



ITU Regional Development Forum Asia-Pacific Region

Yogyakarta, Indonesia, 27 – 29 July 2009

Strategies to Bridge the Standardization Gap

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Outline

- Defining the standardization gap
- Evaluating the gap
- ITU-T activities to bridge the standardization gap

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Digital divide standardization gap & participation

$$\text{Digital Divide} \propto \frac{\text{Standardization Gap \& Poor Access to Technologies}}{\text{Participation \& Capacity Building}}$$

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The Standardization Gap

- Disparities in the ability to access, implement, contribute to and influence international ICT standards (ITU Recommendations)
- Disparities in the representation of developing countries relative to developed countries, cause and manifestation of:
 - Persistence of the wider digital divide in ICTs (among different regions and groups within the society)
 - Unequal access to technology and the ability to use that technology

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Bridging the standardization gap

- PP-02 (Res. 123), WTSA-04/08 Resolution **44**, 17 & 54, WTDC-06 Resolution 47
- ITU-T mandated to bridge the standardization gap between developing and developed countries
- Action plan established:
 - Improve standards making capabilities
 - Assisting in enhancing efforts in standards applications
 - Human resource building
 - Flagship group for bridging the gap
 - BSG fundraising



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Measuring the Gap

- Number of TIES users
- Number of downloads of ITU-T Recs from website site
- Number of Sector Members and Associates
- Number of chairmen, vice-chairmen and rapporteurs from developing countries
- Number of participants in meetings and contributions by country



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Standardization Development Ladder

Bridging the standardization development gap requires a sequence of steps, depending on the level of:


- economic development
- local manufacturing and R&D capability
- previous engagement with ITU

These steps can be conceptualised in terms of a “Ladder of Standardization Development”



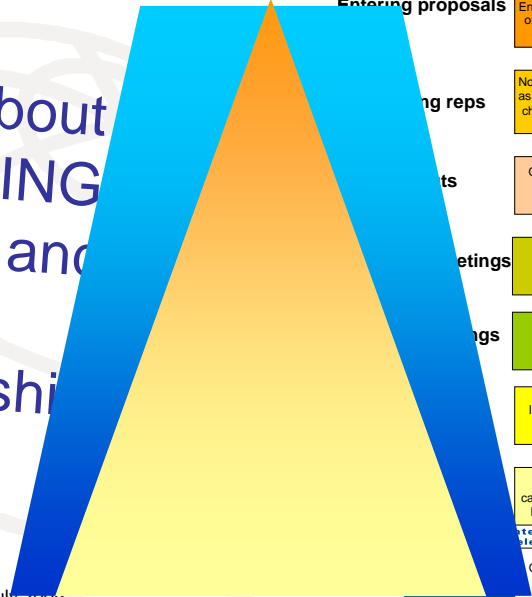
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Standardization Development Ladder

It's all about ENGAGING with ITU and its membership

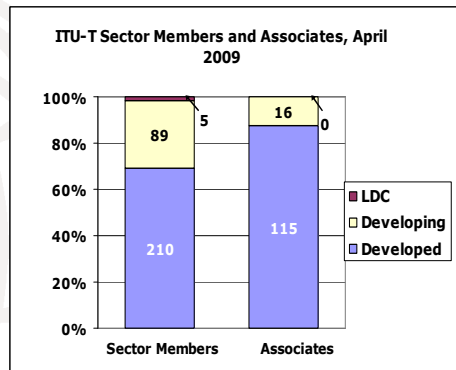
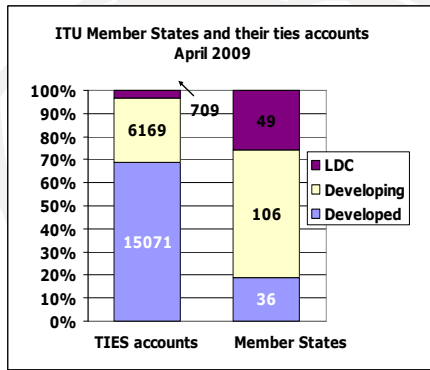


Entering proposals	Entering proposals at WTSA on future study questions and work programmes
...ng reps	Nominating representatives as study group chairs, vice-chairs, rapporteurs, focus group chairs etc
...ts	Giving contributions at Study Groups and related meetings
...etings	Attracting ITU meetings and/or regional groups (Res 54)
...ngs	Going to Study Groups and related meetings
	ITU Sector or Associate Membership
	National training and capacity-building in use of ITU Recommendations
	International Telecommunication Union
	Growing usage of ITU Recommendations

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TIES and ITU-T Members distribution



Need for more participation

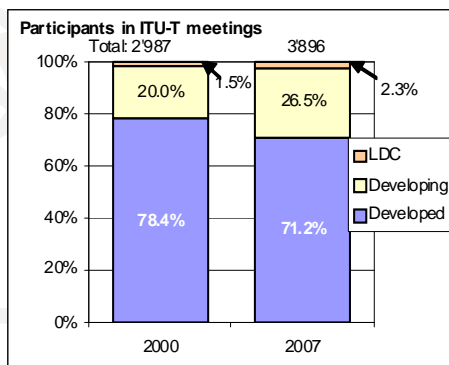
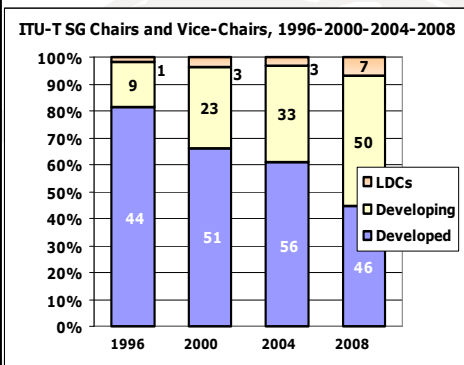


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Participation in ITU-T meetings and SGs



Need for more participation

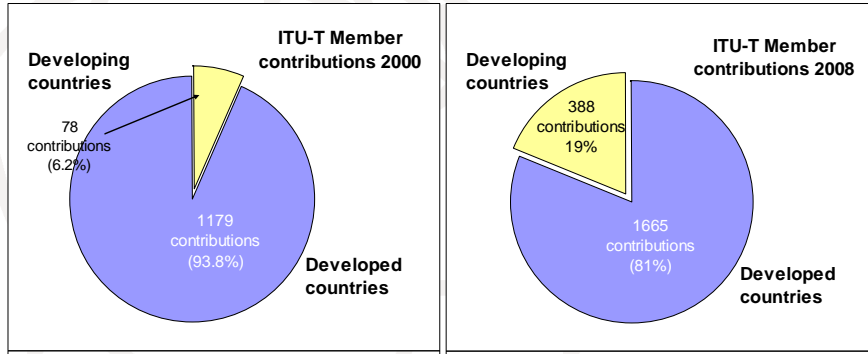


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Participation: contributions



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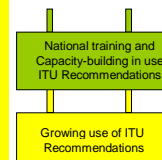
Standardization Development Ladder (1)

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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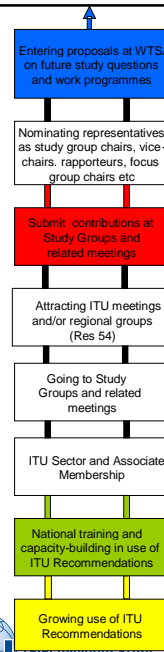




Standardization Development Ladder (2)

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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ITU-T Questionnaire to developing countries on Bridging the Standardization Gap

- Provides background information on the relevance of ITU-T Recommendations for developing countries
- Useful tool to develop strategies able to meet the requirements of the PP-06 and WTSA-08 Resolutions

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



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The ITU-T Questions

- Familiarity with Recs published by ITU-T
- Relevance and usefulness of Recs to developing countries
- Difficulties for implementation and suggestions to increase participation by developing countries
- Regional standardization “block” meetings to facilitate participation from the regions
- Seminars and Workshops in the regions

Contributions and proposal for improvement as inputs to WTSA-08 resulted in revised and new Resolutions



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Increasing participation and collaboration

- Workshops, seminars and other events
- Remote collaboration and participation
- Regional groups
- Block Meetings
- Flagship Group



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Workshops trend

Year	N. Events	Total yearly days	Average days/event	Geneva		outside Geneva	
				days	%	days	%
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	30	60	2.00	21	35	39	65



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VIRTUAL International Symposium on ICTs and Climate Change

itu.int/ITU-T/worksem/climatechange/200909/index.html

- Seoul, Korea, on 23 September 2009,
- Various events on [ICTs and Climate Change](#). In April 2009, ITU-T's [Study Group 5](#) changed its name to reflect a new mandate "Environment and Climate Change".
- The VIRTUAL International Symposium on ICTs and Climate Change will launch a new era in conducting events, offering all the benefits of physical participation but without the environmental costs. Speakers could be virtually present in the meeting room
- more participation from developing and least developed countries,
- The symposium will be transmitted live and a webinar will be available so that remote participants can see and hear presentations from wherever they are in the world. Proceedings will be available online after the symposium.



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Some recent and upcoming workshops

- **Forum on Next Generation Network Standardization**, Colombo, Sri Lanka, 7-10 April 2009
- **Forum on "Implementation of decisions of the World Telecommunication Standardization Assembly (WTSA-08)"**. Accra, Ghana, 16 - 17 June 2009
- **Workshop on the Profiling Requirements for the Feasibility Study on Establishment of Electronic Communications Equipment Type Approval Testing Laboratory**. Dar-Es-Salaam, Tanzania, 25-26 June 2009
- **ITU Symposium on ICTs and Climate Change**, Quito, Ecuador, 8-10 July 09
- **ITU Consultation meeting on "Conformity Assessment and Interoperability"**, Geneva, 20-21 July 2009
- **Kaleidoscope event: Innovations for Digital Inclusion**, Mar del Plata, Argentina, 31 August – 1 September 2009
- **Workshop on Accessibility**: Planned in Bamako, Mali, 13-15 Oct 2009
- **Forum on WTSA-08 Resolution Implementation and Bridging Standardization Gap** (Fiji, 16-17 September 2009)

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WTSA-08 New Resolution 74

Admission of Sector Members from developing countries in the work of the ITU-T at reduced fee

- **resolves**
... to encourage the adoption of the necessary measures to enable new members from developing countries to join ITU-T ...and other groups within the ITU-T, (consider financial contributions applied in the BDT)
- **instructs the Director of the TSB**
to propose to the Council to consider the admission of such category in the work of the ITU-T and to include its consideration of this matter in the council work for the preparation of the 2010 PP conference

Note: These Sector Members from Developing Countries shall not be affiliated in any way to any Sector Member of a Developed Country, and be limited to those Sector Members of Developing Countries classified by the UNDP as low income per capita Country, not exceeding (.....US\$).

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Remote collaboration and participation: 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 participation via webinar (GotoMeeting, GoToWebinar, Webex)



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Resolution 54 : Creation of regional groups

Regional Groups

Support within available (or otherwise contributed resources) and on a case-by-case basis the creation of regional groups

ITU-T RGs: SG2 SG3 SG6 SG12



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Resolution 44

Bridging the standardization gap between developing and developed countries

- Programme 4: Flagship groups for bridging the standardization gap: assistance to help on specific issues, expertise,



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Flagship Group Americas

(Res. 44 Annex 1 prg 4)

- Permanent regional standards awareness
- Training on standardization in the regions, producing manuals and audio/video material
- Support and measure participation in ITU-T activities (academia, private sector...)
- Translate ITU-T material
- Support remote or direct participation of experts in ITU-T activities
- Creation of regional Testing & Calibration labs
- Invite regulators to put in place mechanisms to consider international standards when preparing national technical regulations



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ITU-T "Block" meetings in the region

- Cooperation with regional organizations: CITEL, RCC, APT, ATU, LAS,...
- One per year per region in the same place in the same time in their regions
- 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

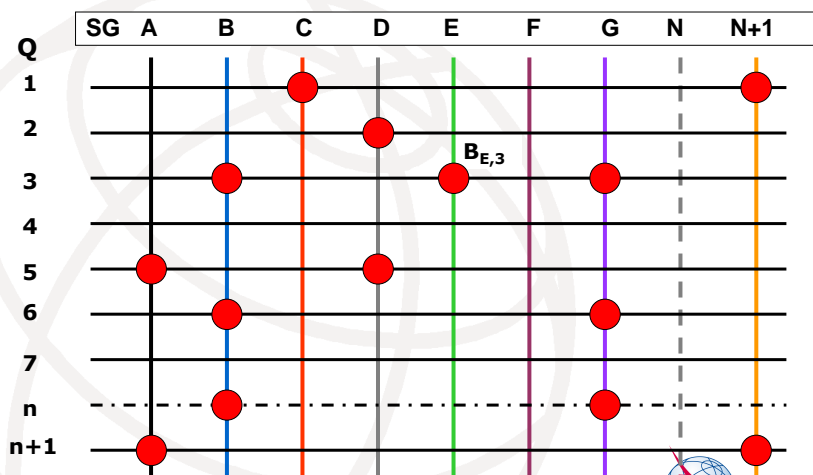


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The $B_{K,J}$ matrix concept: any Question from any SG



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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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Tech Watch briefing reports

Identify new/emerging technologies with a view to identify areas for new standardization work, such as:

- The Future Internet (April 2009)
- Distributed Computing: Utilities, Grids & Clouds (March 2009)
- Standardization Activities for Intelligent Transport Systems (October 2008)
- NGNs and energy efficiency (August 2008)
- Technical aspects of Lawful Interception (May 2008)
- ...
- **ICTs and Climate Change (December 2007)** → FG → SG5

<http://www.itu.int/ITU-T/techwatch/index.html>

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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

<http://www.itu.int/oth/T0B04/en>



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Kaleidoscope Conferences

In order to solicit standardization work on emerging technologies, ITU-T organizes multi-topic events (Kaleidoscopic Conferences) with the aim to enhance participation of Academia and research organizations in ITU-T activities

The first "Innovation in NGN took place on 12-13 May 2008 (see: <http://itu.int/ITU-T/uni/kaleidoscope/2008>)

One place to share knowledge, procedures, experiences and results by experts, scientists, visionaries and academics from all over the world

Unique networking environment in which to discover new standardization areas and new technologies those can be input into ITU-T Study Groups and Technology Watch-Correspondence Group



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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

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

more than 220 participants, from 48 countries,

IEEE COMMUNICATIONS SOCIETY

IEEE

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

ICF

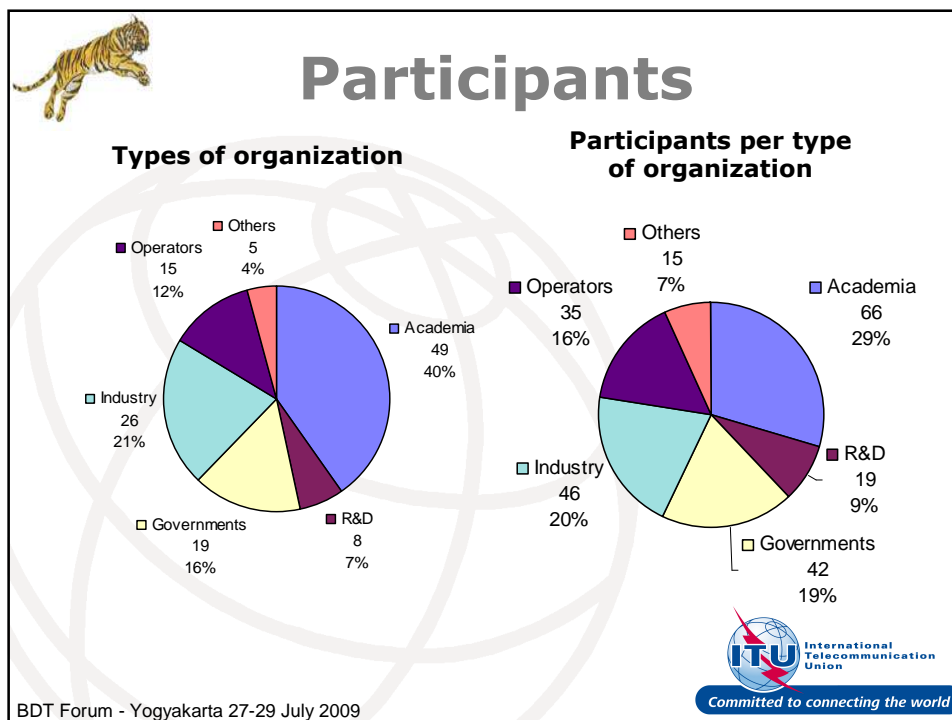
CISCO

intel

Sum microsystems

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IEEE Communications Magazine (May 2009)



IEEE Communications Magazine
www.comsoc.org
MAGAZINE
May 2009, Vol. 47, No. 5
Optical Communications: Highways of the Future
The First ITU-T Kaleidoscope Event: "Innovations in NGN"
Topics in Automotive Networking
IEEE
A Publication of the IEEE Communications Society

Kaleidoscope Special edition from page 80

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ITU-T Kaleidoscope 2009

Deadline for call for papers: 15 January 2009

Innovations for Digital Inclusion

Argentina, 31 August – 1 September 2009

www.itu.int/itu-t/units/kaleidoscope2009

Technically co-sponsored by:

supported by:

Organized by:






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K-2009: Innovations for Digital Inclusion

Background:

WSIS (Geneva 2003 – Tunis 2005) → advocated turning the digital divide into a digital opportunity

Kaleidoscope 2009:

- Second in a series of peer-reviewed academic conferences
- Aims at increasing the dialogue between experts on ICT standardization and academia.
- Will analyze technologies, services and applications five years and beyond...
- Multidisciplinary aspects, including NGN infrastructure, standardization needed, regulatory and societal challenges to promote Digital Inclusion.
- With an eye on developing countries, it seeks to promote research that supports innovation in ICTs toward universal, sustainable, ubiquitous and affordable access by all.



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K-2009: K-IDI 2009 awards

- USD 5k, 3k and 2k will be granted to the best papers
- young author recognition certificate to students who do not hold a PHD.

Publication and presentation of accepted papers

- published in the proceedings and IEEE Xplore.
- The best papers will be evaluated for potential publication in the IEEE Communications Magazine.



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K-2009: K-IDI 2009 papers

Latest Information

- 83 paper proposals submitted
- 20 paper accepted for lecture session
- Regional University Exhibition

Web site

- www.itu-kaleidoscope.org/2009



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Keynotes, invited papers, tutorial

- **Keynote:** Romano M. Schiavello, Universidad Tecnológica Nacional ,Argentina
- **Keynote:** Tomonori Aoyama, Keio University, Japan
- **Keynote:** Jose Luis Espla, Telefonica Latinamerica

- **Tutorial on Open Source:** Richard M Stallman

- **Invited paper:** Alejandro Pisanti, UNAM, Mexico
 - Architecture evolution to foster digital inclusion (TBC)
- **Invited paper:** Erkki Allan Sutinen, Univ.Joensuu, Finland
 - *Technology for Losers: Re-equipping the Excluded*
- **Invited paper:** Louis Masi, IBM Corporation
 - *Interplay and implications of IPR and academic innovation to foster Digital Inclusion*



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ITUing...

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- Increasing the use of ITU recs, membership
- Capacity building, training
- Increasing participation in SGs, management, workshops, meetings and number of contributions
- Contributing to ITU work plans

**Bridge the
Standardization Gap**



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Thank you


www.itu.int/ITU-T/gap

tsbspd@itu.int
tsbpromo@itu.int




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Extra Material



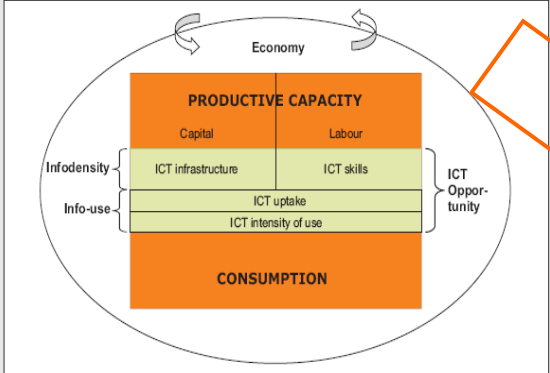
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The concept of Opportunity Index (OI) to measure the information society

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




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

Source: ITU adapted from Orbicom.

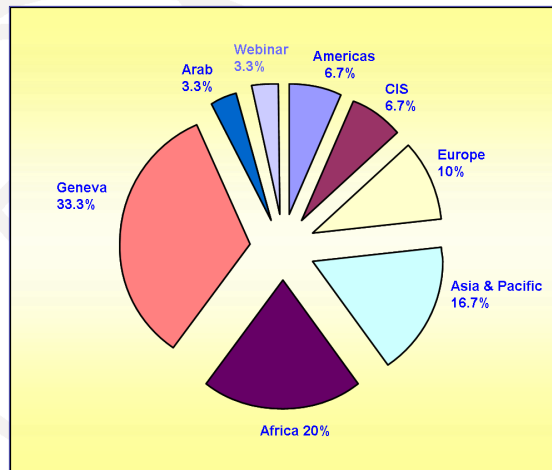


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Meetings by regions



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Types of collaboration

		Same time <i>synchronous</i>	Different time <i>asynchronous</i>
Different place <i>remote</i>	Same place <i>co-located</i>	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 <i>remote</i>	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



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Promoting remote participation

- 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



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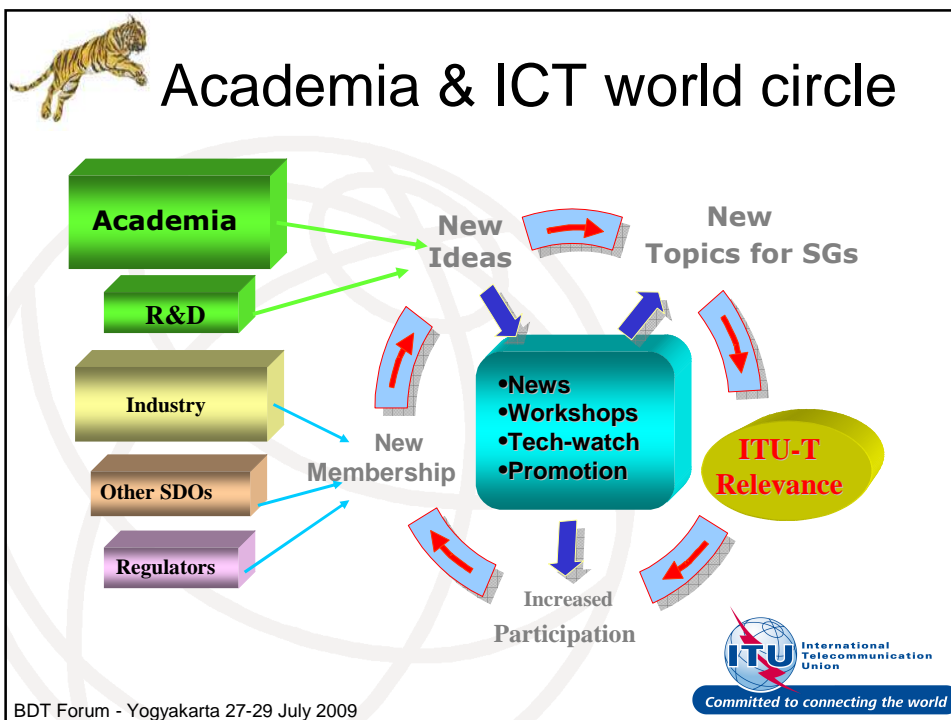
Remote participation

- ITU-T trial, launched by TSAG in Dec-07, to evaluate remote participation
 - **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



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-
- Direct participation mechanisms in ITU-T work**
- Invited experts
 - Cannot submit written proposals
 - Contribution source not acknowledged
 - Sponsored by members (countries and private sector)
 - No membership fee
 - Contribution source not acknowledged
 - Level of participation limited according to national processes or company rules
 - Associate members
 - Contribution source properly acknowledged
 - Participation limited to one SG; can have only a limited number of roles
 - Membership fee (CHF 10600 per year)
 - Sector members
 - Participation in any SG of the sector x higher fee (CHF 31800 per year)
 - Membership in special groups: Focus Groups; Joint groups with ISO/IEC; Coordination activity on RFID
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Some opportunities already offered by ITU-T

- Open and free participation in meetings of some Focus Groups
- Free participation by invitation to SG and Rapporteur' groups meetings as experts
- Free participation in Workshops and Seminars
- Available web-based collaboration tool (Technology Watch)
- Free Recommendations on line
- Possibility to provide secretariat support
- Availability to co-organize events
- Broker for research project sponsors
- Internships (e.g. visiting professors, students, researchers)



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Innovations in NGN – Future Network and Services An ITU-T Kaleidoscope Event Technically co-sponsored by IEEE Communications Society

- More than 136 expert paper reviewers from academia and industry worldwide
- More than 140 scientific papers received
- Accepted 32 Lecture papers plus 22 Poster papers for presentation at the Conference
- Acceptances rate around 30%
- 75% of papers from academic institutions

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



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K-2009: K-IDI 2009 info

Innovations for Digital Inclusion

- Technical co-sponsor: **IEEE Com Soc**
- General Chair: **Yoichi Maeda (ITU-T; NTT, Japan)**
- Organizing Committee: **13 Members**
- Programme Committee: **95 Professors worldwide**

Tracks

- **Tk1:** Architecture evolution to foster digital inclusion
- **Tk2:** Applications and services in the inclusive information society
- **Tk3:** Social, economic and policy issues to achieve digital inclusion

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