



Seminar on the Economic and Financial Aspects of Telecommunications/ICTs and Meeting of the Study Group 3 Regional Group for Latin America and the Caribbean (SG3RG-LAC)

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Final report of the seminar

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1 Introduction

As every year, the Regional Seminar on the Economic and Financial Aspects of Telecommunications/ICTs was organized by the Regulatory and Market Environment Unit (RME) within the framework of implementation of BDT's Action Plan. It was held in conjunction with the meeting of ITU-T's Study Group 3 Regional Group for Latin America and the Caribbean (SG3RG-LAC), in Mexico, at the kind invitation of the Federal Telecommunications Commission of Mexico. The seminar was followed on 20 and 21 March 2013 by the regional meeting of SG3RG-LAC.

Sixty-seven delegates from seventeen countries of Latin America and the Caribbean participated in the seminar. The opening was attended by Ambassador Arturo Hernández Basave, Director-General for the United Nations of the Secretariat of Foreign Affairs, Lic. Tito López, chairman of SG3RG-LAC, Dr Hamadoun Touré, Secretary-General of ITU, and Maestro Mony de Swaan, chairman of COFETEL.

Mr Luis Lucatero Govea, Head of the Foresight and Regulation Unit of COFETEL, was appointed 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 focused 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 the RG-LAC regional group. The results of each session are briefly summarized below.

Session 1

Results of the World Telecommunication Standardization Assembly (WTSA-12) – Lara Srivastava, ITU/TSB

This presentation provided an overview of the results of WTSA-12, including the new resolutions drawn up and the main aspects dealt with of interest to the work of the Study Group 3 Regional Group for Latin America and the Caribbean (SG3RG-LAC). That includes Resolutions 29, 44, 61, 62 and 65. The Opinions were also explained, in particular Opinion 1 on the practical application of network externalities.

Results of the World Conference on International Telecommunications (WCIT) – Carmen Prado-Wagner, ITU/BDT

The main results and modifications made to the International Telecommunication Regulations (ITRs) were presented, with emphasis on the following articles and provisions: mobile roaming (Articles 4 and 5), provisions for services in relation to cost reduction (Articles 3 and 4), economic aspects (Articles 6 and 9

and Appendix 1) and new Resolution 5 on International telecommunication service traffic termination and exchange.

Session 2

Strategies for the deployment of NGN and NGA in a broadband environment – regulatory and economic aspects – Roger Steele, ITU Expert

The results of the ITU/BDT study on this subject were presented. A brief overview was given of the implications of NGNs and NGAs for broadband, and of the benefits for consumers. The different approaches for deploying NGNs were analysed. In the present context, a top-down approach is necessary based on a comprehensive policy embracing all ICTs, including the provision of services, end-user demand, and the provision of NGNs. This should be supported by regulatory approaches and financial conditions adapted to the specific situation of each country concerned and to the specific characteristics of NGN development. NGNs differ from traditional technologies in various basic ways, over and above enabling faster or cheaper services. The differences make it necessary to modify the regulatory approach. From the technical viewpoint, migration also calls for a more radical approach since the network structures modify the economic factors involved in network provision far more than other previous technical changes.

The Spain and Italy cases from a commercial and regulatory point of view – Joan Obradors, Partner Analysys Mason

A brief explanation was provided of the different technologies used to deploy NGA networks, with emphasis on the fact that both copper and fibre are basic architectures for deploying such networks. The costs of cable-to-cabinet construction and installation were discussed along with the differences in investment costs between Spain and Italy. At present both countries are proposing symmetric obligations on the vertical segment of the network. The discussion included an exhaustive comparison of Spain and Italy's regulatory models, and the process for implementing and deploying NGN to provide broadband services.

Session 3

Economic and regulatory aspects in the access to content value chain from the producer to the end user, Omar de León, ITU Expert

The session began with an explanation of the general context in which the presentation was being made, i.e. in regard to information content and the role of content providers (content delivery networks (CDNs)). The CDNs are a set of servers distributed over the global network, some at the interconnection points (IXPs), some directly at the ISPs, thus giving their servers interconnection with the ISPs, with the latter providing final access to users. Until a few years ago, competition between the major content providers like Google, Microsoft, Yahoo and others hinged upon whose content had better quality. Now competition hinges upon whose infrastructure is better. Since content is becoming the fundamental basis of telecommunication networks, there are an enormous number of CDNs worldwide, with the number increasing as the requirements for content, in particular video, increase. Traditionally, payments by end users and between ISPs have been intended to recover the costs of transporting the information. With the progressive increase in the value of content and applications, we are now seeing payments for content. Such payments are usually effected directly by users to the content providers, although payment transfers have recently begun to involve the ISPs in much the same way as occurs, for example, with subscription TV operators. The session included discussion of the importance of regulatory intervention, which would not appear to be the optimum solution at the moment but could intervene *ex post* once the dominant position has been identified. Premature intervention could affect market development. In conclusion, it was stated that the promotion of competition in this field and for the development of content is fundamental to the development of this market segment, and it is thus necessary to promote the development of this ecosystem naturally, avoiding any position of dominance. In order to achieve economic and operational

efficiency on the Internet market, it is essential for the regulatory authorities to protect and promote competition on all Internet-related markets.

Session 4

Initiatives to stimulate demand for broadband services and development of local content: online administration, e-learning, e-government – Roger Steele, ITU Expert

This presentation is a continuation of Session 2, which considered the strategic aspects of NGN and NGA development. The presentation dealt with the practical measures for developing NGNs, and how to increase the demand for and development of local content, which provides society with economic benefits. It considered all the technical and economic aspects involved in setting up NGN networks, taking account of the different technologies (copper, fibre) and the economic impact of old versus new networks.

Session 5

The Brazilian experience on spectrum pricing model: the 3G & 4G licence – Abraao Silva, Anatel

The growing demand for spectrum in order to consolidate and provide new wireless services and mobile communications, digital terrestrial TV broadcasting networks and the various wireless broadband access systems are becoming increasingly indispensable, and there can therefore be no doubt regarding the importance of correctly assessing the opportunity cost of their idleness. This presentation explained the different types of auction; traditionally, Anatel uses a combination of English auction and first sealed bid auction. It also applies a reserve price and other mechanisms such as the division of radio frequency blocks and order of bidding for the blocks. Anatel is currently carrying out a complex study to establish rights for the use of radio frequency, identified in the form of a business plan that is attractive to operators, especially as regards investment in rural areas.

Session 6

International Internet connectivity in Latin America and the Caribbean – Ricardo Sawon, ITU expert

Study of the present situation regarding international Internet connectivity forms part of Initiative 4 for the Americas Region, on the Reduction of Internet Access Costs. Within this context, a study is currently being carried out on the subject for both Latin America and the Caribbean. The speaker presented the results of the study, emphasizing the policies and regulatory aspects related to Internet traffic exchange points (IXPs). In general terms, experience shows that interconnection via IXPs is not usually regulated. Only three countries of the Americas envisage specific regulation: Bolivia, Chile and the Dominican Republic. The various IXP management models and their application within the region were described.

The vice-chairman of Study Group 3 present, Mr Facundo Fernandez Begni, thanked BDT for the study and for the support which is being provided on the subject to the activities of the LAC Group, including the results of the questionnaire on tariff policies. The discussions focused on CDN intervention at national level, which has not yet been defined. Nevertheless, it was recommended that countries could commence discussions with all interested players on the functioning of and need for regulation. The regulator can participate actively in order to promote competition between IXPs and to work to promote and facilitate access for new operators.

Broadband: the present situation and opportunities – Ignacio Bergallo, Telefonica Argentina

The speaker provided an overview of the situation regarding broadband in the region. Broadband has taken off in most Latin American countries, but policies are required to support and promote a new phase of development and universalization. Forecasts regarding IP traffic growth in the region are impressive, making it indispensable to review the infrastructure investment model at both private and public level in order to ensure future sustainability. Customers demand an open, transparent, private and safe Internet.

To achieve this, it was recommended that the regulatory framework be reformulated to embrace all players involved in the digital ecosystem, avoiding regulatory asymmetries.

International Internet connectivity: situation and plans in Paraguay – Tito López, Conatel Paraguay

The chairman of the LAC Group and representative of Conatel Paraguay introduced the analysis of international Internet connectivity in Paraguay, with emphasis on broadband services on the Paraguay market and end prices charged to end users, and prices for international access to the Internet. Explanations were provided of the plans for national IXP implementation and content hosting aimed at reducing international originating costs, improving quality (by reducing latency and shortening routes) and increasing the teledensity of broadband services at national level. At present there is only one national IXP (CAPADI NAP-PY), but it does not include all service providers, and its effects on the market are limited and partial. In conclusion, it was stated that it is hoped that the national IXPs will also provide incentive for hosting local content, and will attract international content operators, which it is hoped will lead to savings on international traffic and consequently on costs.

Session 7

Taxation of international telecommunication services – Carmen Prado-Wagner, ITU/BDT

This presentation was based on the results of the study carried out by ITU/BDT on Taxing telecommunications/ICT services: an overview. The study was prepared in coordination with experts Professor Martin Cave of the London School of Economics and Dr Windfred Mfuh of Warwick University. It is important to analyse how the macroeconomic impact of a tax on telecommunication services can cause a significant reduction in production in other sectors, and even a possible reduction in tax revenues when the indirect or cumulative effects are major. It was concluded that balancing a country's taxation process is not straightforward, and is certainly something that should be effected based on case-by-case analysis, but governments should think carefully before imposing new or special taxes on the telecommunication sector. This should only be done when there is no alternative for increasing tax revenues that would be less harmful to the economy in terms of market distortions and negative impacts on economic growth.

In order for the telecommunications industry to derive maximum benefits as a source of growth, tax authorities, regulatory authorities and operators must work together. For example, all concerned parties should hold consultations before taking major decisions. This could be very useful in assessing the possible distorting effects of each tax on the quality and quantity of services, as well as any possible harm caused to the well-being of the population. The possibility of proposing the establishment of a recommendation on taxation as part of the activities of the LAC Group was discussed.

Taxation and telecommunications in Latin America – Juan Jung, AHCET

The results of the study carried out by AHCET on taxation in the Latin America region were presented. The objective of the study is to describe the taxation applied to consumers and operators of ICT services and equipment, analysing the economic impact thereof. Latin American consumers are particularly sensitive to changes in the prices of ICT devices. This signifies that tax reductions, by directly affecting the prices of services positively, would help to promote access to and use of services. Tax reductions can play a major role by bringing prices for services down. Even small reductions can produce considerable increases in access and use for those consumers whose use is limited. It is important to balance required revenue collection against potential new increases in penetration and the use of ICT services, and the potential impact thereof on public revenues.

Telecommunication sector taxation – Luis Schecker, Indotel, Dominican Republic

The speaker explained the various taxes affecting telecommunication services in the Dominican Republic, traffic behaviour and routing, and customs duties. Indotel's position is that the taxes on the ICT sector are

high (30 per cent in direct taxes) and should not be increased. Indotel refused to charge telephone users new fees for dialling 911 (emergency number). Indotel also maintains that existing taxes should be lowered, in order to encourage investment in the sector and reduce the burden on users. Indotel also supports the campaign to reduce the Internet access rate to 0 per cent.

Regarding international services, the Dominican Republic is endeavouring to avoid double taxation and adheres to the principle adopted in the International Telecommunication Regulations (Dubai, 2012).

Taxation of international telecommunications – A Trinidad and Tobago perspective – Cynthia Reddock-Downes, The Telecommunications Authority of Trinidad and Tobago (TATT)

The speaker briefly presented the rules governing the sector's taxation in Trinidad, which may be summarized as follows: computers and equipment 0 per cent; telephone equipment 30 per cent; telecommunication equipment between 5 per cent and 30 per cent, plus 15 per cent VAT. There will be no tax levy on incoming calls but a contribution will be made out of the revenues of service providers. Access to universal service projects will be limited to concessionaires (pay and play). Various taxes have been set up by other countries on incoming international calls, for example Jamaica. These taxes can be passed on to consumers in the Caribbean region by common international operators. Taxation impacts the affordability of telecommunications in the region. Regional governments should collaborate more closely on telecommunications taxation matters. Cross-border taxation is a matter for all States, and regional commercial agreements should be concluded as this should not be left to the discretion of commercial interest groups. The provisions on double taxation in the ITRs should be taken into consideration by regional governments.

Session 8

How to define the significant market power (SMP) in a broadband converged environment and overview of Latin America and the Caribbean - Omar de León

This session presented the importance of defining significant market power (SMP) in a broadband converged environment, taking account of the elements of regulation, economic fundamentals and best practices based on the most relevant documents dealing with new trends in defining SMP. The presentation was based essentially on the ITU document published in December 2012 on "[*Competition and regulation in a converged broadband world. Broadband series*](#)".

The role of national ICT regulatory authorities and national competition authorities was discussed, it being pointed out that market power may come from services other than those usually subject to ICT regulation, and that its evolution is difficult to predict. This makes it difficult to identify problems justifying *ex ante* regulation. In this environment, rather than regulating in advance for all possible cases, it would seem appropriate to mainly regulate *ex post* based on competition law.

Major changes at this time and adaptation should be effected at country level, taking account of the national context. For example, in Nicaragua the competition model is based on infrastructure.

Session 9

Costing and tariff policies session

1) Daniel Wada, Advisia – ANATEL – The Brazilian experience on the cost modelling project: applied methodology and lessons learned

This presentation was divided into two parts, with the first dealing with concepts and cost methodology in general and the project on cost modelling currently being undertaken in Brazil: the methodology applied, top-down and bottom-up cost models and the reconciliation process. The project involves assessment of the cost models used by operators in previous years, review of the methodologies applied and to be

applied along with the information compiled by Anatel and processed using the RSAC database, with the ultimate objective of commencing the development of standards for the new cost modelling of the different services on a wholesale basis. The discussion in regard to the convergence of services focused on what drivers Brazil is using for modelling and costing the voice and data services. It was explained that megabytes and minutes are used and that within the framework of the project a conversion factor specific to Brazil was developed to quantify and cost them.

2) Luis Schecker, INDOTEL, Dominican Republic – Regulation of interconnection charges

The Dominican Republic applies tariff freedom (Article 39 of the law), unless the regulatory authority determines that market conditions are insufficient to ensure effective and sustainable competition owing to the existence of practices that restrict competition, in which case it sets the tariffs. In 2011, Indotel held a competition to contract a consultant to develop an interconnection cost model and estimate the access charges on the fixed and mobile telephone networks included. In June 2012, various providers renegotiated their contracts, agreeing on the access charges for the period 2012-2014. When reviewing the new contracts, Indotel decided to object to the charges and send them back for modification on the grounds that they do not ensure effective and sustainable competition. It was observed that the retail prices of some services were close to (or below) the interconnection charges, which is harmful to competition (margin squeezing).

3) Luis Fernando Peláez Espinoza, COFETEL, Mexico – Interconnection and costing policies in Mexico

In 2011, an NGN cost model was produced simulating a hypothetical existing operator, in order to determine interconnection charges for fixed and mobile networks. Based on the basic guidelines for the development of models, COFETEL contracted the internationally renowned company Analysys Mason to develop the cost models, which have been submitted to public consultation.

4) Edmundo Lacayo, TELCOR, Nicaragua – Evolution of the telecommunications market in Nicaragua

There are two basic types of telecommunication in Nicaragua: services of public interest (voice services) and services of general interest (data, Internet access, TV). This presentation focused on trends in the growth of installed capacity for both fixed and mobile telephony in Nicaragua, and growth in broadband connectivity penetration and coverage.

5) Lydia Clarke-Misidjang, TELESUR Operator, Suriname – Implementation of a costing model

When the telecommunication sector in Suriname was liberalized in April 2007, Telesur decided to work on the development of a cost model based on the general principles. For internal use, an FAC model was used in 2001 and COSITU in 2004. A cost model was developed with drivers based on network building blocks in terms of minutes and destination of traffic routed. The complexity of the costing activities should not be underestimated: a successful system requires a combination of technical, financial and behavioural knowledge matched with the appropriate technological resources.

6) Alana Motilal, Telecommunications Authority of Trinidad and Tobago (TATT) – A costing perspective on retail promotions

A promotions-oriented approach is being implemented in Trinidad and Tobago as part of the costing policy. The latter is based on the stability of wholesale and retail prices, perpetual or temporary promotion, and customers' expectations. A cost model is currently being used to facilitate economic regulation within the context of the Policy Framework for Competition.

7) Kareem Guiste, Eastern Caribbean Telecommunications Authority (ECTEL) – Mobile termination rates and its impact on retail rates in the ECTEL Member States

The speaker presented an historical overview of mobile termination rates (MTRs) on the five Caribbean islands members of ECTEL (Grenada, Saint Vincent and the Grenadines, Saint Lucia, Saint Kitts and Nevis). In April 2010, a price cap plan was introduced which helped to bring down the MTR in the aforementioned countries. Regarding the MTR, an effort was made to push retail prices down. A positive result of lowering the MTR is that fixed termination rates (FTM) in the ECTEL Member States have been lowered considerably.

3 Closure of seminar

As part of the conclusions of the seminar, the chairman, Mr Luis Lucatero, summarized the various topics dealt with and discussed. He thanked participants and speakers for their active participation, and BDT for organizing the seminar which had dealt with subjects of considerable interest to the region.

The chairman of the LAC Group drew participants' attention to the excellent collaboration that exists with BDT, in regard both to development of the subjects addressed at the seminar and to the studies and data provided by BDT to support the activities of the regional group; he requested that the seminar be organized every year in conjunction with the meeting of the LAC Group, as it offers an excellent platform for the exchange of experience and knowledge and provides feedback on the ICT topics of most current relevance. All the presentations and outcomes of the seminar are available on the following website:
www.itu.int/en/ITU-D/Regulatory-Market/.

4 Follow-up of regional activities by ITU/BDT in coordination with the SG3RG-LAC Regional Group

On the Thursday and Friday, the meeting of SG3RG-LAC was held, dealing *inter alia* with the following points of relevance to the component of Programme 3 "Enabling environment" relating to economics and finance, including costs and tariffs:

- 1) Under agenda item 7 of the SG3RG-LAC meeting concerning Review of the SG3RG-LAC cost model and study of cost modelling, including NGN, the representative of BDT introduced Document TD 10 dealing with the results of the survey on tariff policies as contained in section 3 on cost and tariff models. She also gave an historical overview of the development of the TAL/LAC Group cost model and of that of COSITU up to the current revision Recommendation D.400.
- 2) The representative of BDT introduced Document TD 10 dealing with the results of the survey on tariff policies as contained in section 9 on international Internet connectivity.
- 3) Under agenda item 13 dealing with universal service, its costs and funding, the representative of BDT said that, as part of the discussion documents for GSR 2013, BDT was carrying out a study on *Maximizing the potential of universal service funds through successful administration and management – Addressing the missing link*. The chairman expressed the Group's interest in having that information. The representative of BDT will send the LAC Group the weblink for the study as soon as it has been completed.
- 4) The representative of BDT will share the results of section 7 on the economic aspects of next generation networks (NGNs) via the mailing list.
- 5) The representative of BDT provided information on the work being carried out by BDT with specific regard to the study on roaming and the high-level workshop to be held in September 2013, in coordination with ITU-T Study Group 3.

- 6) BDT was requested to support the ad hoc groups by providing the results of surveys, studies effected and material from workshops and seminars.

The results of the activities of the LAC Group are summarized in the report of the meeting of the LAC Group in Document TD 87 (PLEN/LAC) (www.itu.int/md/T09-SG3RG.LAC-120315-TD-PLN-0087/en). During the discussions, participants suggested various topics of interest to the region for possible inclusion on the agenda of next year's seminar. The members of the LAC Group requested BDT to continue to organize the seminar each year, as it is of considerable interest to participants since it addresses current topics that are extremely useful to the region.
