

**ITU-D Regional Development Forums 2010 on  
NGN and Broadband (ARB, EUR & CIS Regions):  
“NGN and Broadband, Opportunities and  
Challenges**

**Chişinău, Moldova; 4-6 May 2010**

**ITU-T Standardization  
Activities and External  
Organizations**

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**Abstract**

- Standards Development Organization in today's environment find that cooperation and collaboration are essential aspects of building a successful suite of standards for a complete functioning system. This presentation describes the approach of the ITU-T to working with other standards bodies and provides some examples in the areas of NGN and broadband.

## Outline

- Introduction
- ITU-T in the Global Standards Community
- Global Standards Collaboration
- Some Examples

## Standards Bodies, Fora, Consortia

- Many configurations:
  - Treaty-based, accredited and non-accredited; *de jure* or *de facto*
  - Standards Development Organizations
  - Fora and consortia
  - Partnership projects
  - Industry associations
  - Government advisory committees
- May be global, regional or national

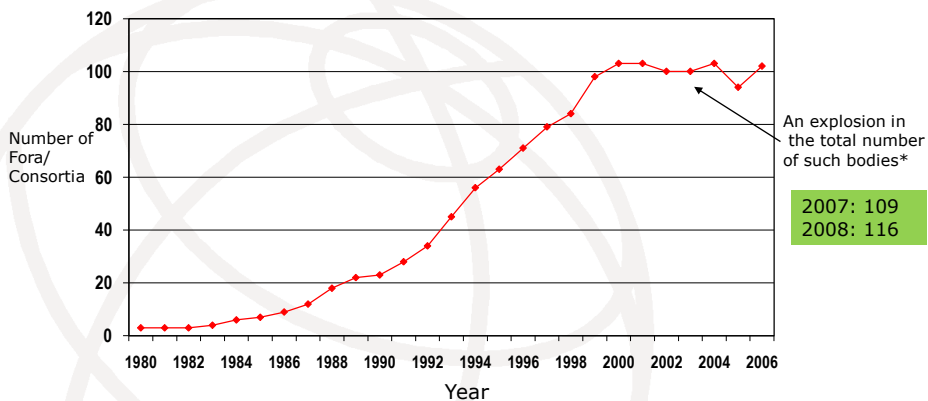
## Proliferation

- New bodies appear and old ones disappear frequently
- Why do fora and consortia appear and then disappear?
  - Need to address a specific area more quickly than a traditional SDO
  - Promote a standard in the marketplace
  - Refine a standard for interoperability, e.g., define "profiles", run "test fests"

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## Fora and Consortia - Proliferation



**Fora and Consortia have been proliferating since the early 1980s; each one can potentially impact business interests - either positively or negatively**

Source: TTC, "Survey Report on the Activities of Information and Communications related Fora"

[www.ttc.or.jp/e/inv/forum/forum\\_report-E\\_v13\\_1.pdf](http://www.ttc.or.jp/e/inv/forum/forum_report-E_v13_1.pdf)

[www.ttc.or.jp/e/inv/forum/forum\\_report-E\\_v15.pdf](http://www.ttc.or.jp/e/inv/forum/forum_report-E_v15.pdf)

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## Industry Forums Churn

- 10% or more of all forums are replaced annually
  - In 2000, 20 fora were added and 15 were deleted
  - In 2001, 12 fora were added and 12 were deleted
  - In 2002, 12 fora were added and 15 were deleted
  - In 2003, 11 fora were added and 11 were deleted
  - In 2004, 9 fora were added and 6 were deleted
  - (In 2005, TTC published analysis in Japanese only)
  - In 2006, 12 fora were added and 4 were deleted
  - (In 2007, TTC published analysis in Japanese only)
  - In 2008, 13 fora were added and 6 were deleted
- Over three years, ~40% of forums tend to get replaced

Source: TTC, "Survey Report on the Activities of Information and Communications related Fora"  
[www.ttc.or.jp/e/inv/forum/forum\\_report-E\\_v13\\_1.pdf](http://www.ttc.or.jp/e/inv/forum/forum_report-E_v13_1.pdf)  
[www.ttc.or.jp/e/inv/forum/forum\\_report-E\\_v15.pdf](http://www.ttc.or.jp/e/inv/forum/forum_report-E_v15.pdf)

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## ITU-T in the Global Standards Community

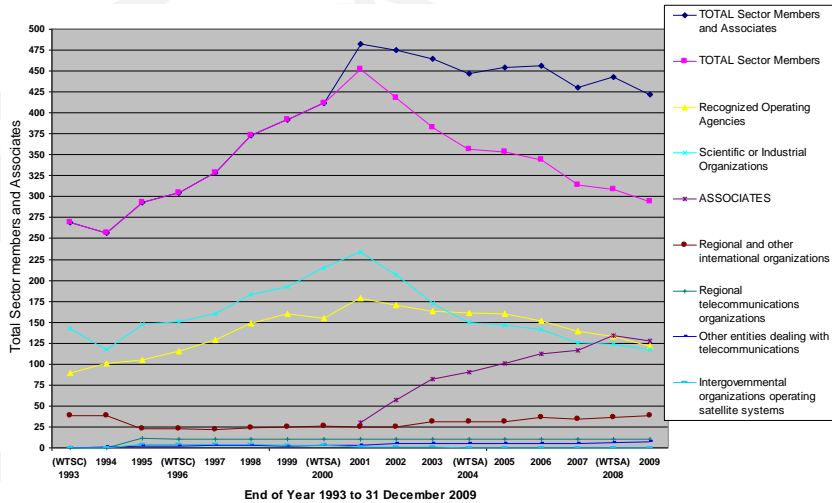
- ITU is a specialized agency of the UN
  - Treaty-based (created in 1865)
  - A truly global organization:
    - 191 Member States
  - Includes industry in its membership:
    - 563 Sector Members\*
    - 149 Associates\*
    - More info: [www.itu.int/ITU-T/membership](http://www.itu.int/ITU-T/membership)

\* As of 2009 08 12

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## ITU-T Membership Trends



Source: TD 86 (TSB, Feb 2010 TSAG meeting)

[www.itu.int/md/meetingdoc.asp?lang=en&parent=T09-TSAG-100208-TD-GEN-0086](http://www.itu.int/md/meetingdoc.asp?lang=en&parent=T09-TSAG-100208-TD-GEN-0086)

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## ITU-T and ISO/IEC JTC1

- ITU-T enjoys a special relationship with ISO/IEC JTC1
  - ◆ Rec. A.23 "Collaboration with the International Organization for Standardization (ISO) and the International Electrotechnical Commission (IEC) on information technology"
  - ◆ Rec. A.23 Annex A "Guide to ITU-T and ISO/IEC JTC1 cooperation" was recently updated and was approved in Feb 2010 (previous version Nov 2001)
  - ◆ Many ITU and ISO/IEC standards are jointly published and freely available
- Collaboration has resulted in a common ITU-T / ITU-R / ISO/IEC Patent Policy
  - ◆ [www.itu.int/ITU-T/dbase/patent/patent-policy](http://www.itu.int/ITU-T/dbase/patent/patent-policy)

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## ITU-T and Referencing

- Where appropriate, ITU-T references other standards bodies' work rather than duplicating it
- Cooperation and collaboration are essential
  - ▶ 29 approved, 2 under study, for communication process (Rec. A.4)
  - ▶ 33 qualified for referencing (Rec. A.5)
  - ▶ 15 approved for cooperation and exchange of information (Rec. A.6)



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Source: [www.itu.int/ITU-T/lists/qualified.aspx#forums](http://www.itu.int/ITU-T/lists/qualified.aspx#forums)

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## Recs. A.4, A.5, A.6

- Rec. A.4 "Communication process between ITU-T and Forums and Consortia"
- Rec. A.5 "Generic procedures for including references to documents of other organizations in ITU-T Recommendations"
- Rec. A.6 "Cooperation and exchange of information between ITU-T and national and regional standards development organizations"
- A-series Recommendations are available at [www.itu.int/rec/recommendation.asp?type=products&lang=e&parent=T-REC-A](http://www.itu.int/rec/recommendation.asp?type=products&lang=e&parent=T-REC-A)

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## Qualified Organizations I

	A.4	A.5	A.6
3G Association	X		
ABNT (Associação Brasileira de Normas Tecnicas)		X	X
ARIB (Association of Radio Industries and Businesses)		X	X
ASN.1 Consortium	X		
ATIS (Alliance for Telecommunications Industry Solutions)		X	X
ATM Forum		X	
ATSC (Advanced Television Systems Committee)	X	X	
AVS (Audio-Visual coding Standard working group)	X	X	
Broadband Forum (Broadband Forum)	X	X	
CA/B (CA/Browser Forum)	us		
CCSA (China Communications Standards Association)		X	X
CEA (Consumer Electronics Association)		X	X
CEPCA (Consumer Electronics Powerline Communication Alliance)	X		
DSL Forum	X	X	
Ecma International		X	X
ETIS (e-and telecommunication information services)	X		
ETSI (European Telecommunications Standards Institute)		X	X
FIRST (Forum of Incident Response and Security Teams) Under study	us		
GSM Association	X		
Home Gateway Initiative	X	X	
IEEE (Institute of Electrical and Electronics Engineers)		X	X
IMTC (International Multimedia Telecommunications Consortium)	X	X	
IP/MPLS Forum	X	X	
IPDR Organization	X		

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## Qualified Organizations II

	A.4	A.5	A.6
IPsphere Forum	X		
IPv6 Forum	X		
ISOC/IETF (Internet Society/Internet Engineering Task Force)		X	
JCTEA (Japan Cable Television Engineering Association)		X	X
Liberty Alliance	X	X	
MEF (Metro Ethernet Forum)	X	X	
MMTA (Mobile Multimedia Technology Alliance)	X		
MSF (Multiservice Switching Forum)	X		
National and Regional Standards Development Organizations			
NIST (National Institute of Standards and Technology)		X	X
NRO (Number Resource Organization)	X		
OASIS	X	X	
OIF (Optical Internetworking Forum)	X	X	
OMA (Open Mobile Alliance)	X	X	
OMG (Object Management Group)	X	X	
SCTE (Society of Cable Telecommunications Engineers)		X	X
SDL Forum Society	X		
SMPTE (Society of Motion Picture and Television Engineers)		X	X
TIA (Telecommunications Industry Association)		X	X
TM Forum (TeleManagement Forum)	X	X	
TTA (Telecommunications Technology Association)		X	X
TTC (Telecommunication Technology Committee)		X	X
UNICODE	X	X	
UPA (Universal Powerline Association)	X		
W3C (World Wide Web Consortium)	X	X	

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## Global Standards Collaboration (GSC)

By-invitation events bring together the top Standards officials from the USA, Canada, the EU, China, Japan, Korea, Australia, and the ITU to discuss their standards work programs and identify areas for collaboration and ways to accelerate global standards for the industry. Observers from other standards-related organizations are also invited to participate.

[www.itu.int/ITU-T/qsc/](http://www.itu.int/ITU-T/qsc/)  
[www.gsc.etsi.org/](http://www.gsc.etsi.org/)



## GSC Participating Standards Organizations (PSOs)

- ITU
  - ◆ [ITU Telecommunication Standardization Sector \(ITU-T\)](#)
  - ◆ [ITU Radiocommunication Sector \(ITU-R\)](#)
- [Alliance for Telecommunications Industry Solutions \(ATIS\)](#)
- [Association of Radio Industries and Businesses \(ARIB\) of Japan](#)
- [China Communications Standards Association \(CCSA\) of China](#)
- [Communications Alliance of Australia](#)
- [European Telecommunications Standards Institute \(ETSI\)](#)
- [ICT Standards Advisory Council of Canada \(ISACC\)](#)
- [Telecommunications Industry Association \(TIA\)](#)
- [Telecommunications Technology Association \(TTA\) of Korea](#)
- [Telecommunications Technology Committee \(TTC\) of Japan](#)



## GSC-14

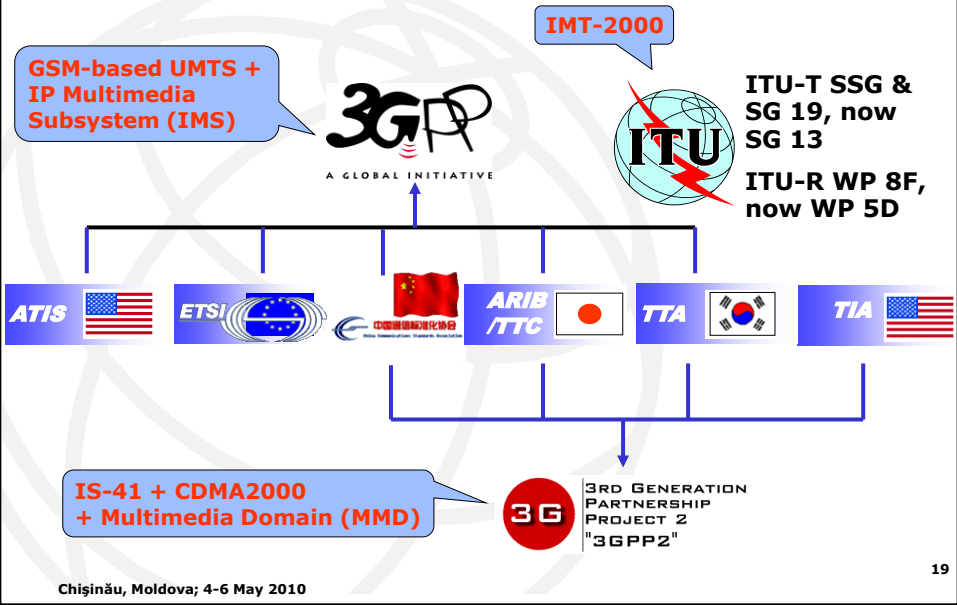


- PSOs take turns hosting
  - GSC-14 was hosted by ITU in Geneva, 13-16 July 2009
  - GSC-15 will be hosted by CCSA in Beijing, 30 Aug – 2 Sep 2010
- GSC-14 Theme: “Fostering worldwide interoperability”
- All GSC-14 documents, Resolutions, etc., are available through links at:
  - [www.itu.int/ITU-T/gsc/gsc14/index.html](http://www.itu.int/ITU-T/gsc/gsc14/index.html)

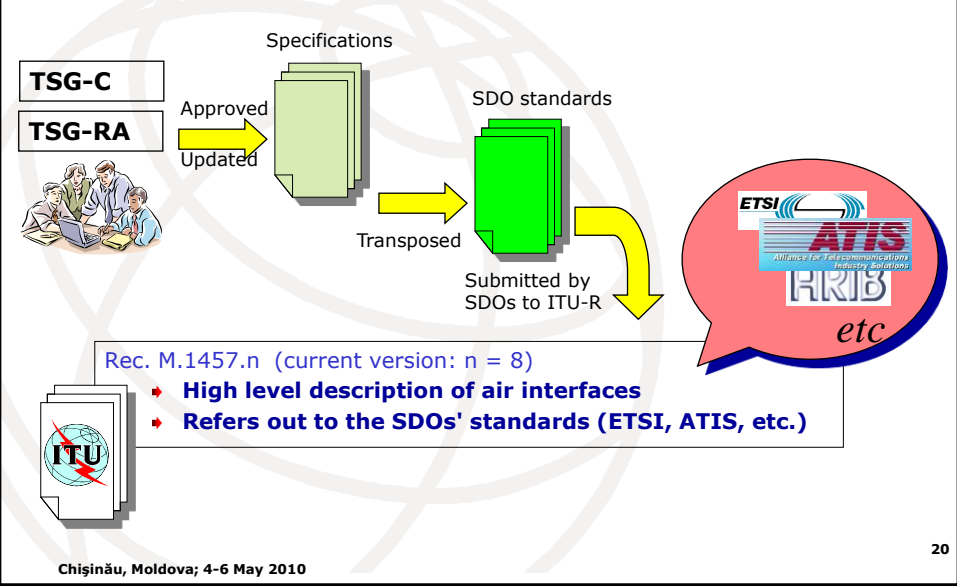
## Example of Collaboration between ITU and Other Bodies

- IMT-2000 / IMT-Advanced / IMT
  - Mobile has become the dominant access means but with multiple technologies
  - “IMT-2000 Family” concept: multiple technologies exist, compete, cooperate and evolve
  - Recognition that each technology has its place, that cooperation in certain aspects is mutually beneficial
    - E.g., globalization of regional standards

# IMT Standards: 3G Partnerships



# 3GPPs and ITU-R WP 5D (formerly WP 8F)



## ITU-R IMT-2000 Radio Interface Specifications\*

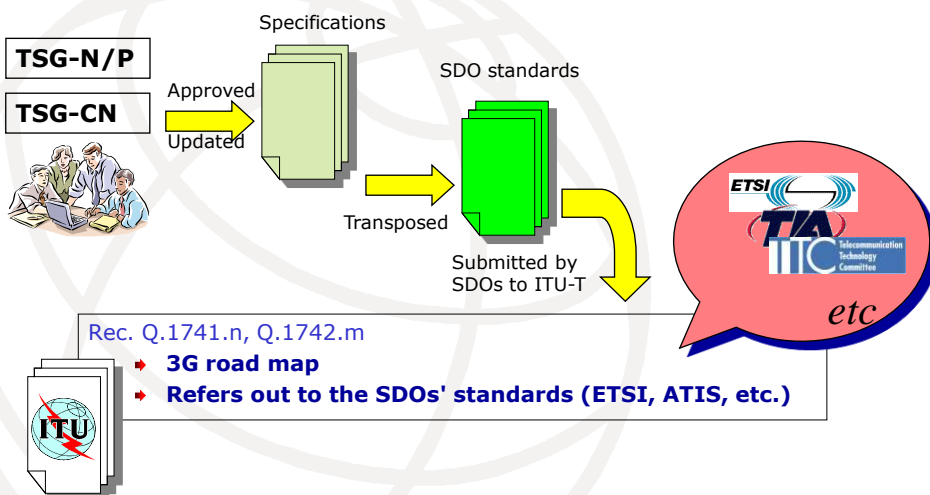
- M.1457-8 (05/09) Detailed specifications of the radio interfaces of International Mobile Telecommunications-2000 (IMT-2000)
- M.1457-7 (10/07) Detailed specifications of the radio interfaces of International Mobile Telecommunications-2000 (IMT-2000)
- M.1457-6 (12/06) Detailed specifications of the radio interfaces of International Mobile Telecommunications-2000 (IMT-2000)
- M.1457-5 (04/06) Detailed specifications of the radio interfaces of International Mobile Telecommunications-2000 (IMT-2000)
- M.1457-4 (07/05) Detailed specifications of the radio interfaces of International Mobile Telecommunications-2000 (IMT-2000)
- M.1457-3 (12/03) Detailed specifications of the radio interfaces of International Mobile Telecommunications-2000 (IMT-2000)
- M.1457-2 (04/03) Detailed specifications of the radio interfaces of International Mobile Telecommunications-2000 (IMT-2000)
- M.1457-1 (08/01) Detailed specifications of the radio interfaces of International Mobile Telecommunications-2000 (IMT-2000)
- M.1457 (05/00) Detailed specifications of the radio interfaces of International Mobile Telecommunications-2000 (IMT-2000)

\* Available with a TIES account at [www.itu.int/rec/R-REC-M.1457/en](http://www.itu.int/rec/R-REC-M.1457/en)

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## 3GPPs and ITU-T SSG / SG 19 / SG 13




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## Q.174x.y Series Recommendations

- "IMT-2000 references to release to GSM evolved UMTS core network with UTRAN access network Release <#>"
  - ◆ Q.1741.1 Release 1999
  - ◆ Q.1741.2 Release 4
  - ◆ Q.1741.3 Release 5
  - ◆ Q.1741.4 Release 6
  - ◆ Q.1741.5 Release 7
  - ◆ Q.1741.6 Release 8
  - ◆ Q.1741.7 Release 9 (in preparation; target: June 2010)
- "IMT-2000 references to ANSI-41 evolved core network with cdma2000 access network (as of <date>)"
  - ◆ Q.1742.1 as of 17 Jul 2001
  - ◆ Q.1742.2 as of 11 Jul 2002
  - ◆ Q.1742.3 as of 30 Jun 2003
  - ◆ Q.1742.4 as of 30 Jun 2004
  - ◆ Q.1742.5 as of 31 Dec 2005
  - ◆ Q.1742.6 as of 31 Dec 2006
  - ◆ Q.1742.7 as of 30 Jun 2008
  - ◆ Q.1742.8 as of tbd 2009 (in preparation; target: April 2010)
  - ◆ Q.1742.9 as of tbd 2009 (in preparation; target: Jun 2010)

## WiMAX

- IEEE 802.16: numerous options
- WiMAX Forum ([www.wimaxforum.org](http://www.wimaxforum.org)): 
  - ◆ defines profiles based on 802.16
  - ◆ promotes WiMAX technology
  - ◆ interfaces with regulators to smooth path for global applicability (like Wi-Fi)
  - ◆ organizes conformance and interoperability test events
  - ◆ promoting WiMAX as new IMT radio technology
    - agreed at WRC-07: "IMT-2000 OFDMA TDD WMAN\*" and included in ITU-R Rec. M.1457-7
    - there are now 568 WiMAX networks in 148 countries
    - E.g., KDDI in Japan offers UQ WiMAX for the mobile business market
      - ◆ [www.kddi.com/english/business/wimax](http://www.kddi.com/english/business/wimax)

\* Orthogonal Frequency Division Multiple Access Time Division Duplex Wireless Metropolitan Area Network

## Summary

- Standards is a global and dynamic environment with lots of churn
  - There are major anchor points, notably the ITU
- No single body can do all the work
  - Cooperation and collaboration are essential
- ITU has a long history of active involvement with many other bodies
  - Recs. A.4, A.5, A.6, A.23; lists of qualified organizations
- IMT provides an excellent example to illustrate the positive effects of global cooperation
  - Both radio access and core network infrastructure

# Thank you!

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