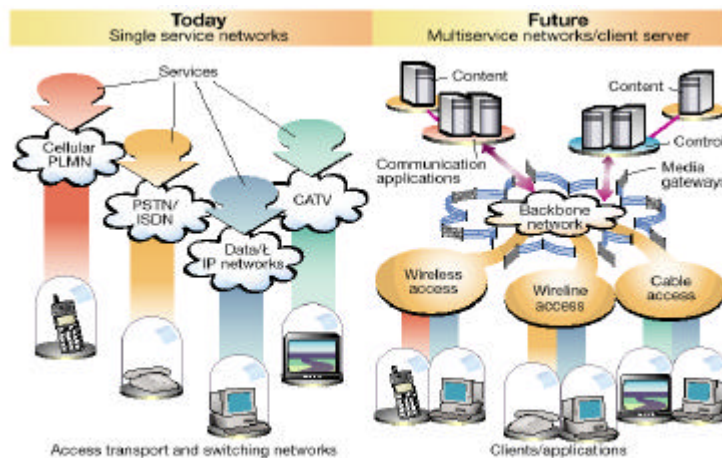
Data Traffic Growth



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Migration towards an IP-based backbone network is taking place



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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

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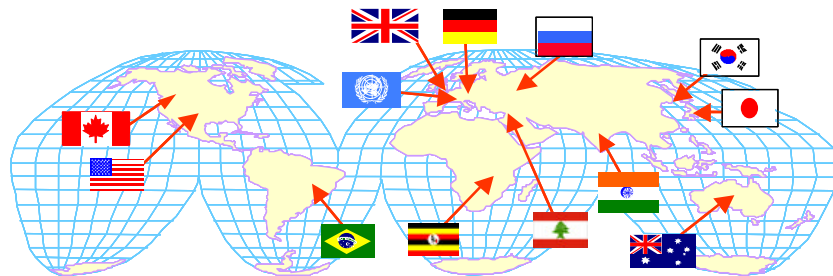
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Why is this SG special?

- **Management Team**

- Larger than usual
- Strength in diversity:
 - viewpoints from vendors, operators and regulators
 - viewpoints from developed and developing countries



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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)

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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**



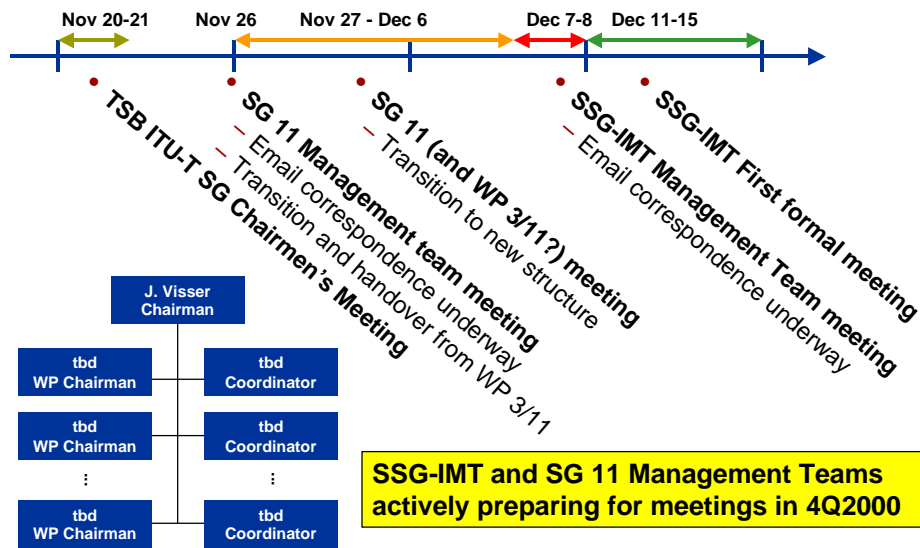
Assigned Questions

- 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





Relationships

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



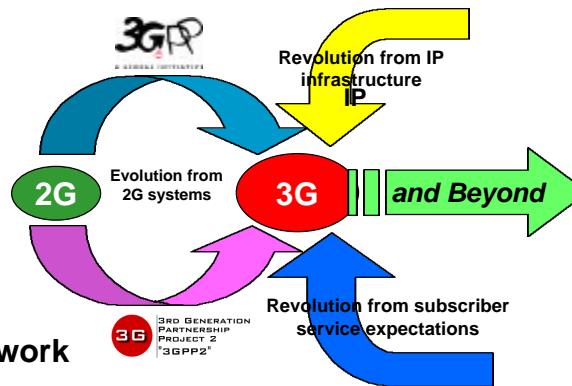
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Approach

- **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?

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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

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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

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