



# Regional Seminar on the economic and financial aspects of telecommunications for the Study Group 3 Regional Group for Latin America and the Caribbean (SG3RG-LAC)

El Salvador, San Salvador, 15-16 February 2011

## FINAL REPORT OF THE SEMINAR

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### 1 Introduction

The Seminar on the economic and financial aspects of telecommunications, organized by the Regulatory and Market Environment (RME) unit within the framework of implementation of BDT's Hyderabad Action Plan (HAP), was held in conjunction with the ITU-T Study Group 3 Regional Group for Latin America and the Caribbean (SG3RG-LAC), in San Salvador, thanks to the kind invitation of the General Superintendency of Electricity and Telecommunications of El Salvador (SIGET). The seminar was followed on 17-18 February 2011 by the regional meeting of SG3RG-LAC. The events were attended by 88 delegates from 12 countries from Latin America and the Caribbean.

The opening was attended by Dr Luis Eduardo Méndez, Superintendent of SIGET, who highlighted the importance of the event and noted that, in today's globalized world in which telecommunications are a tool for technological development and a key item in the domestic economy, it is necessary to analyse the impact of costs and tariffs in order to achieve greater connectivity and accessibility to ICTs. Ms Carmen Prado-Wagner, representing ITU, took the opportunity to thank SIGET for agreeing to host the events and for all the support provided in order to provide such excellent conditions. She pointed out that such events serve as an excellent platform for exchanging ideas and experiences on key issues related to regulation and the economic and financial aspects of telecommunications and ICTs. Finally, Mr Facundo Fernández Begni, Chairman of RG-LAC, stressed what an honour it was to be meeting again in a context of dialogue with representatives from Latin America and the Caribbean. He thanked the authorities of the Administration of El Salvador, especially SIGET and its entire team, for having accepted the offer of ITU and the Chairman to host both the BDT seminar and the RG-LAC meeting. He underlined the ongoing work undertaken in recent years in this technical area to allow the broadest exchange of experiences and views on economic, financial and accounting issues affecting telecommunication services and reflecting the needs of the region. Finally, he thanked both the Director of BDT, Mr Brahima Sanou, and Mr Malcolm Johnson, Director of TSB, along with their team present in San Salvador, for their constant support for the activities of the region. Mr Oscar Atilio Estrada was appointed as Chairman of the seminar.

### 2 Outcomes

The agenda of the seminar was drawn up in coordination with the RG-LAC management team. The agenda items focus on the activities and objectives of the component of Programme 3 "Enabling environment" relating to economics and finance, including costs and tariffs, and on the work of ITU-T Study Group 3, specifically in relation to SG3 RG-LAC. The results of each session are briefly summarized below.

#### Session 1: Tariff regulation in El Salvador (Juan Carlos Casto Ch., SIGET, El Salvador)

The speaker presented an overview of the General Superintendency of Electricity and Telecommunications of El Salvador, including its establishment and the organization's specific activities, the development of laws and regulations and their application in El Salvador. The discussion focused on the background to the determination of tariffs, and especially tariff approval and the formulae used to set tariffs within the cost model developed.

#### Session 2: Key aspects of mobile network cost modelling in the Caribbean (John Thompson, Trinidad & Tobago)

The speaker explained that regulators should define their own cost models based on their telecommunication environment and market. Then, it is important to assess the advantages of maintaining a standard - preferably regional - model. Several key items were suggested for comparability and consistency within the region, as well as the benefits of a uniform cost classification, notably robustness, transparency and causation. Finally, a cost model was described, taking into account the main cost assumptions, such as the use of FAC, LRIC and variants thereof.

Participants expressed some concern on the subject of traffic forecasts, demand and other useful information for cost modeling, which is of great interest to the region.

### **Session 3: Mobile termination charges and mobile roaming in Latin America (Omar de León, Uruguay)**

The speaker presented a general outline of roaming in Latin America, the problems and challenges faced and the tariffs applied in some countries where data are available. He then portrayed the situation in Europe in terms of the price results for incoming calls: regulation has brought down incoming roaming charges within the European Union, improving transparency for consumers. In conclusion, he stated that the situation in Latin America is one of high roaming charges, with a tendency towards stagnation, as happened in Europe in 2005.

With regard to mobile network termination, where regulation is in place mobile termination rates are generally calculated using the long-run incremental cost (LRIC) methodology in its various versions, this being the method which most fully reflects a competitive market.

### **Session 4: Challenges to roaming settlements in the Caribbean - Compliance or forbearance (John Thompson, Trinidad and Tobago)**

The speaker presented the basics of roaming in general before going on to focus on explaining the history of the mobile service in the Caribbean region, current situational issues and especially their impact in the Caribbean and on the economy.

Roaming was first introduced to meet the needs of businesspeople from the United States visiting the Caribbean region, using the availability of what was then AT&T, subsequently expanded throughout the region. Mobile termination rates have major effects, seemingly forming some monopolies in certain parts of the Caribbean region, since there is not any substitute for the mobile termination service, so that network operators enjoy a monopoly when other operators have to connect to other national or international networks.

### **Session 5: Spectrum sharing - Impact on tariffs (Adrian Foster, McLean Foster & Co., Canada)**

This presentation focused on aspects of spectrum sharing, and the impact of spectrum sharing on tariffs for telecommunication services. A number of cases of other countries in Asia and Europe were presented, including how they are implementing their systems. A spectrum pricing methodology was proposed that is practical and easy for regulators to apply. Finally, the speaker presented options for costing methodologies and cost models for spectrum valuation and the impact on telecommunication services tariffs.

### **Session 6: Spectrum in transition - Valuing the digital dividend (McLean Foster & Co., Canada)**

In this presentation the speaker focused on the technical aspects of digital migration in general, and the phases of the transition to digital. With regard to the impact of migration on regulation, he explained that in highly liberalized markets that allow for more flexibility through service- and technology-neutral licensing, policy-makers and regulators usually consider their countries' social, cultural and developmental objectives, endeavouring to achieve a balanced trade-off between economic considerations and access to communication media and content.

### **Session 7: International Telecommunication Regulations (ITRs) and the World Conference on International Telecommunications (WCIT)**

The presentation explained what the ITRs are, namely a treaty establishing general principles relating to the provision and operation of international telecommunications, such as facilitating global interconnection and interoperability and promoting efficiency, usefulness and availability of international telecommunication services.

Discussions regarding review of the ITRs have been ongoing for some time, at conferences in 1998, 2002 and 2006, and active preparations for implementation of the review are currently under way. An example of the work performed by ITU is the inclusion of the issue in discussions of the annual Policy Forum, in the hope of generating ideas and initiatives to be taken into account when updating the ITRs to accommodate new services and technologies. The LAC region is urged to provide its comments on changes that could be made to the regulations.

### **Session 8: International internet connectivity (Oscar Messano, Regional ISP representative)**

The aim of this presentation was to discuss economic and technical features of interconnection in Latin America and the Caribbean, and the rest of the world. A brief explanation was given of the location of network access points (IXP) in both Latin America and the Caribbean, and how they are being managed in the countries where they are located. The impact of these national and regional IXPs in support of SMEs for economic development was highlighted. The possibility of developing a

regional backbone was also addressed, taking into account convergence and IP services.

One of the examples discussed was the case of Comtelca; work is under way in Central America to create a subregional backbone, which is expected to run from Panama to Guatemala and be 80 per cent up and running by June 2011. The aim is to promote IXPs in the Central America region by establishing an IXP per country which will help interconnect all countries.

#### Session 9: IP Interconnection: Economic and regulatory issues, cases and trends for the LAC region (Omar de Leon, Uruguay)

After running through the technological aspects of IP interconnection, how it works, the structuring of converged networks with NGNs and interconnection, the presentation looked at the current status of IP interconnection worldwide, the business models currently being applied in some countries, the transition to a new regime and the evolution of current interconnection and access regulations which are not suited to the characteristics of new networks.

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#### NGN networks and interconnection:

Migration to the new regime  
IP interconnection

Period of gradual migration

Current situation	Final regime
Evolution of networks towards NGN and adoption of new services	Widespread use of IMS architecture, full implementation of NGN networks and massive adoption of new services
Existing regulations for service interconnection	Development of new regulations, ensuring interoperability at different layers and end-to-end connectivity
Calling party network pays (CPNP)	Peering and transit agreements
Interconnection points	Drastic reduction in number, increasing the costs of reaching these points for incoming operators

Effort made to ensure that migrations do not cause disruptive changes or give rise to transaction costs.

The situation in Europe was explained in some detail, as well as the interaction between regulators, fixed operators and mobile operators worldwide.

#### Session 10: The impact of broadband on the economy - Impact in the Americas region and the role of the regulator in boosting the development of broadband (Javier Avila, Columbia University, USA)

The presentation took an in-depth look at the impact of the deployment of broadband in terms of infrastructure, and studies conducted in selected countries of the region which indicate that network construction and associated multiplier effects are considerable for countries' revenues and GDP.

Another important point described was network effects - the significant positive externalities generated by broadband. These include productivity, innovation and restructuring of the value chain, especially in regard to incentives for employment immigration from other regions. Emphasis was laid on the importance of the economic effects of broadband in stimulating the formulation of policies and strategies for the preparation of national development plans, as explained in the figure below.

### Importance of the economic effects broadband has on the formulation of policies for maximizing take-up

- National broadband plans set coverage and service objectives, assign spectrum to maximize the impact of wireless broadband, focus on stimulating demand, define competition policy and address potential obstacles to supply
  - Articulate a vision and raise awareness among civil society and in political circles
  - Coordinate policies and involvement of the public and private sectors
  - Develop government policies
  - Create a sense of responsibility at the highest echelons of government
- Competition policies that stimulate private-sector investment and innovation are critical
- At the same time, governments must recognize that intervention is necessary in some cases
  - To resolve market failures through universal service funds
  - To alleviate restrictions on investment in order to stimulate private capital flows
  - Possible entry as investor of last recourse

### Session 11: The impact of taxation on the development of the mobile broadband sector (Javier Avila, Colombia University, USA)

The speaker presented a typology of taxation for the mobile telecommunication service, with a view to assessing the impact of taxation on the development of mobile broadband. The presentation was divided into two parts. The first explained how to quantify the potential impact of mobile broadcast service adoption approaches using impact models, in order to simulate the effect of changes in taxation on mobile broadband penetration and on the national economy. The second, based on the result of this exercise, offered conclusions and policy recommendations with a view to accommodating the need for governments to secure revenue while at the same time maximizing mobile broadband penetration (assuming that eliminating taxation altogether is not feasible and not an option).

### Session 12: Preparation of the national plan for the introduction of broadband in Cuba (Pedro Oliver Brunet, MIC, Cuba)

This presentation reviewed the situation in Cuba with regard to development of the national broadband plan. In Cuba, the technical and regulatory functions have been established for mobile access to private data networks, WAP navigation and multimedia messaging over GPRS networks, as well as initial investment for migration to 3G. The meeting was informed that on Wednesday 10 February last, Cuban territory was connected to the optical fibre submarine cable linking Cuba to Venezuela, as part of the first stage of a project that will substantially enhance the country's international access. The entry into operation of the cable will bring down the costs of international connection for the country, since Cuba's communications with the rest of the world are routed via satellite, and the leasing of circuits involved pushes up costs.

### Session 13: National plan proposal for broadband development in Peru: Lessons learned (Luis Alejandro Pacheco, OSIPTEL)

The speaker described OSIPTEL's current status with regard to development of the national broadband plan, explaining the roadmap for the work to be carried out and the changes in national service coverage. One important feature was diagnosis and the challenges faced, and how OSIPTEL addressed them. Broadband is a fundamental pillar for achieving greater economic development, improving competitiveness and enhancing social inclusion. It has been recognized in various forums that broadband is a key component in states' strategies seeking to boost their economic growth, improve their productivity and strengthen their position in the globalized economy. OSIPTEL's strategy has focused on policies to promote, in order of priority:

- Indirect competition: in unserved areas, where policies to encourage access are focused on providing incentives to promote competition through new users
- Direct competition: in areas where the population already has access to various telecommunication services, the target consumers are primarily business and residential users in the densest areas
- Suitable adoption of convergence.

#### **Session 14: Mobile broadband and the digital dividend (Ignacio Bergallo, Telefónica Argentina)**

Universal broadband in Latin America constitutes a challenge for most countries, and the presentation looked at the different trends in the region in terms of broadband deployment. The countries of the region are characterized by different socio-demographic realities, which also means that the situation is very different in capital cities and large urban centres than in provincial towns or suburban and rural areas.

The speaker explained that, in view of the socio-demographic and geographical stratification in the region, universal broadband can only be achieved through the adoption of public policies that make infrastructure development viable, with the result that this has to be incorporated as one of the priorities in each country's national broadband plan.

#### **Session 15: Activities of the CITEL Permanent Consultative Committee on economic aspects of telecommunications: Coordination of activities between CITEL and the ITU LAC group (Facundo Fernández Begni, CNC, Argentina)**

The speaker explained the CITEL organization and the work it does, as well as the results of the last assembly, at which the current strategy was developed. He described the work being carried out within the framework of the reporting mechanism on the economic aspects of telecommunications, together with its mission and objectives.

The spotlight was placed on the work being carried out by the various CITEL working groups, highlighting in particular the following studies that may be of interest for the LAC group:

- Preparation and drafting of a Technical Notebook on policies for broadband development in the Americas
- Establishment of regulations for the recording of fraudulent practices in telecommunications/ICTs and the requisite database for registration of such practices
- Development and study of information relating to the rights of users of public telecommunication services
- Review of the current provisions of the International Telecommunication Regulations (ITR) with a view to the 2012 World Conference on International Telecommunications (WCIT-12)
- Analysis of proposals for preparation of the 2012 World Telecommunication Standardization Assembly (WTSA-12)
- International Internet connectivity
- Mobile termination rates (MTR).

Last but not least, the speaker highlighted the identification of joint studies between CITEL and ITU, for the presentation of inter-American proposals, the development of training and the preparation of joint publications.

#### **Closure of the seminar**

In concluding the seminar, the Chairman, Mr Oscar Atilio Estrada, summed up the various topics addressed and discussed throughout the event. He thanked participants and speakers for their active participation and BDT for organizing the seminar, which had dealt with subjects of great interest for the region.

The Chairman of the LAC group drew attention to the excellent collaboration that existed with BDT, both in developing the topics discussed at the seminar and in terms of studies and data provided by BDT to support the regional group's work, and requested that the seminar, which was an excellent platform for exchanging experience and knowledge, be held annually in conjunction with the group's meeting.

All the presentations, the outcomes and the list of participants for the seminar are available on the website at: [www.itu.int/itu-d/finance](http://www.itu.int/itu-d/finance).

### **3 Future ITU/BDT regional work in coordination with the SG3RG-LAC Regional Group**

During discussions at the meeting of the Study Group 3 LAC Regional Group, the following items were addressed of relevance to the component of Programme 3 "Enabling environment" relating to economics and finance, including cost and tariffs:

- 1) With reference to the subject of roaming in the region, the BDT representative introduced Document TD79 (PLEN/LAC) on international roaming and mobile termination in Latin America, which had been presented and discussed at the seminar in the preceding days. BDT participated actively in discussions pertaining to the work of the Ad Hoc Group on Roaming in the region.
- 2) BDT participated actively in the work of the Ad Hoc Group on Cost Models and Statistics for Telecommunication Market Regulation (Document TD84). It also participated in the work on international Internet connectivity (Document TD81). The BDT representative took the opportunity to present the results of the survey on tariff policies,

specifically the section on international Internet connectivity, and suggested that BDT would be open to discussing and including in the survey any new questions which might be of interest for the work of the LAC group.

- 3) With respect to the guide on practical application of economic models and statistics, drawn up by BDT in 2010 and designed to help regulators use such models within their work, the Ad Hoc Group on Cost Models will continue to review the guide (Document TD84) and BDT will have it translated into English.
- 4) The results of the LAC group's work are summarized in the meeting report in Document TD67 (PLEN/LAC) at <http://www.itu.int/md/T09-SG3RG.LAC-110215-TD/en>.

During the discussions, participants suggested a number of topics of interest to the region which might be considered in the agenda for next year's seminar.

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