ITU-D Broadband Activities
APT Wireless Broadband Seminar
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Molly Gavin

Rapporteur ITU-D Q20-1/2

Presented by Riccardo Passerini, ITU-BDT Senior Telecommunication Engineer,
Technology and Network Development

Developing Regions

- Growing demand for Broadband

- Lack of Wireline infrastructure needed to meet the growing demand for Broadband

- BWA, economical and easy to install, is a good high-performance solution to address the needs of these Regions

- Availability of Broadband Services in Rural and Remote areas can address a variety of challenges posed by the distance

ITU-D Broadband Activities Presentation Agenda

- ITU-D Introduction
- Question 20-1/2: Broadband Access Technology
- Results of Questionnaire: Factors affecting broadband deployment
- Case Study: Regional Example: Telstra
- Strategies to Promote Broadband
- Invitation to Participate

ITU Structure

ITU-T	ITU-R	ITU-D
Networking/Standards	Radiocommunications	Development
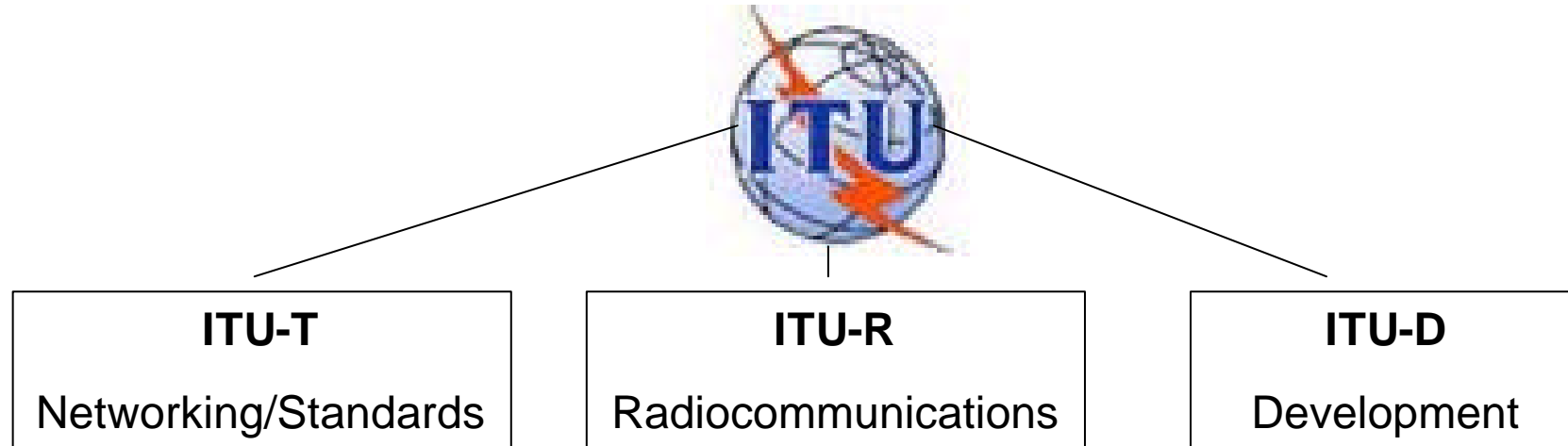
ITU-D manages two study groups:

- These groups serve as a forum for developing and developed countries and public and private sector organizations to meet with the purpose of devising innovative solutions which address specific problem areas as identified by the World Telecommunication Development Conference.

  1. Study Group 1: Telecommunication development strategies and policies (regulatory)
  2. Study Group 2: Development and management of telecommunication services and networks (technical)

ITU-D Study Group 2 Question 20-1/2 Broadband Access Technologies

- **Approved at World Telecommunications Development Conference 2002:**
  - –Identify the technical, economic, and development factors influencing the effective deployment of broadband access technologies and applications.

- **Technology Scope:**
  - –All broadband technologies- as inclusive as contributions permit.

- **Draft Report (to be finalized by July 2005) currently available on ITU-D website:**
  - **– 3 sections: 1) General broadband matters; 2) Technology Matrices, 3) Country experiences**
  - –**General broadband matters:**
    - Social and Economic Benefits of Broadband
    - Broadband Applications
    - Broadband Deployment
    - Strategies to Promote Broadband Development
  - –**Technology Descriptions:**
    - Wireline: DSL, Cable, Fiber to the Home, Powerline, etc
    - Wireless: Satellite, FWA, WLAN, IMT-2000, etc.
    - Non-Standardized Technologies
  - –**Case Studies: Regional example: Telstra**

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Broadband Questionnaire Sent March 2003

- Questionnaire Aims:
    - Identify relevant wireless and wireline broadband access technologies and their attributes.
    - Identify economic, technical and development factors influencing deployment and accessibility of broadband.
    - Look at pricing trends for broadband access.

- Responses:
    - 58 Respondents from 52 countries from all ITU regions
    - American respondents include Barbados, Bolivia, Brazil, Canada, Chile, Costa Rica, Dominican Republic, Ecuador, Guyana, Honduras and Peru
    - Analyzed by ITU-D Secretariat External Consultant

Main Findings of Broadband Questionnaire (1/2)

- No regionally dominant broadband technology.
- DSL is dominant wireline broadband technology, followed by cable and E1/T1.
- Satellite, fixed wireless, WLAN and IMT-2000 are leading wireless broadband technologies.
- Fastest growing broadband platform identified as wireless.
- Business applications are the main adoption drivers – though personal use was a close secondary driver in both developed and developing countries.
- Huge differences exist between developed and developing nations in access to broadband services; even more pronounced in rural areas.
- Gender barriers to broadband exist mainly in lack of training and economic resources.
- The majority of respondent countries do not provide loans or support to enable broadband deployment.
- Many countries offer free broadband access through public centers.

Main Findings of Broadband Questionnaire (2/2)

- Price for broadband access on average 5 times higher in Africa than in Europe.
- Deployment costs followed by lack of demand for broadband services were identified as two largest barriers to broadband deployment.
- Of issues limiting spread of broadband, the most common was that the monthly fee was too high.
  - Other factors identified were insufficient demand to justify infrastructure costs, high installation costs and lack of access to personal computers.
- Lack of awareness is another factor limiting broadband deployment.
- Lack of regulatory framework conducive to network build out also negatively affects broadband deployment.
- Those countries w/ large rural areas and dispersed rural populations are among those facing the greatest difficulties in raising finances for broadband build-out.

Case Study: Regional Example
Telstra in Australia (1/2)

- In June of 2004, Telstra, a major telecommunications operator in Australia, announced that Victoria was the first state in Australia to have its CDMA mobile network 100 per cent upgraded to provide high speed wireless data services.
  - The high speed wireless service enables people to surf the net, access their own office networks, check their email and send and receive data or information using either a compatible mobile phone, or a PDA, laptop or desktop computer, fitted with a suitable card or modem.

- Currently, Telstra is working with health groups in Australia, such as the Loddon-Mallee Health Alliance (LMHA), for the rollout of the latest telecommunications technologies in the region.
  - In doing so, they are improving the delivery of health services to some of the most remote communities in the state of Victoria.

Case Study: Regional Example
Telstra in Australia (2/2)

- The upgrade of Telstra's CDMA network is the first stage of a comprehensive technology upgrade for hospitals, medical practitioners and ancillary health services in the LMHA.
  - The LMHA is present throughout Australia from Gisborne to Mildura and plans to include approximately 85 sites in both regional and remote locations for the initial deployment of this project.
  - The work that LMHA is undertaking throughout the region provides an excellent example of how institutions can deliver quality health care services   by utilizing the latest advancements in broadband technologies.

- Telstra is also working with LMHA to develop new applications which will assist health professionals to access files, emails and other information from their mobile phones or lap top computers, making vital information available sooner and in a shorter time frame.

Conclusions: Strategies to Promote Broadband (1/2)

In order to promote demand for broadband deployment, governments and businesses private sector can aim to:

– Increase broadband availability in schools, and other public centers (increases awareness of broadband benefits).
– Educate users on successful applications such as IP telephony, video chat, audio over broadband.
– Promote teleworking, e-health, e-learning, and e-government transactions (such as filing of tax forms and other administrative procedures).
– Encourage content development in local languages.
– Ensure regulatory environment protects intellectual property rights and user security.
– A competitive market structure is vital to sustain low prices in order to attract consumers.
– Support for research and development on broadband technologies and applications.

Conclusions: Strategies to Promote Broadband (2/2)

In order to promote broadband supply, governments and businesses can aim to:

- Create incentives for competition both among providers of the same broadband technologies, and between providers of different broadband technologies.
- Establish policies that allow service providers the flexibility to independently choose technologies based on commercial and competitive considerations.
- Promote use of existing infrastructure to enable broadband rollout while at the same time encouraging new investment
- Utilize schools, hospitals, and community access centers as effective anchors for broadband demand in areas where individual household connections are not yet viable.
- Consider wireless broadband as a viable community alternative to fixed line solutions such as broadband via DSL or cable modem.
- Participate at all levels: national, regional and city-wide initiatives and community participation projects have been successful in expanding access.
- Particularly for rural and underserved areas, consider potential economic incentives for broadband build-out such as tax credits, grants for community planning efforts, subsidized or low-interest loans.

We want your participation. If you're interested in contributing a case study or information on specific broadband access technologies, please contact:

Miss Molly Gavain

QUALCOMM, Government Affairs

THANK YOU!