How to bridge the standardization gap

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Standardization gap & Digital divide

What is the standardization gap

The standardization gap can 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 Recommendations.

http://www.itu.int/ITU-T/gap

* These include the least developed countries, small island developing states and countries with economies in transition.
Standardization gap & Digital divide

The development of the “gap” is a cause and manifestation of the wider digital divide

- Deploying networks
- Providing services
- Promoting technologies
- Influencing ICT international standards

⇒ Let’s share/give assistance for common understanding, applications and interests

Roles of ITU-D

RESOLUTION 123 (REV. ANTALYA, 2006)
Bridging the standardization gap between developing and developed countries

... resolves to instruct the Secretary-General and the Directors of the three Bureaux

1. to work closely with each other ... that assist in bridging the standardization gap between developing and developed countries;
2. to maintain, to the extent practicable, a close coordination mechanism among the three Sectors at the regional level through ITU regional offices;
3. to further collaborate with the relevant regional organizations and support their work in this area

Yogyakarta, Indonesia, 27-29 July 2009
Roles of ITU-D

**RESOLUTION 47 (DOHA, 2006)** Enhancement of knowledge and effective application of ITU Recommendations in developing countries

... instructs the Director of the Telecommunication Development Bureau, in collaboration with the Directors of the Telecommunication Standardization Bureau and the Radiocommunication Bureau

1. to promote participation in training courses and workshops on best-practice application of ITU-T and ITU-R Recommendations for developing countries;
2. to establish a database containing information on new technologies that are standardized and develop guidelines on applying ITU-T and ITU-R Recommendations.

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**Why NGN and broadband?**

- High population in developing countries create potential demand for ICT services
- NGN and broadband for ease of expanding networks and providing new services
- Several countries in Asia-Pacific Region hold the initiative in standardizing and applying NGN
The fact is that...

- Many variations/ways of deploying NGN

![Diagram of NGN deployments]

What's next?

- BcN
- 21CN
- TGN

ITU-T NGN Release x

NGN in Softswitch model

Developing countries - Perspective

- Overall configuration and expected functions of NGN
  - Common and widely accepted
  - Fixed-mobile convergence
  - Diversity in access method but sharing common core network and control system
Developing countries - Perspective

- Principle for NGN structure
  - Providing data and voice services over a single telecom infrastructure
  - Supporting different access technologies
  - Distributed control system
  - Open control system
  - Providing service-neutral network infrastructure
  - Advanced security mechanism
  - Smooth and economic migration from legacy network and meet customer demands
  - Fixed- Mobile Convergence.

NGN – Challenges and opportunities

- NGN or not?
  - Customer, market, benefit
  - Time-to-market, life-cycle
  - Cost for network operation and maintenance
- Migration to NGN
  - Strategy/plan for migration
  - Time for migration
  - Reuse of legacy infrastructure
  - Expansion of the bandwidth
- NGN business and exploitation
  - Business strategy
  - Service marketing
  - Organizational model

Still common concerns!
ITU-D activities and efforts on BSG

ITU-D trainings, workshops, seminars and regional forums for AP region

<table>
<thead>
<tr>
<th>Network Infrastructure &amp; Bridging the Standardization Gap</th>
<th>Venue, date</th>
</tr>
</thead>
<tbody>
<tr>
<td>ITU/MIC Training on Bridging the Standardization Gap</td>
<td>Tokyo (Japan), 15-19 December 2008</td>
</tr>
<tr>
<td>ITU/MIC Training on Bridging the Standardization Gap</td>
<td>Tokyo (Japan), 18-22 June 2007</td>
</tr>
<tr>
<td>APT-ITU Workshop on NGN Planning</td>
<td>Bangkok (Thailand), 16-17 March 2007</td>
</tr>
<tr>
<td>ITU-BDT Seminar on Network Planning</td>
<td>Bangkok (Thailand), 11-15 November 2002</td>
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ITU-D activities and efforts on BSG

ITU-D SG1 questions (1/2)

<table>
<thead>
<tr>
<th>Question</th>
<th>Description</th>
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<tbody>
<tr>
<td>6-2/1</td>
<td>Regulatory impact of next generation networks on interconnection</td>
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<tr>
<td>7-2/1</td>
<td>Regulatory policies on universal access to broadband services</td>
</tr>
<tr>
<td>10-2/1</td>
<td>Regulation for licensing and authorization of converging services</td>
</tr>
<tr>
<td>12-2/1</td>
<td>Tariff policies, tariff models and methods of determining the costs of services on national telecommunication networks, including next-generation networks</td>
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### ITU-D activities and efforts on BSG

#### ITU-D SG1 questions (2/2)

<table>
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<tbody>
<tr>
<td>18-1/1</td>
<td>Domestic enforcement of telecommunication laws, rules, and regulations by national telecommunications regulatory authorities</td>
</tr>
<tr>
<td>19-1/1</td>
<td>Implementation of IP telephony in developing countries</td>
</tr>
<tr>
<td>20/1</td>
<td>Access to telecommunication services for people with disabilities</td>
</tr>
<tr>
<td>21/1</td>
<td>Impact of telecommunication development on the creation of employment</td>
</tr>
<tr>
<td>22/1</td>
<td>Securing information and communication networks: Best practices for developing a culture of cybersecurity</td>
</tr>
</tbody>
</table>

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### ITU-D activities and efforts on BSG

#### ITU-D SG2 questions (1/3)

<table>
<thead>
<tr>
<th>Question</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>9-2/2</td>
<td>Identification of study topics in the ITU-T and ITU-R study groups which are of particular interest to developing countries</td>
</tr>
<tr>
<td>10-2/2</td>
<td>Telecommunications for rural and remote areas</td>
</tr>
<tr>
<td>11-2/2</td>
<td>Examination of terrestrial digital sound and television broadcasting technologies and systems, including cost/benefit analyses, interoperability of digital terrestrial systems with existing analogue networks, and methods of migration from analogue terrestrial techniques to digital techniques</td>
</tr>
</tbody>
</table>
### ITU-D activities and efforts on BSG

#### ITU-D SG2 questions (2/3)

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<tr>
<td>14-2/2</td>
<td>Telecommunications for e-health</td>
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<tr>
<td>17-2/2</td>
<td>Progress on activities for e-services/applications in the world</td>
</tr>
<tr>
<td>18-1/2</td>
<td>Implementation aspects of IMT-2000 and information-sharing on systems beyond IMT-2000 for developing countries</td>
</tr>
<tr>
<td>19-1/2</td>
<td>Strategy for migration from existing networks to next-generation networks for developing countries</td>
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#### ITU-D SG2 questions (3/3)

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<tr>
<td>20-2/2</td>
<td>Examination of access technologies for broadband telecommunications</td>
</tr>
<tr>
<td>22/2</td>
<td>Utilization of ICT for disaster management, resources, and active and passive space-based sensing systems as they apply to disaster and emergency relief situations</td>
</tr>
<tr>
<td>23/2</td>
<td>The unique telecommunication/ICT needs of small island developing states (SIDS)</td>
</tr>
<tr>
<td>Resolution 9</td>
<td>Participation of countries, particularly developing countries, in spectrum management</td>
</tr>
</tbody>
</table>
ITU State Members - AP region

- 32 developing countries
- 5 developed countries

* LDCs (13)
  - Afghanistan
  - Bangladesh
  - Bhutan
  - Cambodia
  - Kiribati (SIDS)
  - Samoa (SIDS)
  - Solomon Is. (SIDS)
  - Tuvalu (SIDS)
  - Vanuatu (SIDS)
  - Lao, PDR
  - Maldives
  - Nepal
  - Myanmar

* Small Island Developing States (+5)
  - Fiji
  - Marshall Islands
  - Micronesia
  - Nauru
  - Tonga

* Low Income States (10)
  - PNG (SIDS)
  - D.P.R. Korea
  - India
  - Indonesia
  - Mongolia
  - Pakistan
  - Philippines
  - Sri Lanka
  - Vietnam
  - [Timor Leste: non MS]*

* The Rest (9)
  - China/Hong Kong
  - Iran
  - Malaysia
  - Thailand
  - (Developed countries)
    - Australia
    - Japan
    - New Zealand
    - R.O. Korea
    - Singapore

Source: ITU and World Bank, July 2008

Participation in ITU-D events

- Presence of AP developing countries in ITU-D events...
  - on 10 SG meetings in 2009: 8.1%
  - on 4 trainings, seminars, workshops: 43.8%
  - on 1 Regional forum: 50%

Yogyakarta, Indonesia, 27-29 July 2009
**ITU-D SG outputs**

- **ITU-D SG outputs…**
  - Reference materials and guidelines on e-services/ICT applications for developing countries [http://www.itu.int/ITU-D/cyb/](http://www.itu.int/ITU-D/cyb/)
  - Guidelines on the Smooth Transition of Existing Mobile Networks to IMT-2000 for Developing Countries (GST) (under revision) [www.itu.int/publ/d-stg-sg02.18-1-2006/en](http://www.itu.int/publ/d-stg-sg02.18-1-2006/en)
  - Best Practice Guidelines for the Broadband Access in Developing Countries (currently being developed) [http://www.itu.int/md/D06-RGQ20.2.2-C-0028/en](http://www.itu.int/md/D06-RGQ20.2.2-C-0028/en)
  - Others (reports, draft reports, questionaires...)

**Ways forward…**

**Expectation of ITU-D activities**

- to continue to collect views, questions, requirements of ITU Member States (especially developing countries) in the region for further study
  - By conducting surveys, questionnaires, workshops, seminars, etc.
  - NGN and broadband should be a great concern!
- to collaborate with ITU-R and ITU-T on standardizing NGN and broadband networks
- to collaborate with regional standard organizations and fora (e.g. ASTAP), toward common standards
- to allocate more fund to support developing countries (for trial projects in developing countries, fellowship for participants to ITU-D SG meetings)
Bridging the gap - How?

ITU-D Regional Office:
- to notify Member States of ITU-D outputs, on a regular basis and by using appropriate means such as online and free access database, sending liaison to Member States contact points, etc.
- to collaborate and support members in holding ITU-D SG meetings in developing countries in order to facilitate the attendance of developing countries; teleworking could be encouraged.

Bridging the gap - How?

Member States and industry:
- to join ITU-D events, raise positions and share experiences for the common benefit of developing countries
- to encourage industry to assist developing countries
  - in conducting consultation programs focused on potential technologies
  - in developing guidelines on how to apply ITU-T Recs. with particular emphasis on practical issues
THANK YOU FOR YOUR ATTENTION!

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