

## Bridging the Standardization Gap: China and the ITU-T

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## ITU Membership

- Member States: 191 governments
- ITU-T, ITU-R, ITU-D Sector Members (565)
  - ITU-T Sector membership fee: 31,800 CHF (= 20 k EUR)
- Associates (154): have right to participate in one study group
  - Associate membership fee: 10,600 CHF (= 7 k EUR)
- Today, 95% of the work in ITU-T is done by the private sector (Sector Members and Associates)

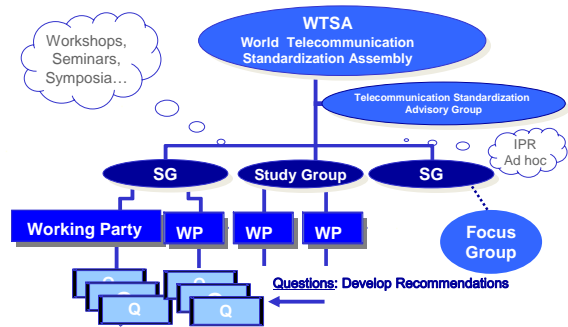
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## ITU-T in a Nutshell

- Work (mostly) done in Study Groups (10 of them)
  - + Telecommunication Standardization Advisory Group (TSAG)
- ITU-T Product: Recommendations (= "standards")
  - Freely available to the public
- Unique partnership of private sector (Sector Members) & government (Member States)
- Truly global
- Consensus decisions
- Very flexible
- Fast procedures, transparent procedures
- Brand name
- Interoperability events / ITU-T Conformity database
- Common Patent Policy ITU-T/ITU-R/ISO/IEC

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## ITU-T Structure



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## Work in Study Groups

- Currently 10 study groups (= technical committees)
- Study group structure:
  - Study groups ( $\Leftrightarrow$  JTC1 Sub-Committees)
    - Working parties ( $\Leftrightarrow$  JTC1 Working Groups)
      - Questions
  - Face-to-face meeting cycle every 6 – 9 months but can also arrange interim meetings
  - Electronic working methods (electronic meetings, web conferencing, email) heavily used
- Rapporteur meetings to deal with specific Questions
  - Some have face-to-face meetings as frequently as once a month

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## ITU-T is fast

- Start work: within 1 day / few weeks
- Develop work: from weeks to 2-3 yrs
- Approve work: 4(+) weeks (average 2 months) for technical standards (95% of work)
- Publish work: within days after approval ("pre-published" standard = non-edited version)
  - Edited version: typically a few months after approval

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## ITU-T has two approval processes

- The vast majority of ITU standards pass without any problems; very few are “difficult”
- Two approval processes:
  - “AAP” (= Alternative Approval Process”) for technical standards
    - today 95% of all ITU-T standards go thru AAP
  - “TAP” (= Traditional Approval Process) for standards with regulatory/policy implications
    - today only 5% of all ITU-T standards go thru TAP
- An approved standard has the backing of 191 Member States

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## Defining the “Standardization Gap”

- It might be defined as disparities in the ability of developing countries, relative to developed ones, **to access, implement, contribute to and influence international ICT standards**, specifically ITU-T Recommendations
- The standardization development gap is itself **both a cause and a manifestation of the wider digital divide**
- It contributes to the **persistency** of the wider digital divide

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## Researching the Gap

- A recent research project by TSB led to publication of a major Report in December 2009 on what can be done to improve the capacity of developing countries to participate in standardization, including case studies and best practices.
- “Bridging the Standardization gap — ITU-T Research Project: Measuring and Reducing the Standards Gap,” December 2009. The report can be downloaded at [www.itu.int/oth/T3202000001/en](http://www.itu.int/oth/T3202000001/en)

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## 4 Categories of Standards Capability: Low, Basic, Intermediate or Advanced

- **Level 1 (low standards capability)** applies to a very small number of developing countries, which have little direct involvement in standardization activities, other than as buyers of ICT products based on universal standards. They are usually net importers of ICT technology rather than developers and manufacturers, and they do not have a significant base of private industry, research institutions or government agencies involved in adopting standards.
- **Level 2 (basic standards capability)** refers to countries that, in addition to using standardized ICT products, have private industry, government agencies or research institutions that adopt and implement technical standards in products or services created within the country — allowing them also to find a market abroad. Countries at this level are not involved in the work of regional or international standards development organizations to any great extent, but they have access to the organizations’ output and might have made efforts to adopt such standards nationally.

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## 4 Categories Cont’d.

- **Level 3 (intermediate standards capability)** describes countries engaged in standardization activities in three ways: they use ICT products based on universal standards; they implement standards within products manufactured nationally, and they have experts who participate in regional and international standards-development processes, including on technical issues. This means that they are able to influence the design choices and associated policy consequences of standards.
- **Level 4 (advanced standards capability)** incorporates all aspects of the previous levels and adds strategic factors. These countries have national strategies for using ICT standards to maximize their economic positions and to support innovation policy; market influence can be exerted nationally by using procurement policies or by developing effective partnerships and incentive structures between a country’s public and private entities. Countries at this level also have adequate funding for standardization activities, in the private or public sector; they produce numbers of standards experts, and they influence the international and regional direction of new ICT standards.

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## China as ITU Member

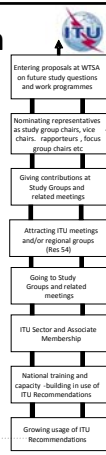
- China joined ITU on 1 September 1920
- Represented by the Ministry of Industry and Information Technology (MIIT)
- 13 distinct Sector Members (4 February 2010)
  - ITU-T: 12
  - ITU-R: 9
  - ITU-D: 4
- No Associate Members

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## China on the Standardization Development Ladder

- Bridging the standardization development gap requires a sequence of steps, depending on the level of:
  - economic development
  - local manufacturing capability
  - local R&D capability
  - previous engagement with ITU
- These steps can be conceptualized in terms of a “Ladder of Standardization Development”

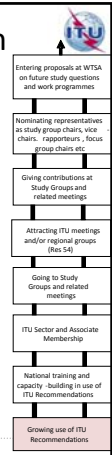
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## China on the Standardization Development Ladder (1)

- On the lowest rung of the ladder is the **growing usage of ITU-T Recommendations** and website
- This can be measured in terms of sales or downloads of Recommendations
- Use of international standards in ICT procurement should help to reduce costs and promote interoperability

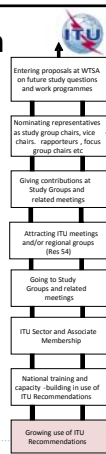
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## China on the Standardization Development Ladder (1)

- In 2007: 3,868,658 downloads of ITU-T Recommendations from ITU-T website, <http://www.itu.int/ITU-T/>
  - China ranked number 2: 3.8% of all downloaded Recommendations
  - (most downloads from USA)

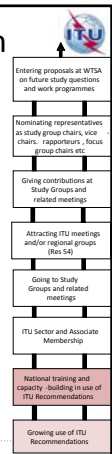
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## China on the Standardization Development Ladder (2)

- On the second rung of the ladder is the **national capacity-building in use of ITU Recommendations**, helping to build a national resource base of engineers able to implement Recommendations
- ITU can provide capacity-building and training programmes (e.g., centers of excellence)
- Workshop in Fiji in 2009 and planned for KL in 2010

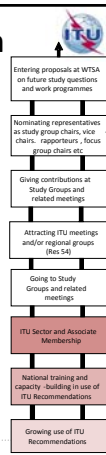
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## China on the Standardization Development Ladder (3)

- On the third rung of the ladder is **ITU Sector and Associate membership**
- Institutional membership in the global community helps promote globalization while off-setting its negative aspects
- Membership also gives access to meeting reports, contributions, temporary documents, working documents etc
- To date, **12 ITU-T Sector Members from China**

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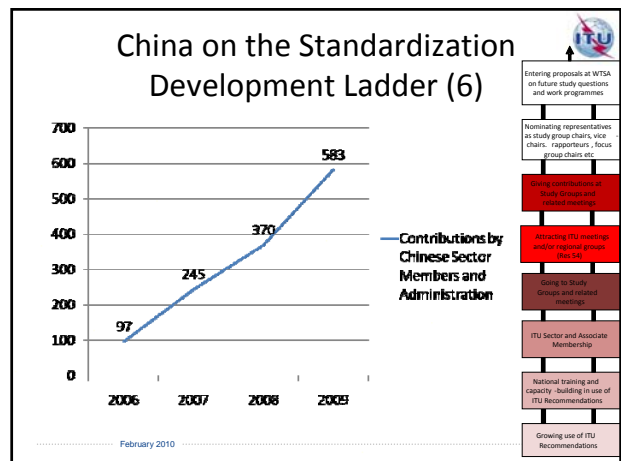
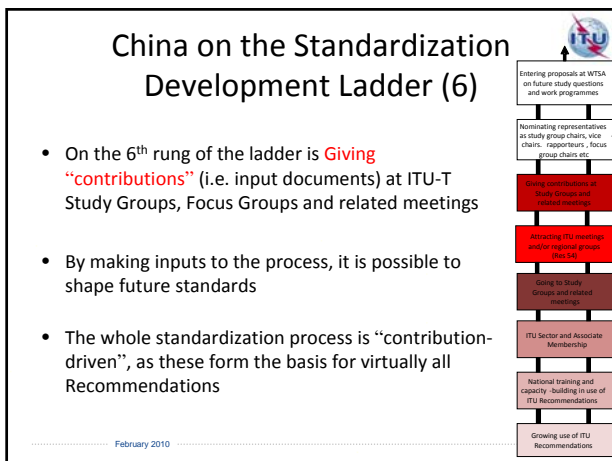
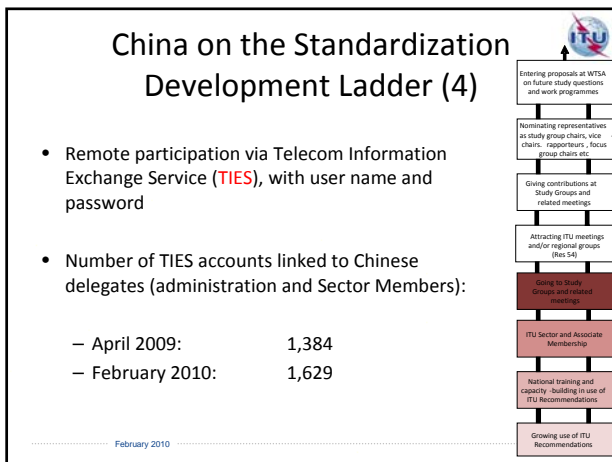
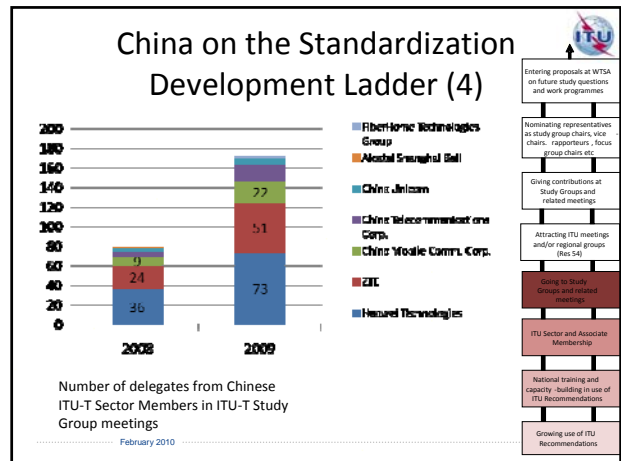
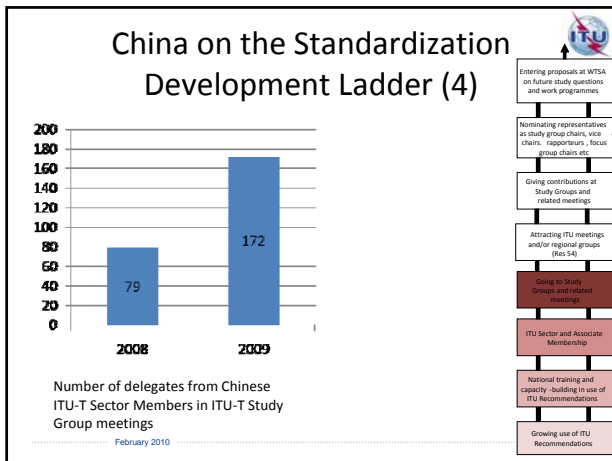


## China on the Standardization Development Ladder (4)

- On the 4<sup>th</sup> rung of the ladder is **participation in Study Groups** and Focus Groups
- Participation promotes “learning by doing” and opens possibilities for networking
- Possibilities also exist for remote participation (e.g., through Internet Broadcast of Study Group meetings, correspondence groups, remote collaboration tools etc)

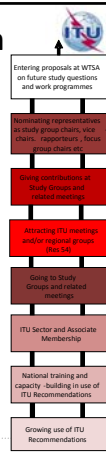
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## China on the Standardization Development Ladder (7)

- On the 7<sup>th</sup> rung of the ladder is **Nominating representatives**, e.g., to serve as Study Group chairs, vice chairs, rapporteurs etc
- These officials form part of the management team for each Study Group and help progress the work
- Nomination is a sign of respect for the contributions made by individuals over a number of years



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## China on the Standardization Development Ladder (7)

Study Group	2	3	5	9	11	12	13	15	16	17	TSAG
Chair					★						
Vice-chair	★		★	★		★	★	★	★	★	

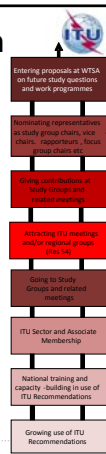
Chinese Study Group Chairmen and Vice-Chairmen (period 2009-2012)



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## China on the Standardization Development Ladder (8)

- On the final rung of the ladder is **Entering Proposals**, in TSAG and WTSA, e.g., on future study questions and work programmes
- ITU-T's work is structured around study questions which determine the work of the Study Groups
- China:
  - 4 Contributions to Telecommunication Standardization Advisory Group (TSAG 2008)
  - 26 Delegates, 2 Contributions to World Telecommunication Standardization Assembly (WTSA 2008)



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## China Case Study

- The China Communications Standards Association (CCSA) was established in 2002 and includes corporations, universities, and other institutions within its membership. This association conducts standardization activities under the guidance of the Ministry of Information Industry and other authorities.
- China has few standards courses in higher education but has some government ICT standards training. There are many standards conferences held in China, including ITU meetings and workshops. The CCSA also provides electronic training materials on a variety of standardization topics.
- Source: China Academy of Telecommunication Research (CATR)



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## Strengths of China's Standardization Capacity include

- a strong national standards body
- thousands of standards experts
- significant participation in international ICT standards development
- multi-stakeholder participation from government, industry and academia
- extensive regional ICT standards development
- national laws and a national standards strategy.

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## Some challenges and opportunities reflected in the self-assessment

- the need for further involvement of private industry in standards development
- adoption and greater coordination between private industry and government
- a need for international organizations like the ITU to encourage greater developing country involvement in standards development (such as providing education, holding ITU meetings in developing countries, engaging experts from developing countries to participate in the ITU);
- the possibility of the government establishing more national standards policies and increasing funds to support standards development and adoption.

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