Project	**IEEE 802.20 Working Group on Mobile Broadband Wireless Access** <**http://grouper.ieee.org/groups/802/mbwa**>	
Title	**The ITU and other Key Standards Development Organizations**	
Date Submitted	**2003-01-10**	
Source(s)	Joanne C. Wilson 2300 N Street, NW Suite 700 Washington, DC 20037	Voice: +1 202 383-3349 Fax: +1 202 721-9818 Email: joanne@arraycomm.com
Re:	802.20 Contributions	
Abstract	This presentation provides an overview of the ITU and the nationally and internationally recognized StandardsDevelopment Organization for mobile communications. Information is also presented about the various Partnership projects and collaboration activities established to facilitate the deployment of global networks	
Purpose	The 802.20 PAR call for collaboration with the ITU and other appropriate standards development organizations. The purpose of this presentation is to assist 802.20 in determining which bodies with which to collaborate.	
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Patent Policy	The contributor is familiar with IEEE patent policy, as outlined in Section 6.3 of the IEEE-SA Standards Board Operations Manual <http://standards.ieee.org/guides/opman/sect6.html#6.3> and in *Understanding Patent Issues During IEEE Standards Development* <http://standards.ieee.org/board/pat/guide.html>.	

The ITU and other Key Standards Development Organizations

Joanne Wilson

Presented to IEEE 802.20

January 15, 2003

Outline

- **Key International Standards Development Organizations (SDOs) for Mobile Communications**
- **The International Telecommunications Union**
  - ITU-R
  - Study Group 8
  - Working Parties 8A and 8F
- **Regional SDOs**
  - ARIB, CWTS, Committee T1, ETSI, TIA, TTA, TTC
- **Partnership Projects**
  - 3GPP
  - 3GPP2
  - Project Mesa
- **Standards Collaboration Groups**
  - Global Standards Collaboration (GSC)
  - GRC (formerly RAST)

Key International SDOs for Mobile Communnications

- **The International Telecommunications Union**
- **Regional and National SDOs**
  - North America
    - Telecommunications Industry Association (TIA)
  - United States
    - Standards Committee T1 (Committee T1)
  - Europe
    - European Telecommunications Standards Institute (ETSI)
  - Japan
    - Association of Radio Industries and Business (ARIB)
    - Telecommunications Technology Committee (TTC)
  - Korea
    - Telecommunications Technology Association (TTA)
  - China
    - China Wireless Telecommunications Standards Group (CWTS)

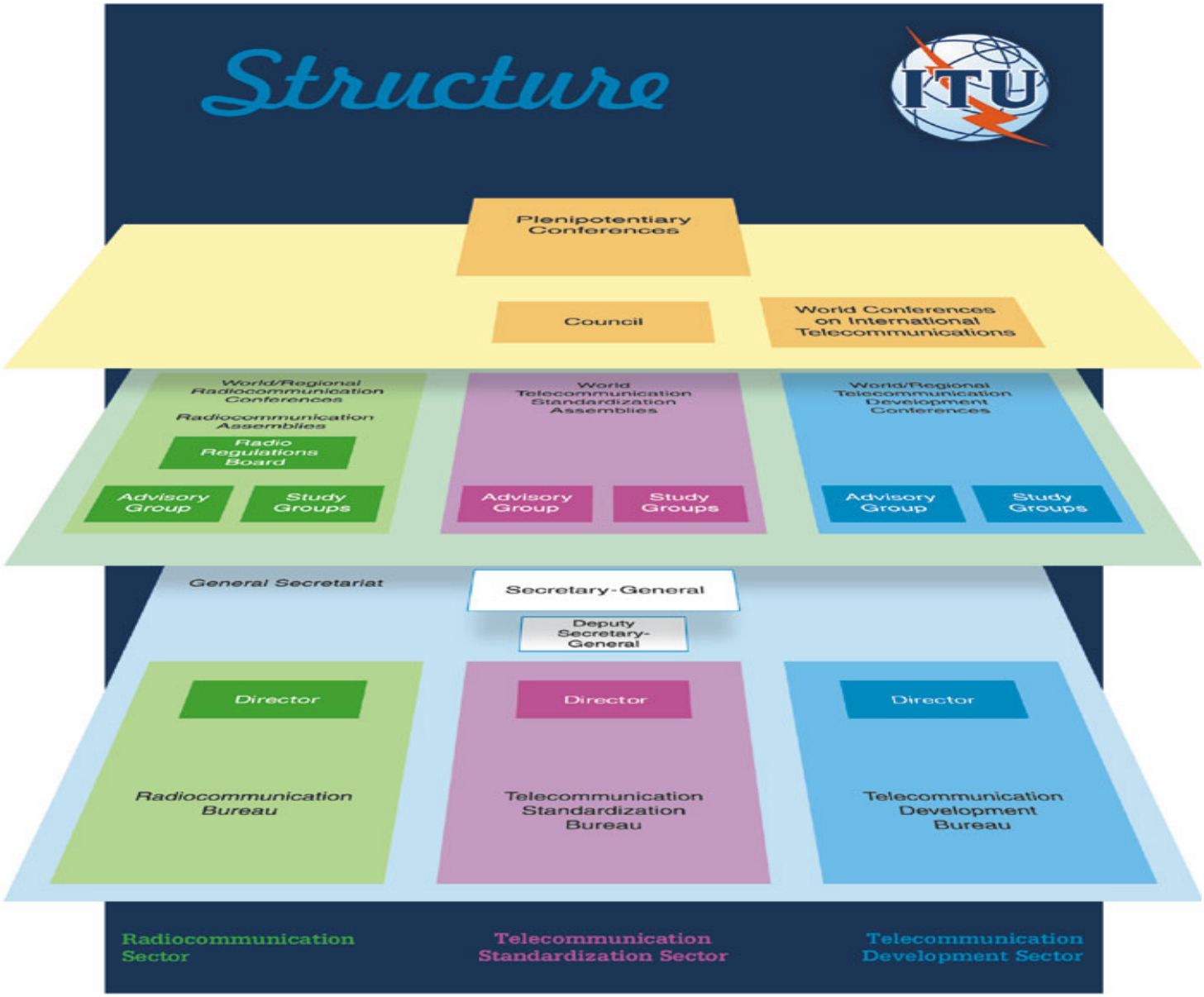
The International Telecommunications Union

- The ITU, headquartered in Geneva, Switzerland is an international organization within the United Nations System where governments and the private sector coordinate global telecom networks and services.
- Purposes:
  - To maintain and extend international cooperation between all its Member States for the improvement and rational use of telecommunications of all kinds.
  - To promote and enhance participation of entities and organizations in the activities of the Union, and to foster fruitful cooperation and partnership between them and Member States for the fulfillment of the overall objectives embodied in the purposes of the Union.
  - To promote and offer technical assistance to developing countries in the field of telecommunications, and also to promote the mobilization of the material, human and financial resources needed to improve access to telecommunications services in such countries.

The International Telecommunications Union

- Purposes cont'd:
  - To promote the development of technical facilities and their most efficient operation, with a view to improving the efficiency of telecommunication services, increasing their usefulness and making them, so far as possible, generally available to the public.
  - To promote the extension of the benefits of new telecommunication technologies to all the world's inhabitants.
  - To promote the use of telecommunication services with the objective of facilitating peaceful relations.
  - To harmonize the actions of Member States and promote fruitful and constructive cooperation and partnership between Member States and Sector Members in the attainment of those ends.
  - To promote, at the international level, the adoption of a broader approach to the issues of telecommunications in the global information economy and society, by cooperating with other world and regional intergovernmental organizations and those non-governmental organizations concerned with telecommunications.

The International Telecommunications Union



Leadership of the ITU

- **Secretary General**
  - Yoshio Utsumi (Japan)
- **Deputy Secretary General**
  - Roberto Blois (Brazil)
- **Director, Telecommunications Sector**
  - Houlin Zhao (China)
- **Director, Radiocommunications Sector**
  - Valery Timofeev (Russia)
- **Director, Development Sector**
  - Hamadoun Toure (Mali)

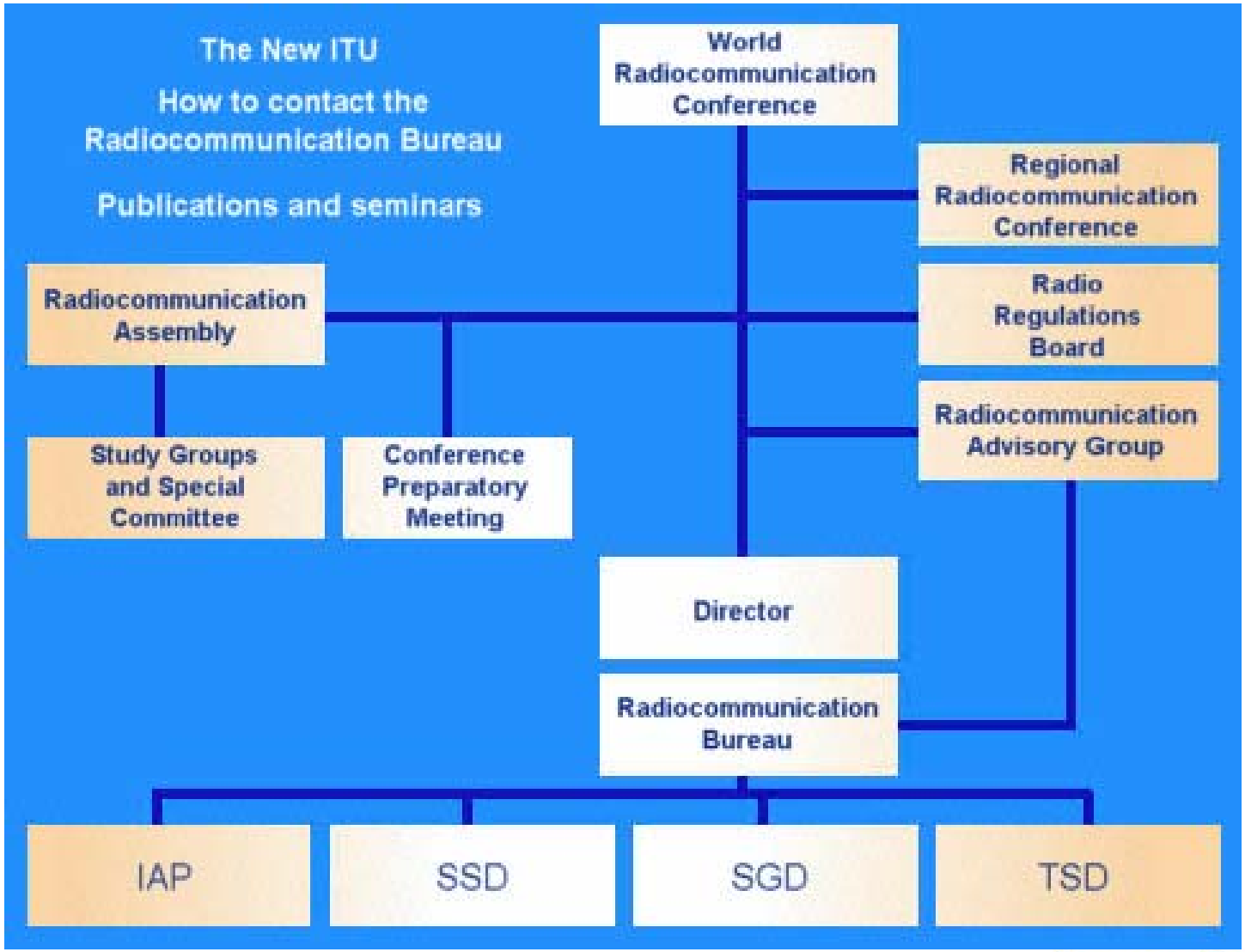
The ITU Radiocommuncations Sector

- **Mission:**
  - Under the provisions of the Constitution and Convention (Geneva,1992), the mission of the ITU Radiocommunication Sector is, inter alia, to ensure rational, equitable, efficient and economical use of the radiofrequency spectrum by all radiocommunication services, including those using satellite orbit, and to carry out studies and adopt recommendations on radiocommunication matters.

The ITU Radiocommuncations Sector

- **The specific role of ITU-R within the framework of this mission is as follows. ITU-R shall:**
  - Effect allocation of bands of the radiofrequency spectrum, the allotment of radio frequencies and the registration of radio frequency assignments and of any associated orbital position in the geostationary satellite orbit in order to avoid harmful interference between radio stations of different countries;
  - Coordinate efforts to eliminate harmful interference between radio stations of different countries and to improve the use made of radio-frequencies and of the geostationary-satellite orbit for radiocommunication services.

ITU Radiocommunications Sector



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ITU-R Study Group 8

- **ITU-R Study Group 8 – Mobile, radiodetermination, amateur and related satellite services**
- **Scope:**
  - Systems and networks for the mobile, radiodetermination and amateur services, including related satellite services
- **Structure:**
  - Working Party 8A - Land mobile service excluding IMT-2000; amateur and amateur-satellite service
  - Working Party 8B - Maritime mobile service including Global Maritime Distress and Safety System (GMDSS); aeronautical mobile service and radiodetermination service
  - Working Party 8D - All mobile satellite services and radiodetermination satellite service
  - Working Party 8F - IMT-2000 and systems beyond IMT-2000
  - Joint Rapporteur Group 8A-9B - Wireless access

ITU-R Study Group 8 - Leadership

- **Chairman, Study Group 8**
  - Mr. C. Van Diepenbeek (Netherlands)
- **Vice Chairman, Study Group 8**
  - Mr. T. Mizuike (Japan)
  - Mr. V. Strelets (Russia)
  - Mr. R. Swanson (United States)
- **ITU-R Counsellor for Study Group 8**
  - Mr. Colin Langtry
    Radiocommunications Bureau (BR)
    Place des Nations
    CH-1211 Geneva 20
    Switzerland
    colin.langtry@itu.int
    +41 22 730 6178 (office)
    +41 22 730 5806

ITU-R Study Group 8 – Study Questions

- **Study Questions that may be relevant to Mobile Broadband Wireless Access Systems:**
  - 37-4/8: Sysems with improved spectrum efficiency for the land mobile service (WP8A)
  - 40-4/8: Digital transmission in the land mobile service (WP8A)
  - 107-1/8: Cellular land mobile telecommunication systems (WP8A)
  - 223/8: Internet protocol applications over mobile systems (WP8A, WP8F)
  - 229/8: Future development of IMT-2000 and systems beyond IMT-2000 (WP8F)

ITU-R Working Party 8A

- **Scope:**
  - Working Party 8A is responsible for studies related to the land mobile service, excluding IMT-2000, and to the amateur and amateur-satellite services.
- **Leadership:**
  - Chairman: Sabah Towaij*, Industry Canada
    towaij.sabah@ic.gc.ca
- **Structure:**
  - WG 1: Amateur and amateur-satellite services and disaster communications
  - WG 2: Transport information and control systems
  - WG 3: Public protection and disaster relief, trunking and paging systems
  - WG 4: Interference protection criteria and sharing studies
  - WG 5: New and innovative technology and systems
  - WG 6: Pre-IMT-2000 and evolution to IMT-2000
  - JRG 8A-9B: Wireless access, including RLANs

ITU-R Working Party 8F

- **Scope:**
  - WP 8F is responsible for the overall radio system aspects of IMT-2000 and beyond. It has the prime responsibility within ITU-R Study Group 8 for issues related to the terrestrial component of IMT-2000 and beyond; and works closely with Working Party 8D on issues related to the satellite component of IMT-2000 and beyond.
- **Leadership:**
  - Chairman: S. M. Blust, Cingular Wireless (USA)
    stephen.blust@cingular.com
  - Vice Chairman:
    - S. Cao, Ministry of Information Industry (China)
      shmcao@public.bta.net.cn
    - S. Cooke, Nokia (UK)
      stuart.cooke@nokia.com
    - K.-J. Wee, Ministry of Information and Communication (Korea)
      kjwee@rrl.go.kr

ITU-R Working Party 8F

- **Structure:**
  - WG VIS: Vision
  - WG DEV: Developing IMT
  - WG RTECH: Radio Technology
  - WG SAT: Satellite Coordination
  - WG SPEC: Spectrum
  - AH ITU-T: ITU-T Coordination
  - AH Workplan: Workplan
  - AH VOC: Vocabulary

Regional and National SDO

- **Telecommunications Industry Association (North America)**
  - Non-profit trade association serving the communications and information technology industry
  - Accredited by the American National Standards Institute (ANSI) – major contributor of voluntary industry standards that support global trade and commerce in communications products and systems.
  - Over 1,000 TIA member companies.
  - Five product oriented divisions:
    - User Premises Equipment
    - Network Equipment
    - Wireless Communications
    - Fiber Optics and Satellite Communications
  - 70 Standards Formulating Groups
  - TIA-sponsored committees of experts prepare standards dealing with performance testing and compatibility.
  - Point of Contact: Bart, Dan, Sr. Vice President, TIA Standards & Special Projects
    Telecommunications Industry Association
    2500 Wilson Blvd., Suite 300
    Arlington, VA 22201 USA
    (703) 907-7703
    dbart@tia.eia.org

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Regional and National SDOs

- **TIA Wireless Communications Division (WCD)**
  - Four active engineering committees:
    - TR-8: (Mobile and Personal Private Radio Standards) develops standards related to traditional land mobile radio products and systems including voice and data applications.
    - TR-45: (Public Mobile & Personal Communications Systems Standards) develops performance, compatibility, interoperabilitv and service standards for cellular telephones and PCS.
    - TR-46: (Mobile & Personal Communications) develops similar standards for several additional technologies operating in the 1900 MHz band.
    - TR-14: (Point-to-Point Communications Systems) maintains standards and recommended practices relating to terrestrial fixed point-to-point radio communications equipment and systems primarily for the frequency bands above 960 MHz.

Regional and National SDO

- **Standards Committee T1 (United States)**
  - Sponsored by the Alliance for Telecommunications Industry Solutions (ATIS)
  - ANSI-accredited to create network interconnections and interoperability standards for the United States.
  - Six technical subcommittees:
    - T1A1 - Performance and Signal Processing
      T1E1 - Interfaces, Power and Protection of Networks
      T1M1 - Internetwork Operations, Administration, Maintenance & Provisioning
      T1P1 - Wireless/Mobile Services and Systems
      T1S1 - Services, Architectures and Signaling
      T1X1 - Digital Hierarchy and Synchronization
  - Point of Contact: E. Raymond Hapeman (Ray), Chairman
    Committee T1
    Telcordia Technologies
    331 Newman Springs Rd
    Room 2C-405 Red Bank, NJ 07701-5699
    Ph: (732) 758-2239
    FAX: (732) 758-4545
    rhapeman@telcordia.com

Regional and National SDO

- **European Telecommunications Standards Institute (European Union)**
  - A not for profit organization whose mission is to produce the telecommunications standards that will be used for decades to come throughout Europe and beyond.
  - Based in Sophia Antipolis, south of France, ETSI is a recognized European standards organization
  - Officially recognized by the European Commission and the EFTA secretariat.
  - 912 members from 54 countries inside and outside Europe – represents administrations, network operators, manufacturers, service providers, research bodies and users.
  - ETSI is governed by the ETSI Directives, including its Statutes and Rules of Procedure
- Point of Contact: Karl Heinz Rosenbrock, Director General
  ETSI
  650, route des Lucioles
  06921 Sophia-Antipolis Cedex
  FRANCE
  Tel.: +33 (0)4 92 94 42 00
  Fax: +33 (0)4 93 65 47 16

Regional and National SDO

- **Association of Radio Industries and Business (Japan)**
  - Chartered by the Minister of Public Management, Home Affairs, Posts and Telecommunications as a public service corporation on May 15, 1995.
  - Its activities include those previously performed by the Research and Development Center for Radio Systems (**RCR**) and Broadcasting Technology Association (**BTA**).
  - Established in response to several trends such as the growing internationalization of telecommunications, the convergence of telecommunications and broadcasting, and the need for promotion of radio-related industries.
- Objectives
  - To conduct investigation, research & development and consultation of utilization of radio waves from the view of developing radio industries, and to promote realization and popularization of new radio systems in the field of telecommunications and broadcasting. Thus, ARIB aims at promotion to public welfare.
- Members
  - 309 companies are regular members; 5 companies are supporting members

Regional and National SDO

- **ARIB Activities**
  - Conducts the following in its capacity as a Minister of Public Management, Home Affairs, Posts and Telecommunications designated "the Center for Promotion of Efficient Use of Radio Spectrum" and "Designated Frequency Change Support Agency".
    - Investigation, research and development on utilization of radio waves in the field of telecommunications and broadcasting
    - Consultation, education for popularization, collections and publications of information on utilization of radio waves in the field of telecommunications and broadcasting
    - Establishment of technical standards for radio systems in the field of telecommunications and broadcasting
    - Correspondence, coordination and cooperation with overseas organizations regarding utilization of radio waves in the field of telecommunications and broadcasting
    - Specific Frequency Change Support Service as defined in Article 71-2 of the Radio Law of Japan
    - Activities related to the above activities
    - Other activities to perform the objective of ARIB
- **Points of Contact:** Masayoshi Wakao, Sr Managing Director,
  Satoshi Kobayashi, Managing Director
  Secretary General of ARIB
  Association of Radio Industries and Businesses
  Nittochi Bldg. 14F, 1-4-1, Kasumigaseki,
  Chiyoda-ku, Tokyo 100-0013, Japan
  TEL: 81-3-5510-8590 FAX: 81-3-3592-1103
  E-Mail: info@arib.or.jp

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Regional and National SDO

- **Telecommunications Technology Committee (Japan)**
  - Established as a private standardization organization in October 1985 to contribute to further activation of the field of telecommunications;
- **Purpose**
  - To contribute to standardization in the field of telecommunications by establishing protocols and standards for telecommunications networks and terminal equipment, etc as well as to disseminate those standards
- Currently, there are 220 companies are members of the TTC for participating in standards development
- **Point of Contact:** Kenichi Kitami
  Chairman, Technical Assembly, TTC
  PHONE: +81 3 3432 1551
  FAX: +81 3 3432 1553
  Hamamatsu-cho Suzuki Building
  1-2-11,Hamamatsu-cho,Minato-ku
  Tokyo105-0013,Japan

Regional and National SDO

- Activities of the TTC:
  - Develop protocols and standards for telecommunications networks
  - Conduct studies and research on protocols and standards for telecommunications networks
  - Disseminate protocols and standards for telecommunications networks
  - Engage in activities accompanied by the above items, and
  - Engage in other business activities necessary to achieve the purpose of the committee

Regional and National SDO

- Committees of TTC
  - Strategic Research and Planning Committee: Technical Survey, support for TTC activities, International Collaboration
  - Technical Committee 1: Network-Network Interfaces
  - Technical Committee 2: User-Network Interfaces
  - Technical Committee 3: PBX,LAN
  - Technical Committee 4: High Layer Protocol
  - Technical Committee 5: Voice & Video signal coding scheme and systems
  - Technical Committee 6: Mobile communications

Regional and National SDO

- **Telecommunications Technology Association of Korea**
  - An IT standards organization that develops new standards and provides one-stop services for the establishment of IT standards as well as providing testing and certification for IT products.
- Purpose
  - Contribute to the advancement of technology and the promotion of information and telecommunications services and industry as well as the development of national economy, by
    - Effectively establishing and providing technical standards that reflect the latest domestic and international technological advances, needed for the planning, design and operation of global end-to-end telecommunications and related information services;
    - Close collaboration with companies, organizations and groups concerned with information and telecommunications such as network operators, service providers, equipment manufacturers, academia, R&D institutes, etc.
- Currently, 87 Full Member and 14 Associate Member companies participating in standards development in the TTA
- Point of contact: Chu-Hwan Yim, Secretary General,
  Telecommunications Technology Association of Korea
  267-2 Seohyeon-dong
  Bundang-gu
  Seongnam-City, Gyonggi-do
  Korea
  chyim@tta.or.kr
  PH: +82 31 724 0002

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Regional and National SDO

- TTA Committee Structure
  - Technical Assembly (TA)
    - Telecommunication Network Technical Committee(TC02)
    - Transmission Technical Committee(TC03)
    - Broadcasting Technical Committee(TC05)
    - Radiocommunication Technical Committee(TC06)
    - Informatization Technical Committee(TC07)
    - Data Engineering Technical Committee(TC08)
    - Software Engineering Technical Committee(TC09)
    - Information Security Technical Committee(TC10)
    - IC Card Technical Committee(TC11)
    - National Geographic Information System Technical Committee(TC12)
    - IMT-2000 Project Group(PG01)
    - ITS Project Group(PG04)
  - Strategy & Operations Committee (CC)
    - Special Committee on Strategic Planning(SC01)
    - Special Committee on Testing and Certification(SC02)
    - Special Committee on International Cooperation(SC03)
    - Ad-hoc User Group(AH05)

Regional and National SDO

- **China Wireless Telecommunications Standards Group (China)**
  - A non-profit making organization, which has the responsibility to define, produce and maintain Chinese wireless telecommunication standards in China
  - Established under the Chinese Standardization Law, with the approval of Ministry of Information Industry (MII) of China;
  - Its working process is guided and supervised by MII. Its research field is also defined by MII.
- **Purpose**
  - Promoting and accelerating wireless telecommunication standardization process in China;
  - Meeting the requirement for rapid development of wireless industry in China.
- **Members**
  - Manufacturers, operators, R&D institutions, universities and other relevant organizations
- **Point of contact:** Madam Cao Shuming
  Chairperson of CWTS
  Vice President of RITT, MII
  No.11 Yue Tan Jie, Beijing 100045, China
  Tel: 86-10-68026421, 68094265
  Fax: 86-10-68034801
  shmcao@public.bta.net.cn

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Partnership Projects

- **3rd Generation Partnership Project (3GPP)**
  - Formalized in December 1998 by the signing of the “The 3rd Generation Partnership Project Agreement”
  - Organizational Partners are ARIB, CWTS, ETSI, T1, TTA, and TTC.
- **Scope:**
  - To produce globally applicable Technical Specifications and Technical Reports for a 3rd Generation Mobile System based on evolved GSM core networks and the radio access technologies that they support (i.e., Universal Terrestrial Radio Access (UTRA) both Frequency Division Duplex (FDD) and Time Division Duplex (TDD) modes);
  - The maintenance and development of the Global System for Mobile communication (GSM) Technical Specifications and Technical Reports including evolved radio access technologies (e.g. General Packet Radio Service (GPRS) and Enhanced Data rates for GSM Evolution (EDGE)).

Partnership Projects

- **3rd Generation Partnership Project 2 (3GPP2)**
  - A collaborative third generation (3G) telecommunications specifications-setting project
  - Develops global specifications for:
    - **ANSI/TIA/EIA-41 "Cellular Radiotelecommunicatoin Intersystem Operations network evolution to 3G**
    - **Radio transmission technologies (RTTs) supported by ANSI/TIA/EIA-41.**
  - Organizational Partners: ARIB, CWTS, TIA, TTC, TTA
  - Currently 80 individual member companies participating in 3GPP2;

Partnership Projects

- **Project Mesa**
  - An international partnership producing globally applicable technical specifications for digital mobile broadband technology, aimed initially at the sectors of public safety and disaster response.
  - First established in May 2000 as the Public Safety Partnership Project between ETSI and the TIA
- **Aims**
  - Project MESA is producing the specifications for an advanced digital mobile broadband standard much beyond the scope of currently known technologies.
  - MESA represents the first such international initiative to involve users and organizations from the Public Protection & Disaster Relief (PPDR) and Peacekeeping sectors to join forces with Industry for the production of a truly global standard.

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Partnership Projects

- **How to join Project Mesa:**
  - Organizational Partnership is open to any Standards Development Organization, irrespective of its geographical location, which has:
    - a national, regional or other officially recognized status and the capability and authority to define, publish or set standards in that nation or region;
    - an Intellectual Property Rights (IPR) policy which is compatible with those of the Organizational Partners;
    - committed itself to all or part of the Project MESA scope;
    - signed the Partnership Project Agreement.
  - A Standards Organization may apply to become an Organizational Partner by writing to any of the existing Organizational Partners.

Standards Collaboration Groups

- Global Telecommunication Standardization Collaboration (GTSC, formerly GSC)
  - An initiative of ETSI, Committee T1 and TTC. Besides these founding members, TSACC (Candada), TIA, TTA, ACIF and ITU are participating in GTSC.
  - The mission of the GTSC is to facilitate collaboration between PSOs on High Interest Subjects(HIS).
  - The goal of the GTSC is to provide further informal linkage among senior officials from the national, regional and international telecommunication standards bodies in support of the work of the International Telecommunication Union (ITU).
  - To provide a framework for the exchange of information, the establishing of objectives to accelerate the process of global telecommunications and radio standards development and the promotion of interconnectivity and interoperability.

Standards Collaboration Groups

- Global Radiocommunications Standardization Collaboration (GRSC, formerly RAST)
  - Formed in November1994
  - Provides an informal multinational information exchange focused on radio standardization trends and developments in the delegates various regions, to facilitate assessing the potential for harmonization and to complement the more formal processes of other bodies, and particularly the ITU in the work of developing international standards recommendations
  - GRSC meetings are held in conjunction with other major related international events such as the GTSC or ITU.
  - The next GTSC/GRSC meeting will be held in Ottawa, Canada from 28 April to 1 May 2003.

Standards Collaboration Groups

- Past GTSC/GRSC Meetings
  - GSC1 (Melbourne, March 1-3, 1994)
  - GSC2 (Ottawa, June, 1995)
  - GSC3 (Kyongju, September 3-5, 1996)
  - GSC4 (Sophia Antipolis, March 30 - April 2, 1998)
  - GSC5 (Williamsburg, August 22-26, 1999)
  - GSC6 (Sapporo, August 29 - September 1, 2000)
  - GSC7 (Sydney, November 4-9, 2001)