



**ASIA-Pacific Forum on
Bridging Standardization Gap
Ha Noi, Viet Nam, 15 – 17 September 2008**

The ITU-T: “Bridging the Standardization Gap”

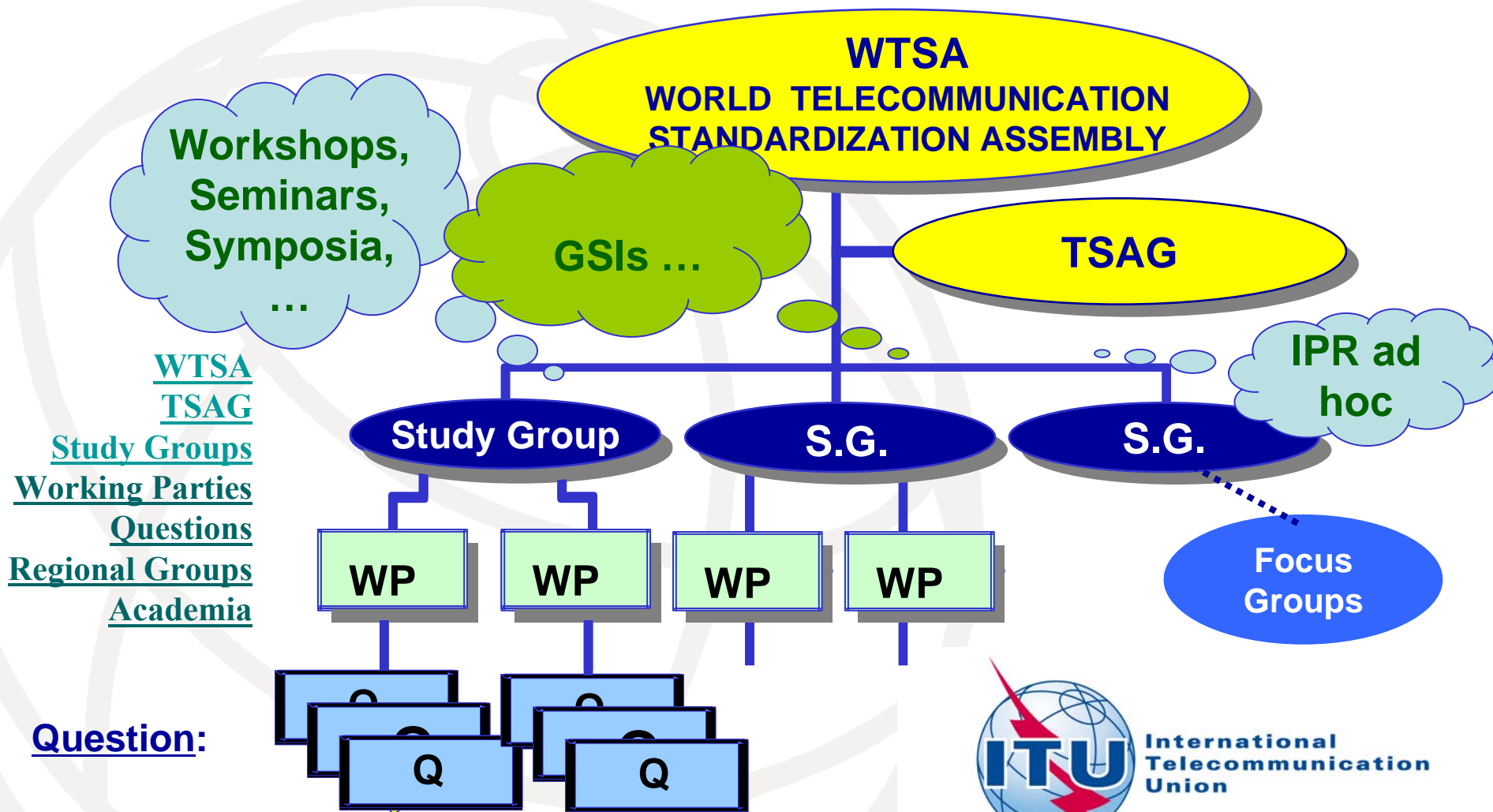
Paolo ROSA

Head, Workshops and
Promotion Division,
ITU - Telecommunication
Standardization Bureau





ITU-T Structure



Question:

Draft Recommendations



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ITU-T Study Groups

- Telecommunication Standardization Advisory Group (TSAG)
- Technical/regulatory work
 - SG2: Operational aspects of service provision, networks & performance
 - SG3: Tariff and accounting principles including related telecommunications economic and policy issues
 - SG4: Telecommunication management
 - SG5: Protection against electromagnetic environment effects
 - SG6: Outside plant and related indoor installations
 - SG9: Integrated broadband cable networks, TV & sound transmission
 - SG11: Signaling requirements and protocols
 - SG12: Performance and quality of service
 - SG13: Next Generation Networks
 - SG15: Optical and other transport network infrastructures
 - SG16: Multimedia terminals, systems and applications
 - SG17: Security, languages and telecommunications software
 - SG19: Mobile telecommunication networks



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Global Standard Initiative: GSI

IdM-GSI
GLOBAL STANDARDS INITIATIVE
ITU-T

IPTV-GSI
GLOBAL STANDARDS INITIATIVE
ITU-T

NGN-GSI
GLOBAL STANDARDS INITIATIVE
ITU-T

ITU International Telecommunication Union
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PP-06 Resolution 123

(Antalya, 2006)

Recognizes:

"the continued shortage of human resources in the standardization field in developing countries, resulting in a low level of developing-country participation in meetings of ITU-T and of ITU-R and, consequently, in the standards-making process, leading to difficulties when interpreting ITU-T and ITU-R Recommendations;"



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Three dimensions

Any TIME connection

- On the move
- Outdoors and indoors
 - Night
 - Daytime

Any WHERE connection

- On the move
- Outdoors
- Indoors (away from the PC)
- At the PC

Any THING connection

- Between PCs
- Human to Human (H2H), not using a PC
- Human to Thing (H2T), using generic equipment
- Thing to Thing (T2T)

Source: ITU, Adapted from NRI (Japan)



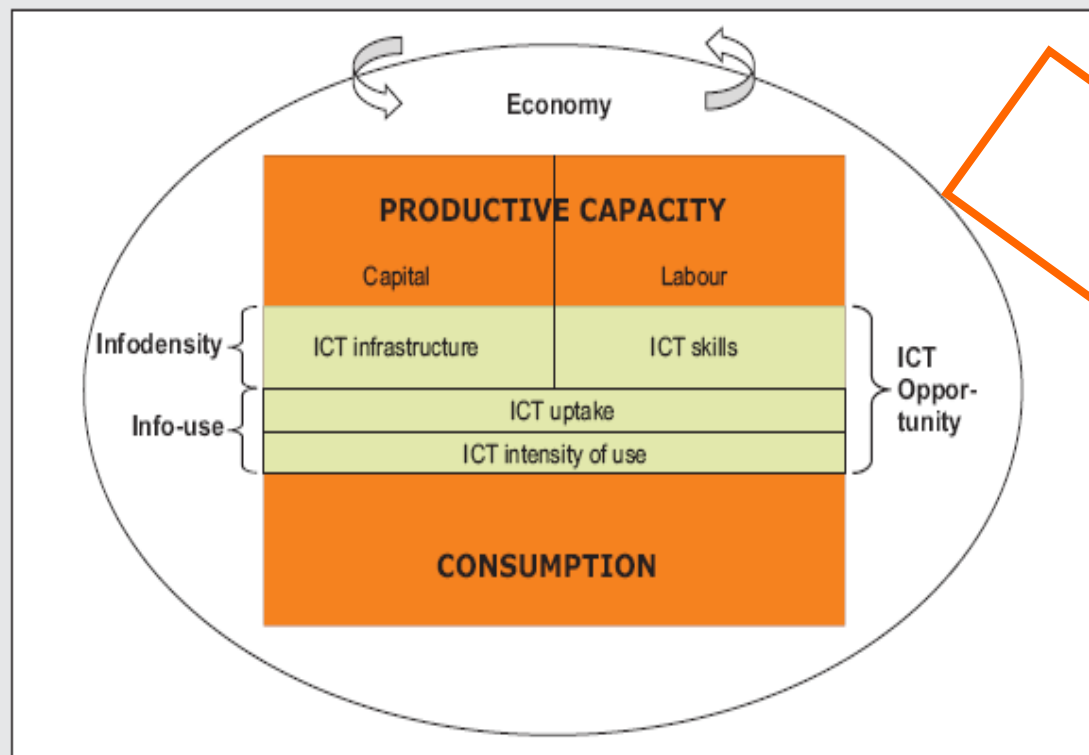
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The concept of Opportunity Index (OI) to measure the information society

Figure 1: The ICT-OI conceptual framework, which is set within the socio-economic, geopolitical and cultural environment of every economy



Source: ITU adapted from Orbicom.

Infodensity

ICT capital [telecommunication network infrastructures (fixed, mobile, internet) and of ICT, including equipment (cables, routers, etc),

Info-use

Three indicators:

- Internet users every 100 inhabitants
- PC owners every 100 inhabitants
- Houses and TV sets proportion

disparity



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Digital Divide Standardization Gap & Participation Relationship

Digital Divide \approx -----
Standardization Gap &
Poor Access to Technologies
Increase Participation &
Capacity Building





WTSA to Bridging the standardization gap

- **Resolution 44** WTSA-04 Bridging the standardization gap:
 - Programme 1 - Strengthening Standard-making capabilities
 - Programme 2 - Assist BDT for standards application
 - Programme 3 - Human resources building
 - Programme 4 – Flashing Groups
 - Programme 5 – Fundraising bridging standardization gap
- **Resolution 54** WTSA-04: Regional Groups
 - support for the creation of regional groups in Study Groups, in addition to those already existing in Study Group 3, to cooperate with relevant regional organizations



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The Standardization Gap

- The standardization development gap: **persistence of the wider digital divide in ICTs.**
- **Unequal access to technology and the ability to use that technology**
- **ability to access, implement, contribute to and influence international ICT standards,** (ITU Recommendations)
- **digital divide measures disparities**
 - **among different regions** (e.g., urban/rural), or
 - **between different groups within society** (e.g., by age, sex, race, income, etc)
- PP-06 (Res. 123) and WTSA-04 Resolutions



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Bridging the standardization gap

- ITU-T mandated to bridge the standardization gap between developing and developed countries.
- Action plan established:
 - Improve standards making capabilities
 - Develop guidelines
 - Consultancy
 - Human resources building
 - Fundraising?



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Workshops evolution

Year	N. events	Total days	Average Days/ev	Geneva	%	Outside Geneva	%
2002	12	24	2.00	11	46	13	54
2003	14	36	2.57	24	67	12	33
2004	15	31	2.07	8	26	23	74
2005	18	47	2.61	16	34	31	66
2006	18	41	2.28	19	46	22	54
2007	15	33	2.20	13	30	20	70
2008	21+	49+	2.33	17+	35	32+	65



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Technology Watch

Objectives

- Facilitate development of **timely market-oriented international standards** on specific topics
- Increase cooperation between research institutes, academia, private sector, forums and consortia
- Align and harmonize the studies and research among different standards developing organizations (SDOs), therefore avoiding duplication of work

Terms of References

- to consider possible new standardization activities for ITU-T gathering information from various sources (e.g. academia, industry, research institutes SDOs, etc.);
- to evaluate the new possible standardization activities in relation with studies performed by other SDOs;
- to report TSAG on new possible standardization activities.



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Tech Watch briefing reports

- Remote collaboration tools (March 2008)
- Ubiquitous Sensor Networks (February 2008)
- ICTs and Climate Change (December 2007)
- TelePresence: High performance video-conferencing (November 2007)
- Intelligent Transport Systems and CALM (October 2007)
- ...



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Cooperation between ITU-T and Universities

Given the knowledge that many new technologies find life in the minds of the academic and research communities, ITU is increasingly looking to attract more involvement from the world's universities and other academic institutions

Following the Consultation meeting held in January 2007 an informal discussion group has been formed to discuss ways to increase this cooperation with participation of ITU-T and academia, which is open to all interested parties. To participate in the discussion please join the mailing list by sending a request to tsbuni@itu.int

(see <http://itu.int/ITU-T/uni>)



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Innovations in NGN – Future Network and Services

An ITU-T Kaleidoscope Event Technically co-sponsored by IEEE Communications Society

Geneva 12-13 May 2008

Track 1: NGN architecture evolution

Track 2: Application and services over the NGN

Track 3: Social, economic and policy issues in the ubiquitous societies

Breaking news: more than 220 participants, from 48 countries



IEEE COMMUNICATIONS SOCIETY

Awards

Awards will be granted to selected best papers, as judged by the organizing and programme committee. Details will be announced later.



IEEE

<http://itu.int/ITU-T/uni/kaleidoscope>
kaleidoscope@itu.int

ICF

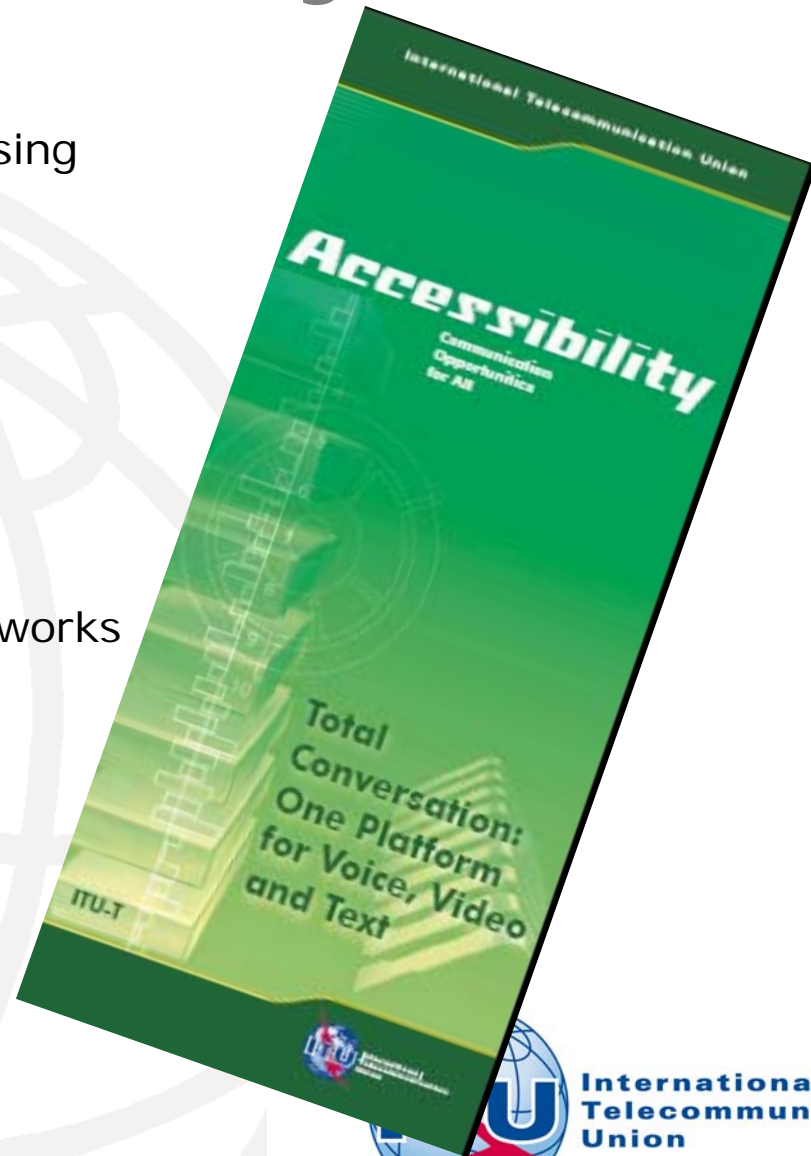


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Technical Flyers

- Numbering, Naming and Addressing
- VoIP
- QoS & QoE
- NGN
- ASON
- B-PON ; CWDM; DSL ; G-PON
- Optical Fibres and Cables
- OTN ; OTS
- Synchronization over packet networks
- Accessibility
- H.264 ; H.350
- Multimedia Communications
- ASN.1
- Security
- IMT-2000



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TSB Questionnaire to developing countries on Bridging the Standardization Gap

It will provide background information on the relevance of ITU-T Recommendations for developing countries and a useful tool to develop strategies able to meet the requirements of the PP-06 and WTSA-04 Resolutions.

TSB Circular 213 – 5 May 2008
to: tsbpromo@itu.int

ITU-T Forum Bridging Standardization Gap, Hanoi, 15- 17 September 2008



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The ITU-T Questionnaire

TSB Circular 213 of 5 May 2008
replies by 13 of June

- Familiarity with Recommendations published by ITU-T
- Relevance and usefulness of Recommendations to Developing Countries
- Difficulties for implementation and suggestions to increase participation by developing countries
- Regional standardization “block” meetings as a tool to facilitate participation from the regions
- Seminars and Workshops in the regions
- The WTSA Resolutions relevant to developing countries: contributions and proposal for improvement



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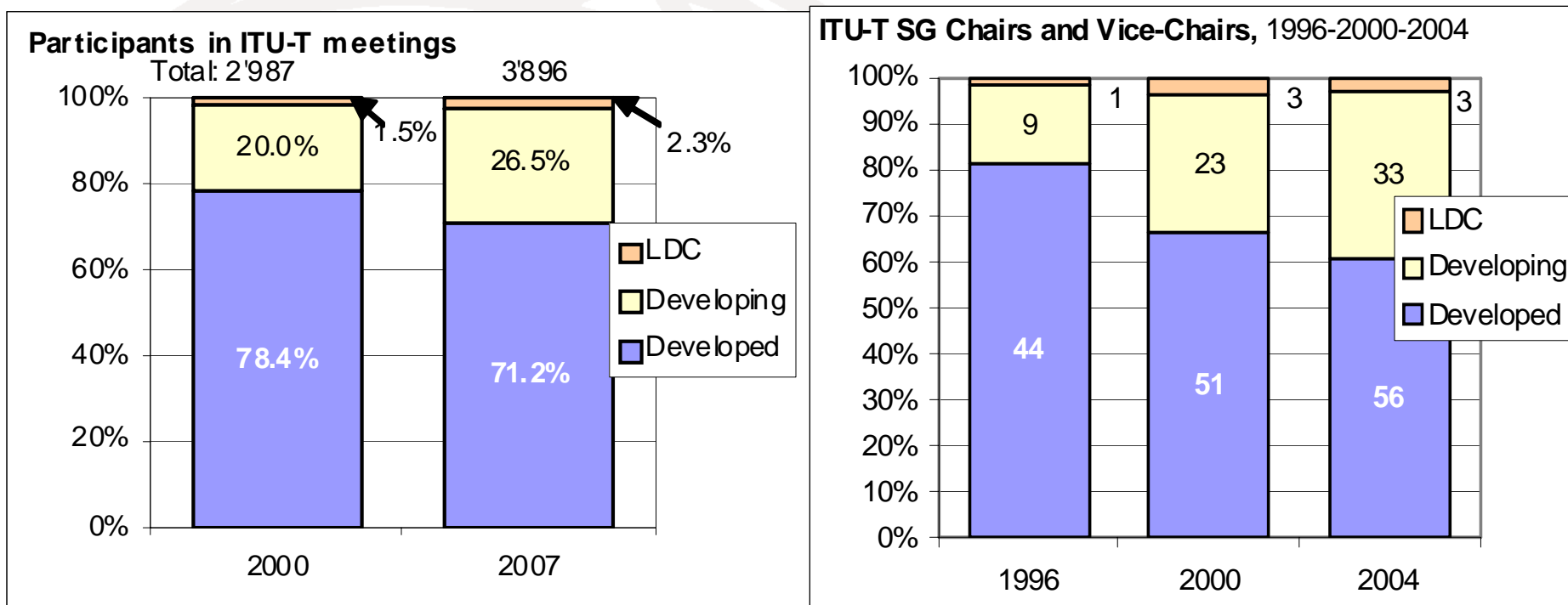
Participation



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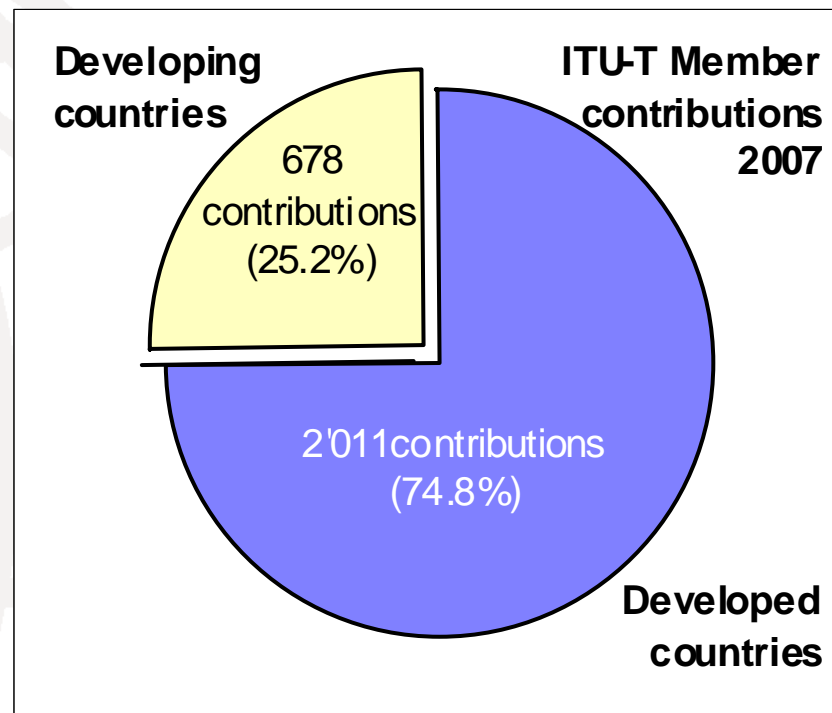
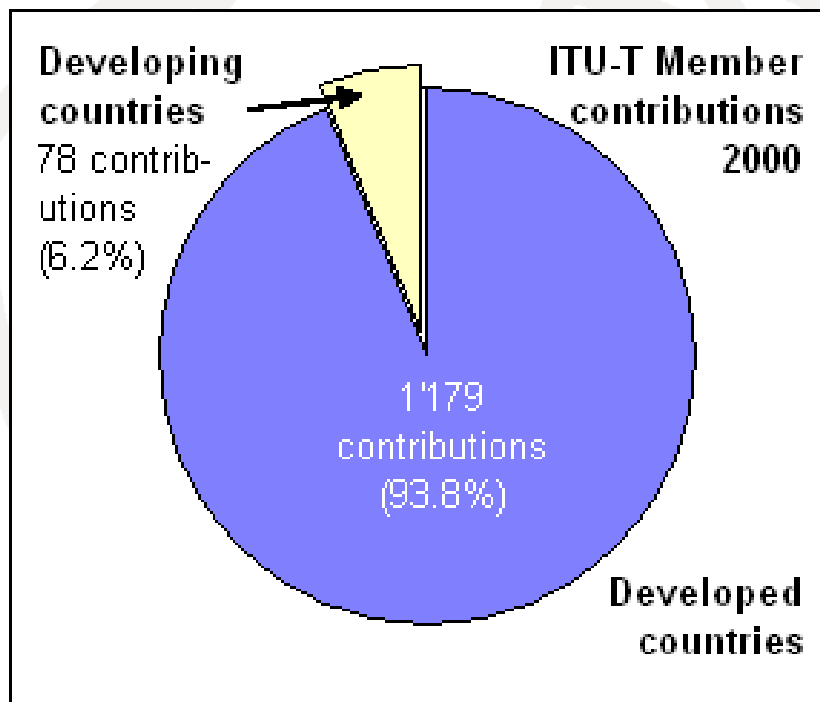
Participation



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Participation: Contributions



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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 conceptualised in terms of a “Ladder of Standardization Development”



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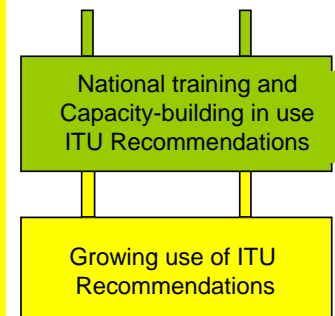
Standardization Development Ladder (1)

Capacity-building

- to build a national resource base of qualified engineers able to implement Recommendations
- ITU centres of excellence

Growing use of ITU Recs

- can be measured in terms of sales or downloads of Recommendation
- should help to reduce costs and promote inter-operability



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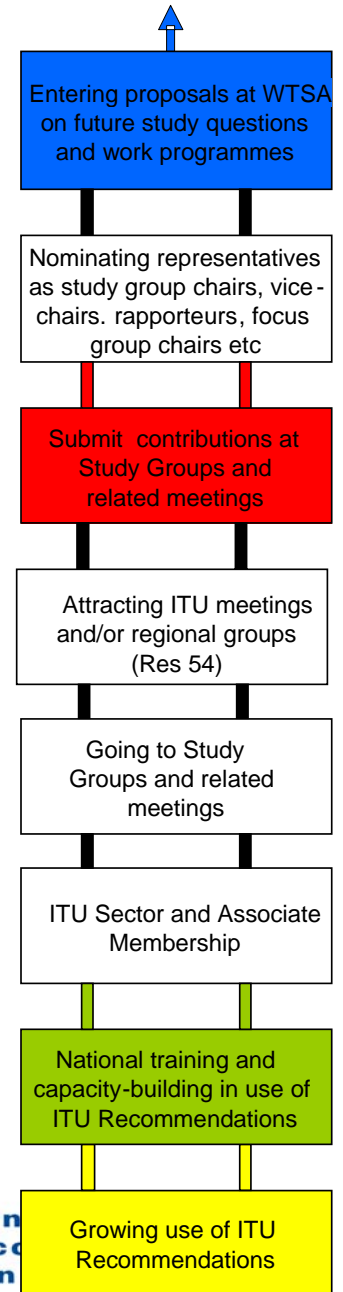
Standardization Development Ladder (1)

Entering proposals to WTSA

Determining ITU-T study questions to drive the work of the Study Groups.

Contributing to ITU-T SGs

“Contribution-driven” philosophy: to enter into the process and shaping future standards

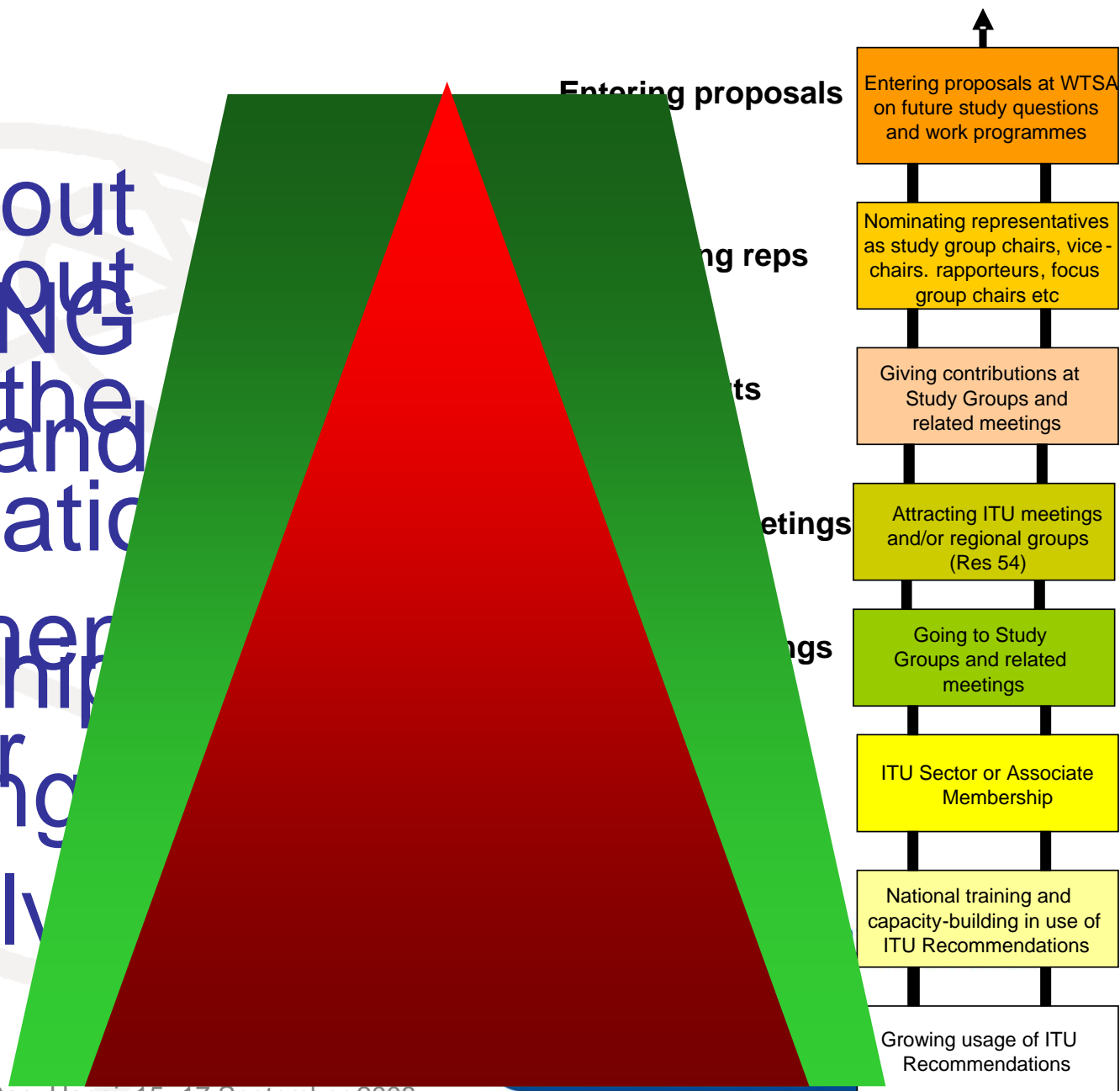


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It's all about
It's all about
ENGAGING
climbing the
with ITU and
Standardization
its
Development
membership
Ladder
by getting
more involved



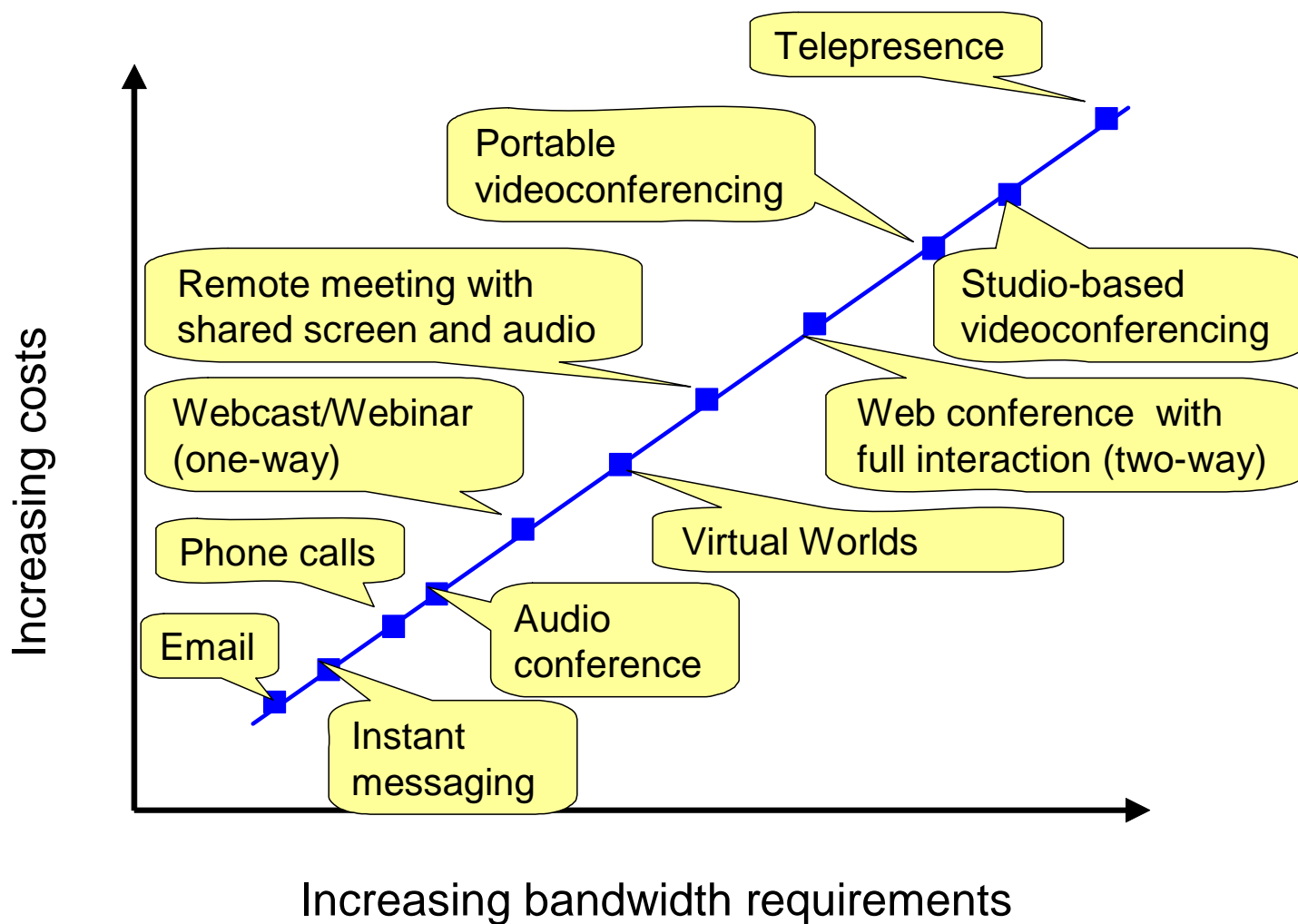


Remote participation why?

- To assist in bridging the standardization gap, especially for delegates from developing countries
- To provide training materials (archived on web)
- To make participation in short meetings more efficient (e.g. steering committees, seminars, rapporteur groups)
- To contribute in reducing carbon footprint



Segmenting the market



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mmunication

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Remote collaboration existing online tools

- Free access to ITU-T Recommendations online (since 1 January 2007)
- TIES access (password protected) to meeting documents etc
- Other electronic tools, e.g., correspondence groups, informal FTP areas on website, Forums etc



Remote collaboration Audio/video tools

- Internet Broadcasting System (IBS)
 - In use since 2000 (mainly audio, with some video)
 - Large archive available (www.itu.int/ibs/)
- E-learning
 - Public digital library
 - Training opportunities online (both instructor-led and self-paced)
 - See: www.itu.int/ITU-D/hrd/elearning/





Remote participation

- ITU-T trial, launched by TSAG in Dec-07, to evaluate remote participation tools
 - **GoToMeeting**: used extensively within ITU for short (>2 hours) meetings, with up to 30 participants
 - **GoToWebinar**: used for covering Climate Change symposium in Kyoto, with up to 200 participants over 2 days (archived)
 - **WebEx**: one year trial offered by CISCO



Possible future scenarios

- Increasing share of ITU meetings held outside Geneva or in cyberspace
 - Workshops and symposia, Webinars
 - Regional block meetings
- Distributed participation in ITU meetings
 - Broadcast (two-way audio/video) to regional offices of Centres of Excellence, allowing for local interaction and participation
- Increased use of remote collaboration tools
 - Full-scale use of existing tools after trial period?
 - ITU-T workshops in Second Life?



Standardization “Block” Meetings in the Regions

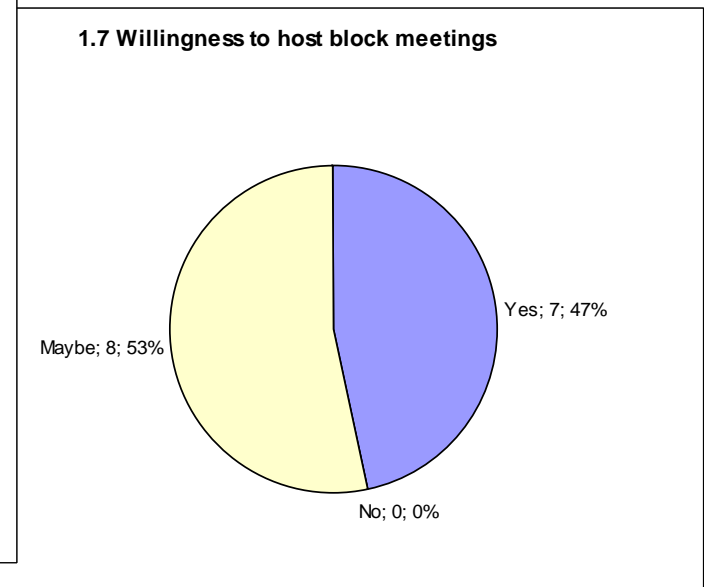
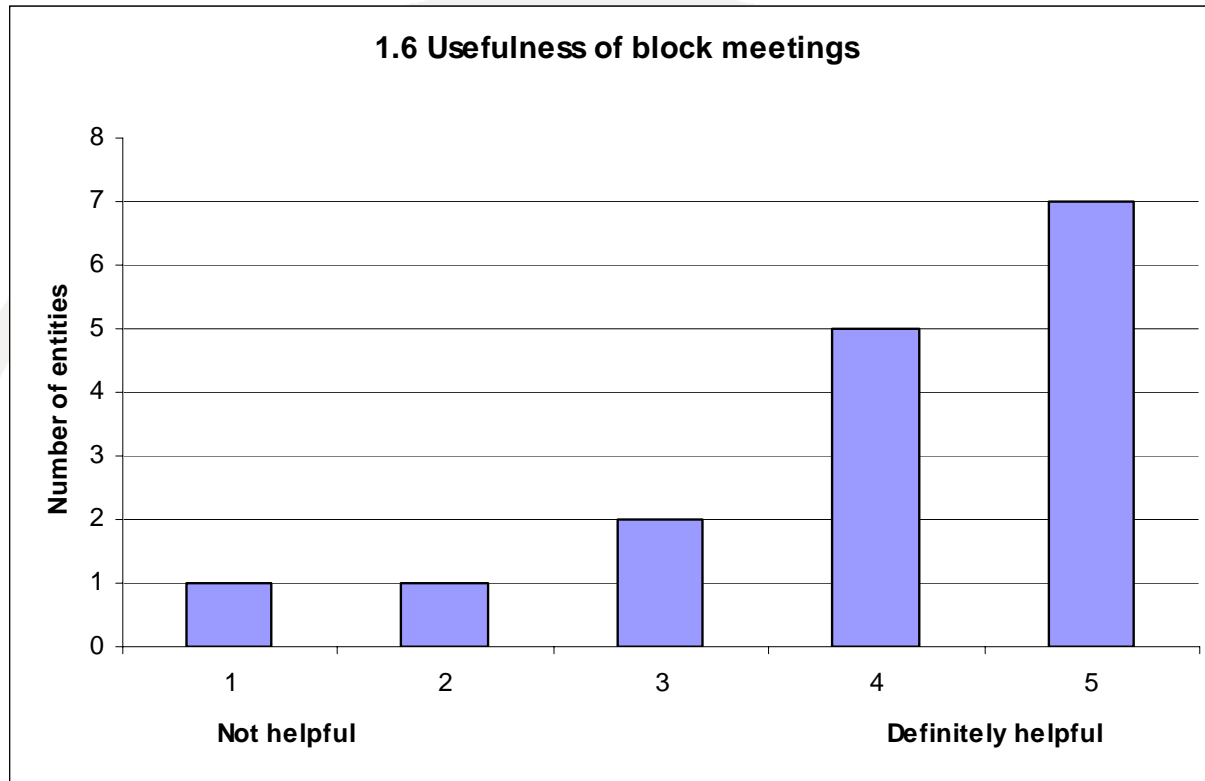
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From the Questionnaire





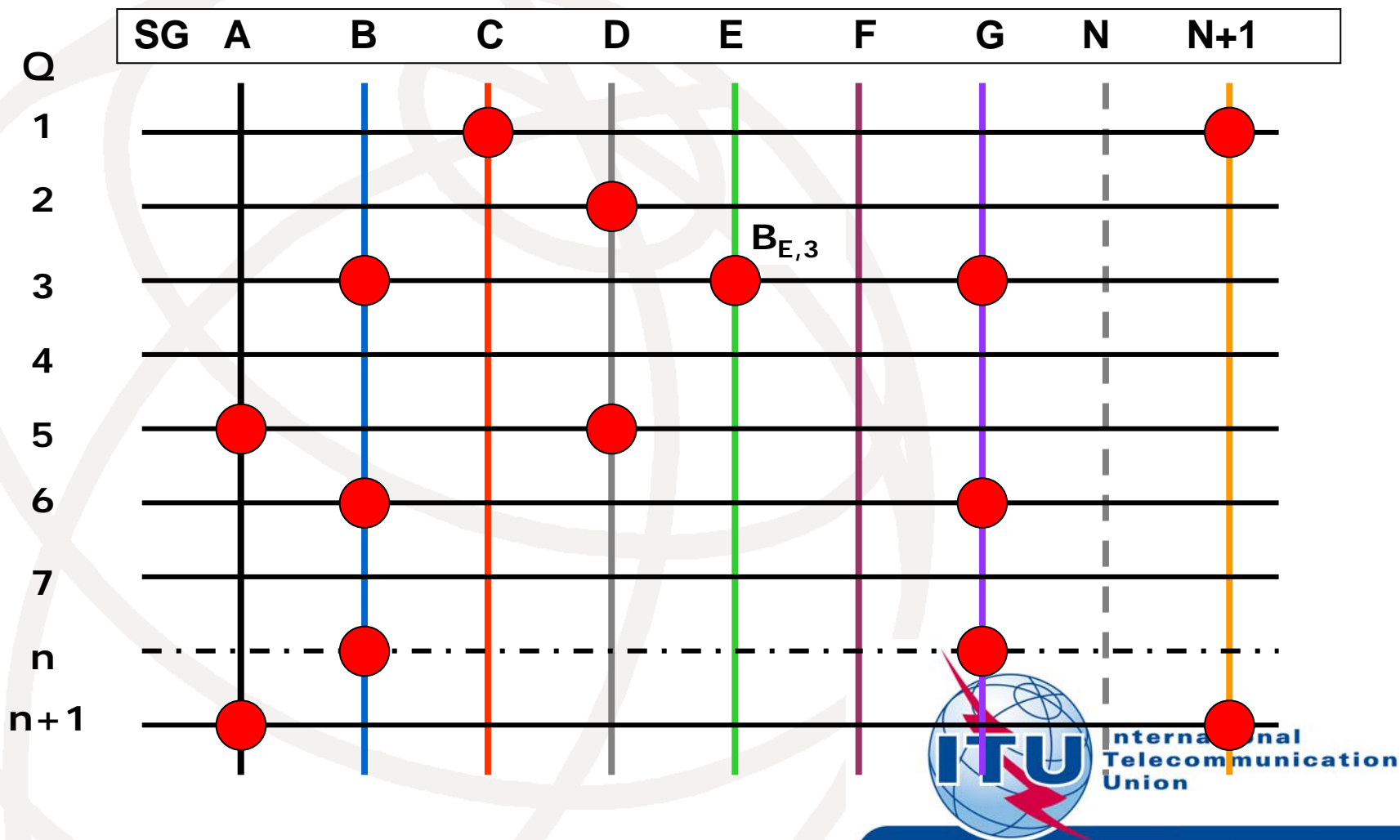
The ITU-T “Block” Meetings in the region

- **Cooperation** with regional organizations: CITEEL, RCC, APT, ATU, LAS,...
- **One per year per region** possibly co-located with the ITU Development Forums
- **Topics** decided by the membership and transversal to any ITU-T Study Groups
- Official status as generator of contributions to parent study groups
- TSB secretarial support, EDH facilities as any other SG meeting





The $B_{K,J}$ matrix concept: any Question from any SG





“Block” Meetings: Pros and Cos

- **PROS:**

- More participation of experts from the region: study, progress, approval process - “have a voice in global standards”
- Increase of contributions from the region
- Lower costs associated (travel/accomodation Region/Geneva) for regional experts
- Same TSB facilities available on site: regional presence
- Possibility to co-locate S-RBMs with ITU Forums or other events
- Potential increase of membership: sector’s promotion
- Reduce standardization gap and digital divide increase capacity building
- Possibility to reduce Study group meetings duration

- **COS:**

- TSB staff to move for one-two weeks
- Funding / associated organizational costs
- Risk to work on too much regional-oriented standards
- Need to look for co-location with ITU Forums or other events



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Thank you

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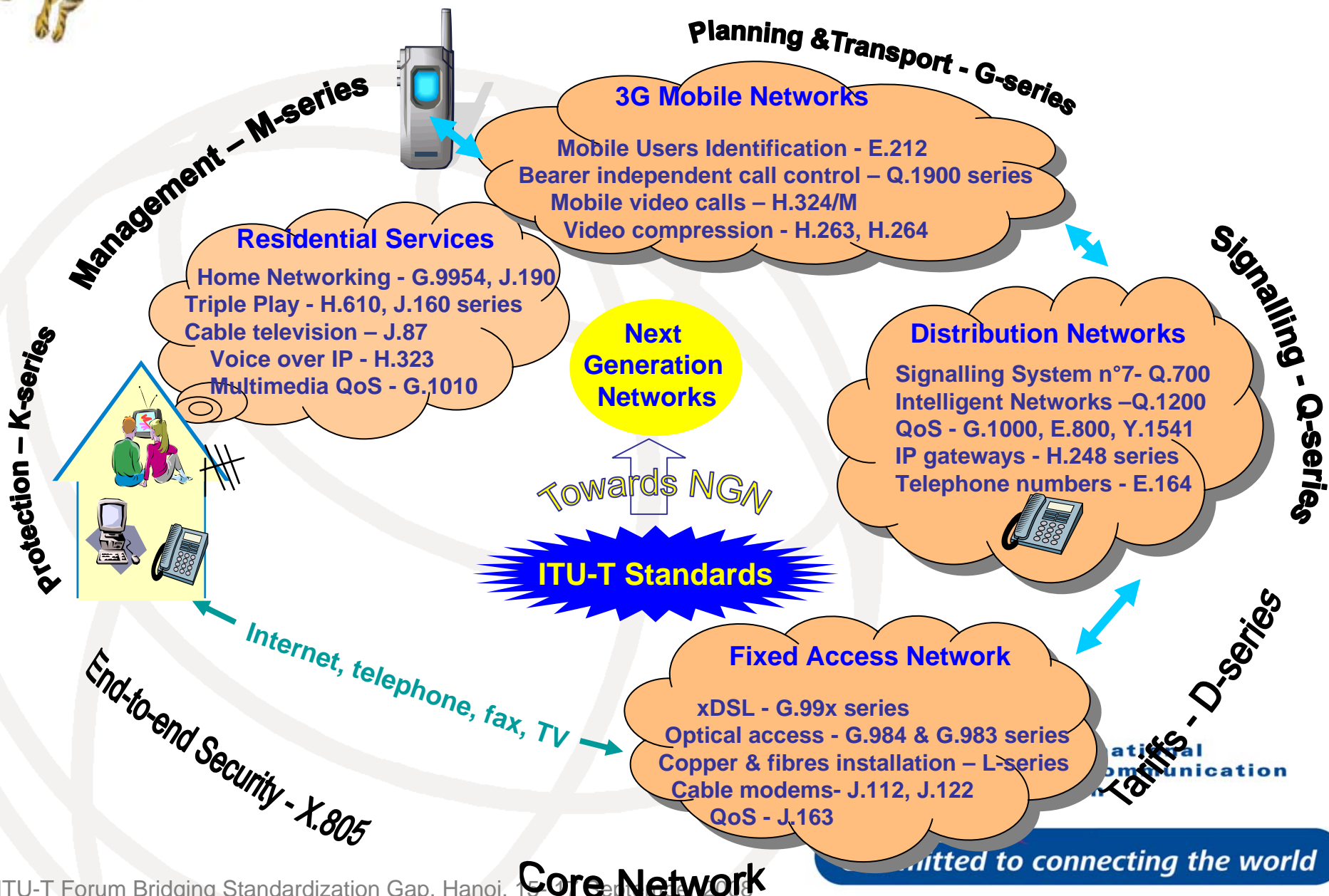
Additional Slide



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Your communications run on ITU-T standards





World Summit on



world summit
on the information society
Geneva 2003 - Tunis 2005

Information Society: targets (by 2015 at latest)

- a) to connect all villages with ICTs;*
- b) to connect all educational institutions;*
- c) to connect all scientific and research centres;*
- d) to connect all public libraries, museums and archives;*
- e) to connect all health centres and hospitals;*
- f) to connect local and central government departments;*
- g) to adapt all primary and secondary school curricula to meet the challenges of the Information Society;*
- h) to ensure that all have access to television and radio services;*
- i) to encourage the development of content on the Internet;*
- j) to ensure that more than half the world's inhabitants have access to ICTs within their reach.*



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WSIS Actions and ITU

World Summit on Information Society,
Tunisia, 2005

Action Line

C1. The role of public governance authorities and all stakeholders in the promotion of ICTs for development

C2. Information and communication infrastructure

C3. Access to information and knowledge

C4. Capacity building

C5. Building confidence and security in the use of ICTs

C6. Enabling environment

C7. ICT Applications

E-government

E-business

E-learning

E-health

E-employment

E-environment

E-agriculture

E-science

C8. Cultural diversity and identity, linguistic diversity and local content

C9. Media

C10. Ethical dimensions of the Information Society

C11. International and regional cooperation

Possible Moderators/Facilitators

ECOSOC/UN Regional Commissions/**ITU**

ITU

ITU/UNESCO

**UNDP/UNESCO/ITU/
UNCTAD**

ITU

**ITU/UNDP/UN REGIONAL
COMMISSIONS/UNCTAD**

UNDP/ITU

WTO/UNCTAD/ITU/UPU

UNESCO/ITU/UNIDO

WHO/ITU

ILO/ITU

WHO/WMO/UNEP/UN-Habitat/ITU/ICAO

FAO/ITU

UNESCO/ITU/UNCTAD

UNESCO

UNESCO

UNESCO/ECOSOC

**UN REGIONAL COMMISSIONS/
UNDP/ITU/UNESCO/ECOSOC**

** PS: ITU is MODERATOR for Action Lines C2 and C5*

And FACILITATOR for Actions C1, C3, C4, C6, C7, C11

And Facilitator for Action C8, C9, C10, C11, September 2008



**UN REGIONAL COMMISSIONS/
UNDP/ITU/UNESCO/ECOSOC**



Steps to Bridge the Standardization Gap

- Increase of participation of developing country representatives in the ITU-T Standardization process and in the Academia initiatives
- Free ITU-T Recommendations online
- Assistance in establishing regional groups
- ITU-D, ITU Regional Offices and ITU-T organizing common regional events
- More ITU-T meetings and workshops in the Regions
- Work on BSG through a series of regional workshops:
Mendoza, Argentina (2007), Kigali, Rwanda (2007)
Brasilia (2008), Accra (2008), Tashkent (2008),
Damascus (2008), Hanoi (2008)

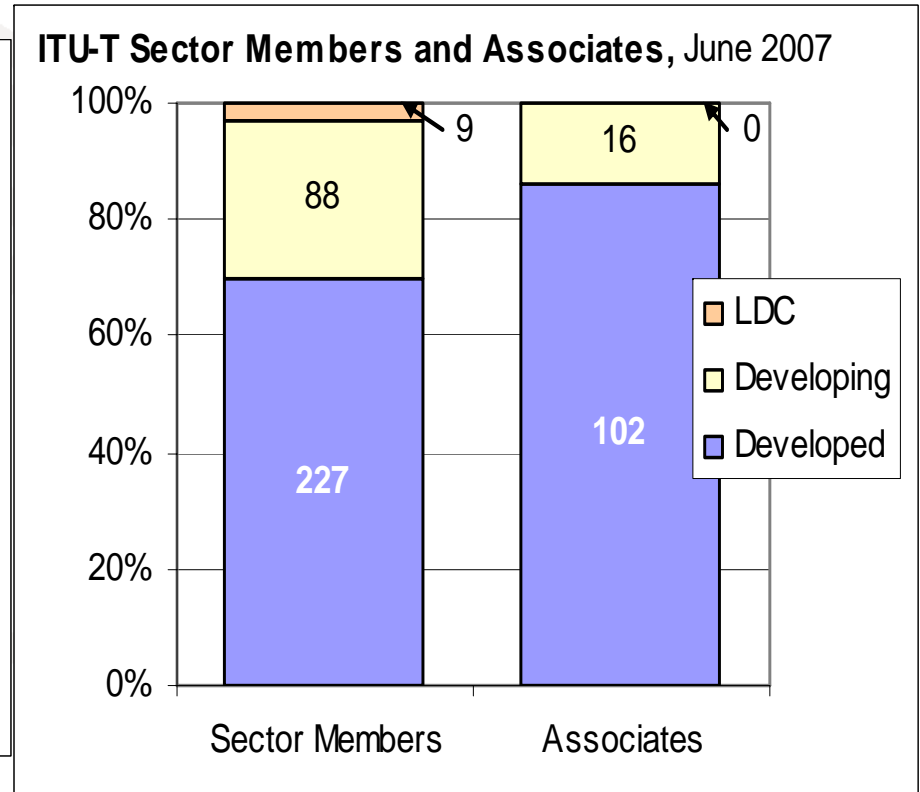
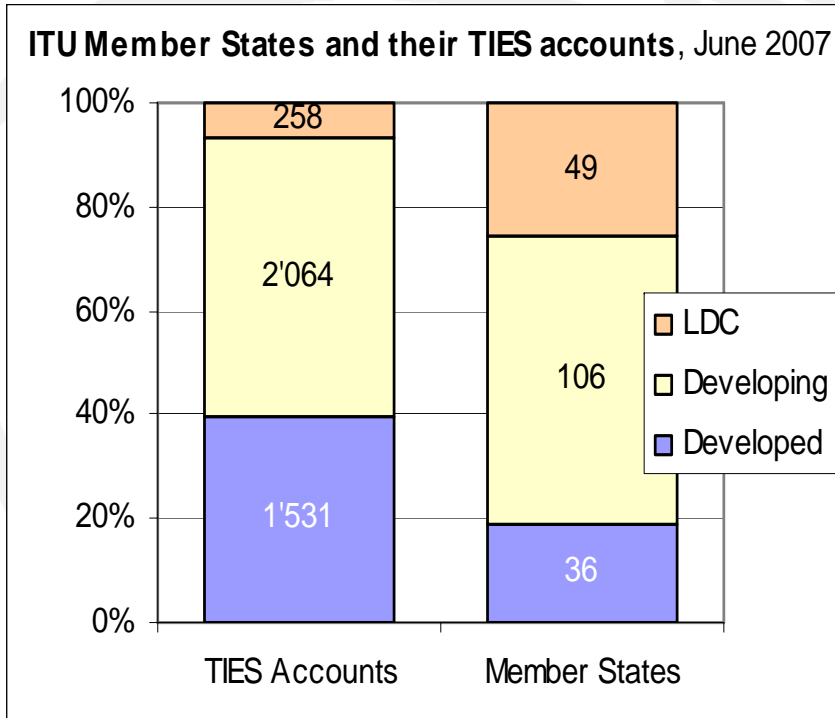


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TIES and ITU-T Members distribution



Need for more participation



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“The Ladder for ICT Standards”

Consequences for socio-economic development



Helping to determine the future standards-making process

Helping to determine future ICT standards

Helping to shape future ICT standards

Learning by doing
Possibilities for wider use and home country

Learning by doing
Possibilities for wider use

Institutional mechanisms in the international arena helps promote and offset its national

Capacity-building to build a national resource base of ICT standards

Use of international standards for instance should promote and promote ease of use

ICT Standardization Ladder



Indicators for measuring the gap



Country of origin for proposals on future study questions

Statistics on breakdown of Study Group officials by country of origin

Statistics on contributions by country/member of origin

Statistics on organization and hosting of workshops by country

Study Group participation statistics

Workshop statistics

Number of sales of standards by country and training material into the market

Number of sales of standards by country Trends

over time



ITU-T Standardization meetings today

Study Groups, working parties, Rapporteurs groups, Focus Groups mostly meet in Geneva

They meet also in the regions when invited

Need to involve membership in the regions in face-to-face meetings

Need to increase standardization meetings out of Geneva

ion



ITU-T's Focus Group concept (Recommendation A.7)

Creation of forum-like entities as an “arms-length” organization under ITU-T Study Group to Work on a well-defined topic, scheduled for completion at a specific time

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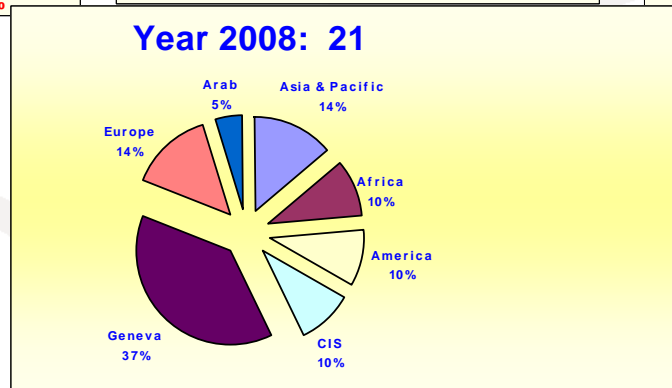
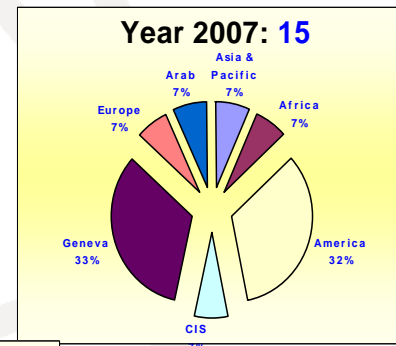
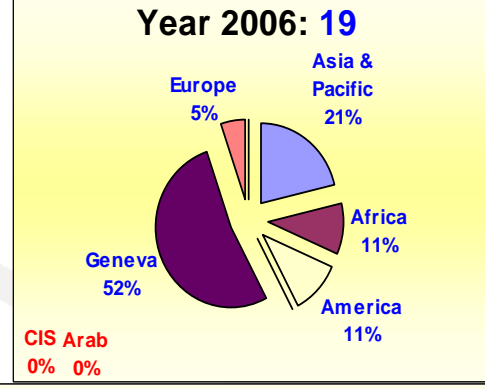
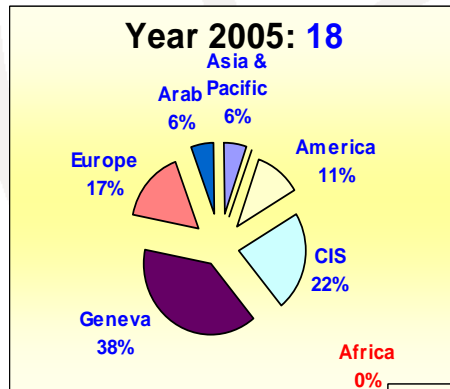
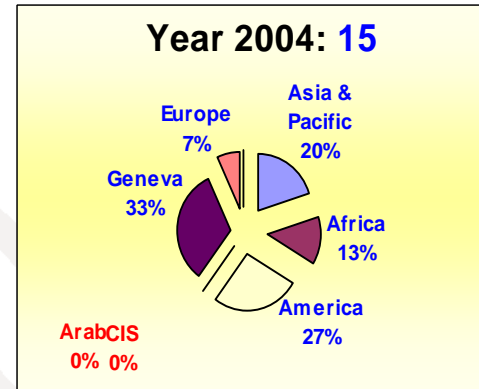
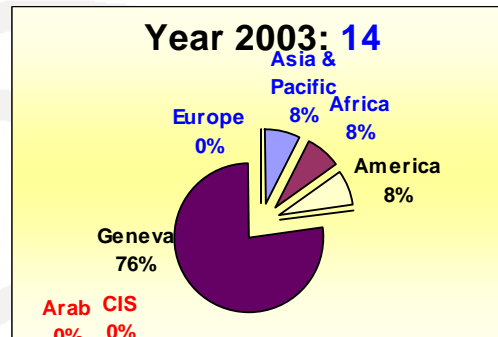
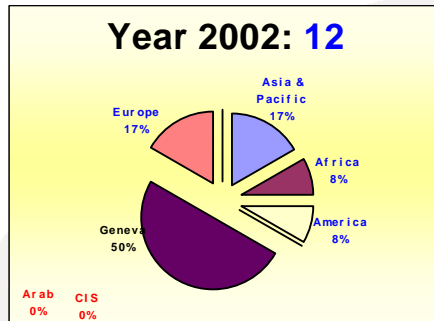
- Goal:
 - Encourage participation of **non-members** / members of other organizations (forums) / experts / individuals
- Organizational freedom to establish its own rules
 - can keep own brand name and at the same time benefit from ITU's branding, have its own deliverables



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ITU-T Workshops

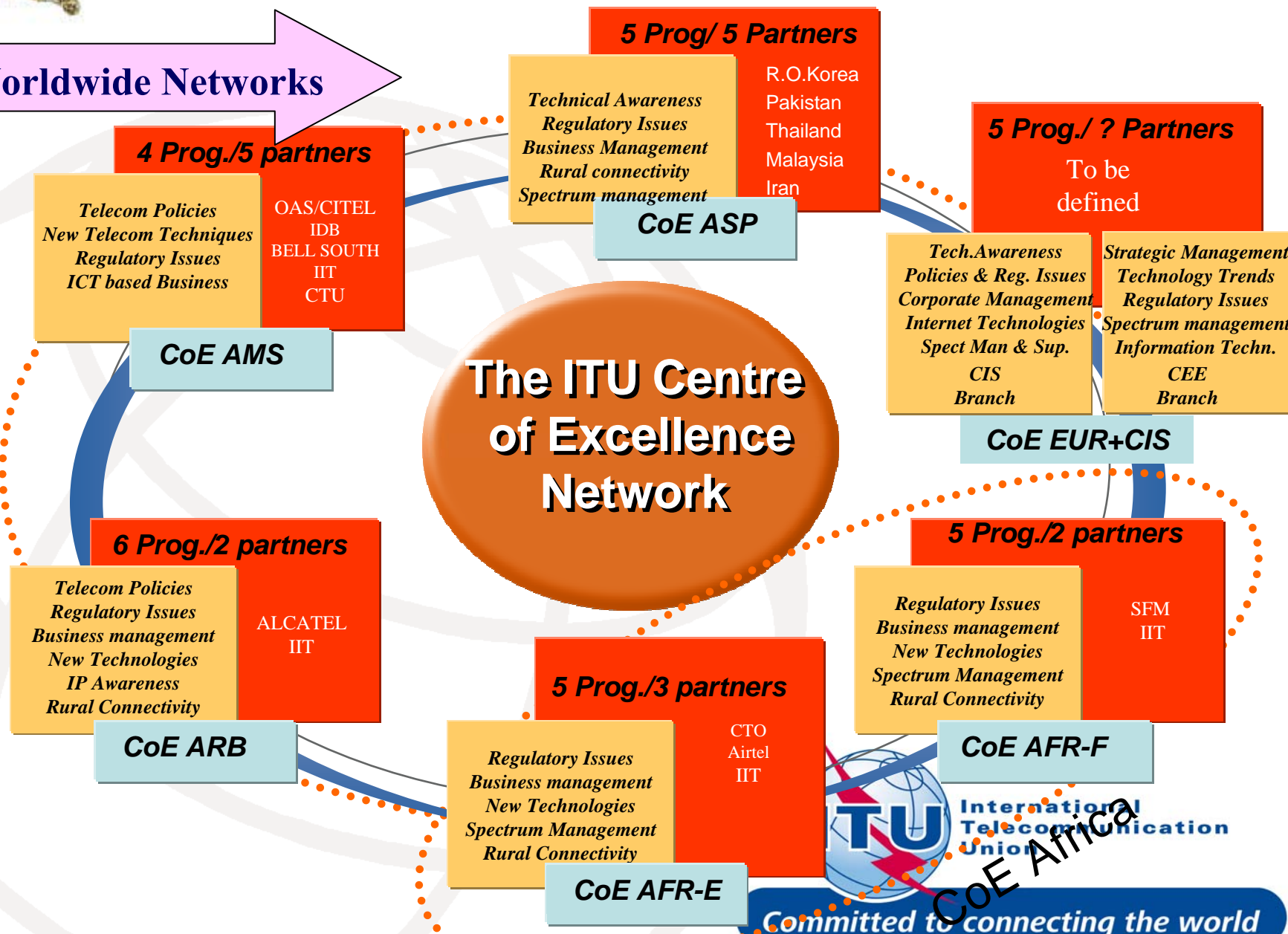


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ITU Centre of Excellence

Worldwide Networks



COE Africa

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Free Recommendations

- From the beginning of 2007, ITU-T Recommendations are available without charge for a trial period.
- With only a small number of exceptions all in-force ITU-T Recommendations are available in PDF form via a simple mouse click.
- www.itu.int/ITU-T/publications/recs.html



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Types of collaboration

Same time
synchronous

Different time
asynchronous

Same place
co-located

Face-to-face meetings

meeting rooms, projection systems, tabletop computer, flip charts etc

Ongoing collaboration

project management tools, e-calendars, wall charts, shift-work groupware etc

Different place
remote

Remote meetings

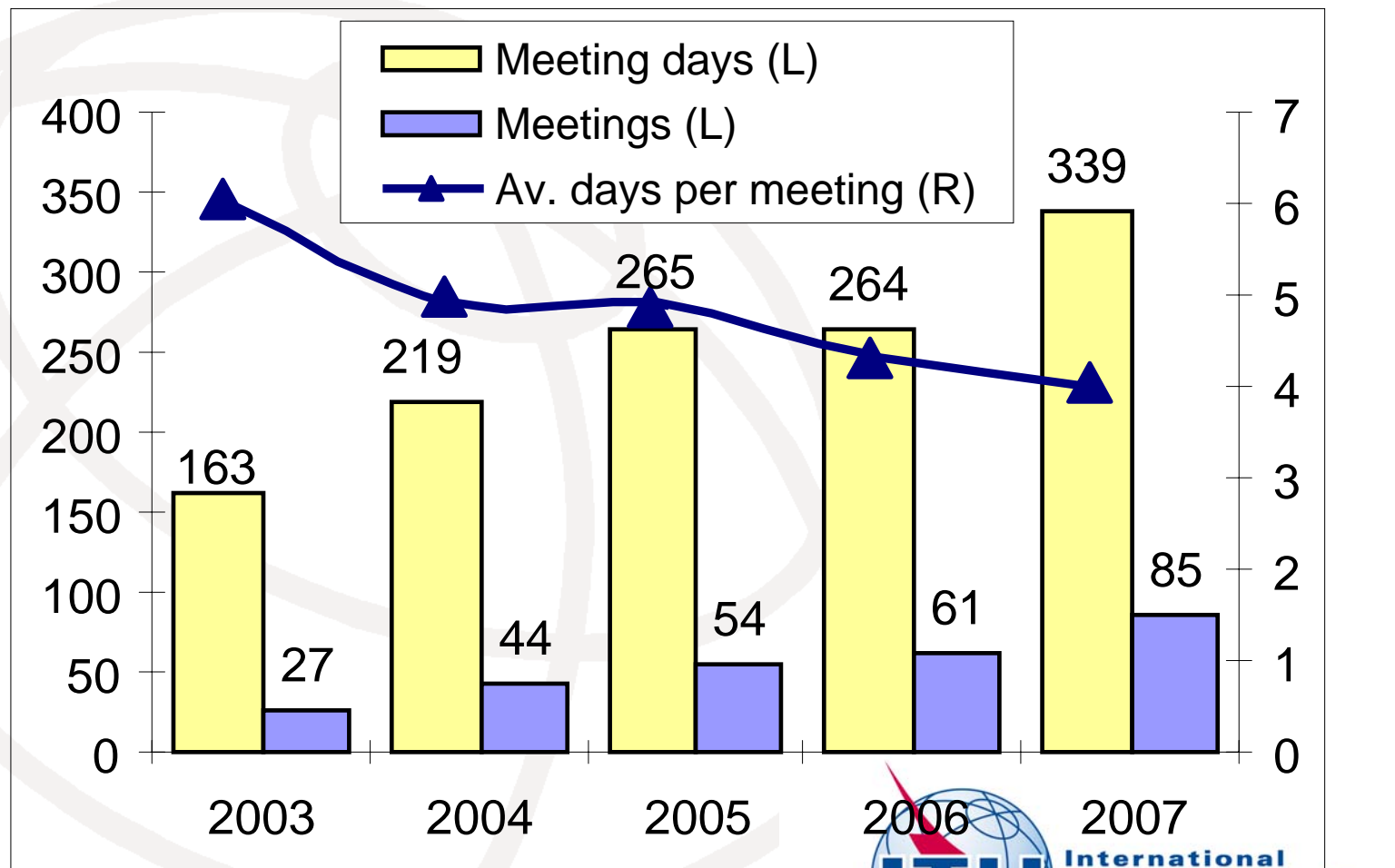
remote collaboration tools, video/audio conferencing, IM/chat, telepresence, webcasts, virtual worlds etc

Time-shift remote collaboration

websites, forums, email, e-calendars, sharepoints, wikis, version control etc



Participation / Duration in ITU-T meetings (1)



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Remote collaboration tools

- For more information, see ITU Technology Watch Briefing Report #5, available at:
<http://www.itu.int/oth/T2301000005/en>



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What is IdM

- Identity Management (IdM) is treated quite differently among the many different "stovepiped" communities of network operators, service providers, and users
- ITU-T initiatives to implement trusted means to bridge the gaps among different platforms (the framework)
 - by encouraging collaboration and a common global framework of capabilities
 - especially discovery and trusted interoperability
- This global framework is increasingly essential for an array of government, industry, and consumers needs
- Initial success is being achieved with an Identity Provider oriented model and open identity protocols



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