



Telecommunication Development Bureau (BDT)

ITU Regional Economic and Financial Forum of Telecommunications/ICTs for Latin America and the Caribbean Nassau, Bahamas, 21-22 April 2015

I Introduction

The ITU Regional Economic and Financial Forum of Telecommunications/ICTs for Latin America and the Caribbean took place on 21 and 22 April 2015. The Forum was organized by the ITU Telecommunication Development Bureau (BDT) in cooperation with the Utilities Regulation and Competition Authority (URCA) of the Bahamas and was followed by the Meeting of the Study Group 3 Regional Group for Latin America and the Caribbean (SG3RG-LAC) of the ITU Telecommunication Standardization Bureau (TSB), on 22 (afternoon) to 24 April 2015.

The Forum was attended by 21 delegates from 13 countries, including representatives of ministries, regulatory bodies, operators, industry and regional associations, and invited experts. The complete list of participants, the presentations and additional information are available at: www.itu.int/en/ITU-D/Regional-Presence/Americas/Pages/EVENTS/2015/0421-BS-Economic.aspx.

II Opening ceremony

The opening ceremony was attended by Mr Randoll Dorsett, URCA Chairman, Ms Carmen Prado-Wagner, ITU representative, and the Forum Chairman, Mr Stephen Bereaux of URCA.

Mr Dorsett welcomed the delegates and said that it was a great pleasure for the Bahamas to host the Forum, the sole platform for discussing the economic and financial aspects of information and communication technologies (ICTs). He referred to the excellent cooperation between ITU and the Bahamas and thanked BDT for organizing the events in Nassau and thereby promoting economic growth socially, economically and sustainably.

The opening ceremony concluded with a screening of the video film on ITU's 150th anniversary.

III Summary of the discussions

Session 1: The future of global telecommunications in view of the growth of OTT services: expected impact on usage and prices

Mr Simon Forge, SCF Associates, United Kingdom, made a presentation that considered the impact of OTT voice, text messaging and data services on telecommunication prices, in particular for international mobile roaming. OTT implied communications carried over the physical network using an IP protocol to access services available on the web, such as Skype, Viber and Facebook. The OTT channel could be carried over any kind of network infrastructure giving access to the Internet (Wi-Fi, mobile or fixed 3G or 4G, satellite) or combinations thereof. The data connection

used VoIP (Voice over IP) and appropriate video standards, and IP packet flows could transport isochronous traffic for high quality voice and HD video worldwide, avoiding voice and SMS national and international roaming charges. The business model for an OTT service provider was to offer web access on top of conventional carrier networks (fixed and mobile). OTT service operators could not operate a network and did not tend to lease network capacity from a mobile operator. Some of them (e.g. Vonage and Vopium) had nevertheless invested in network assets such as switching centres and VoIP gateways, and others had agreements with operators. A global understanding was needed of the business models for all types of players, as changes in the definition of the significant market power of OTTs was crucial to ascertaining OTT market trends with respect to technological progress and the telecommunication industry.

Statement by the panellist

In her presentation, **Ms Annie Baldeo, TATT (Telecommunications Authority of Trinidad and Tobago), Trinidad and Tobago**, explained that, on 5 July 2014, Digicel had announced its intention to block OTT services by Viber, followed by Nimbuzz, Tango and Fring, in Trinidad and Tobago. In December 2014, the other main service providers (Columbus and Bmobile) had also announced that they would block VoIP OTT services in the country. The TATT had asked them not to block the service pending its investigation of the matter. The complaint was based on the potential loss of financial revenues by authorized service providers and the impact on the use of “dedicated network resources” by authorized service providers in terms of traffic. A free and open Internet policy did not allow authorized service providers to block OTT services, and the TATT had therefore recommended a collaborative arrangement between OTT VoIP operators and authorized service providers when public switched telephone network facilities were used to originate/terminate OTT VoIP connections and/or calls.

Session 2: Consumer protection in an evolving telecommunication market

The session started with a presentation by **Ms Prado-Wagner, BDT/ITU**, who described the results of the ITU study *Regulatory framework and research on the behaviour of consumers of telecommunications services in Latin America*, conducted by the ITU Regional Office in close cooperation with the Inter-American Telecommunications Commission (CITEL). The research had revealed that consumers in the region were not in the habit of declaring their understanding of their rights and requesting fulfilment of their needs and demands, as they should. As a result, operators and service providers could believe that almost all of their customers were satisfied and that the effort and investment needed to solve problems would not be compensated from the financial point of view. It was important to underscore that the thermometer used to manage quality of service in the current market was lack of complaints. The study’s main recommendations were therefore: (a) the adoption of consumer satisfaction surveys; (b) the adoption of perceived quality indicators; (c) the use of social media; and (d) management using indicators.

Statement by the panellist

Ms Shantarra David-Gaszczyk, URCA, Bahamas, presented recent consumer protection work in the Bahamas, a series of regulations on subjects such as service provider obligations with regard to consumer sales, contracts and services; consumer constraints; billing and credit management;

consumer complaints; customer service quality and handling by service providers. One of the regulations' main points related to performance and monitoring of service providers and the performance reports to be submitted to URCA. The Bahamas required operators with significant market power to maintain adequate quality-of-service standards.

Session 3: Broadband technology, regulation and market in the region - Approaches and best practices

Mr Germán Pérez Benítez, ITU expert, Peru, presented the results of the BDT study entitled [*Banda Ancha en los países Andinos: tecnología, regulación y mercado - Análisis de situación y perspectivas 2015*](#) [Broadband in the Andean countries: Technology, regulations, market. Analysis of the situation and 2015 outlook]. He described the current broadband situation in the Andean countries (Bolivia, Colombia, Ecuador, Peru and Venezuela), and in Latin America in general, in terms of market supply and demand, technologies and standards, including telecommunication/ICT sector regulatory environments and institutional frameworks. It was hoped that the study would help national regulatory authorities and policymakers in general do their job with a view to improving and expanding telecommunications/ICTs in the region, especially for the development of rural areas and areas of preferred social interest.

Statements by the panellists

The presentation made by **Mr Mauricio Delgado, TELCOR (Nicaraguan Telecommunications and Post Institute), Nicaragua**, covered broadband implementation, the economic impact in some of the region's countries, the specific situation of Nicaragua and the initiatives taken. He stressed the limits to implementation in the country, such as: (a) coverage, which was a factor of the existing infrastructure; (b) computer literacy, as represented by the number of people who appreciated and use the Internet and its content; and (c) the economic ability of the population to pay for access.

Mr Craig John Nesty, NTRC (National Rural Telecommunications Cooperative), Dominica, presented a review of IXP (Internet Exchange Point) application and caching warrants in Dominica, including broadband supply and demand. He explained the benefits and costs of establishing an IXP and the countervailing positions of ISPs (Internet service providers) in the area of the five members of the Eastern Caribbean Regulatory Telecommunications Authority (ECTEL) (Saint Kitts and Nevis, Dominica, Saint Lucia, Saint Vincent and the Grenadines, and Grenada). IXPs were not as beneficial as submarine and non-submarine cable ISPs. The bids ECTEL was receiving for populating the cache had revealed potential anti-competitive practices, the need for further studies and the possible application of stricter measures to submarine cable operators.

Session 4: Relevant market definition and identification of operators with significant market power: methodological aspects and coordination with competition authorities

Mr Oscar Cabello, ITU expert, Chile, explained what was meant by "relevant market" and "operators with significant market power". He started by briefly reviewing the origins of competition in the telecommunication industry, technological convergence and net neutrality, shifting the focus to the new stage in the debate on "free Internet access services". He then analysed the concepts of operators with significant market power (SMP) and relevant markets. On the basis of those concepts, he discussed what should be regulated and how, with a view to

answering the question: should the regulator also be a competition authority? The presentation concluded with a warning about future regulatory risks, such as too much information and excessive formalism in Latin American legislation. Indeed, it had been observed in the previous ten years that traditional telecommunication regulations generally speaking did not help solve the challenges of technological convergence. Many countries were trying to apply traditional fixed telephony regulations to VoIP, but that was an inadequate approach that limited the development of both coverage and market competition.

Statements by the panellists

Mr Franklin Brown, URCA, Bahamas, presented the situation of SMP operators in the Bahamas. URCA was the converged national regulator and competition authority for the electronic communication sector in the Bahamas. It regulated all forms of electronic communication, including pay TV (cable TV) and broadcasting services (radio and free-to-air television). The SMP requirements set out in the Communications Act were supplemented by the SMP Guidelines issued by URCA, which established the approach to market reviews (see ECS 20/2011, *Methodology for Assessment of Significant Market Power*, at www.urcabahamas.bs/download/059384700.pdf). URCA's approach was consistent with the European Commission's recommendations as applied by national regulatory authorities across Europe. As such, when it conducted market reviews, URCA could be guided by European Union and other precedents. In conclusion, he recommended that regulators should establish market review guidelines, thereby allowing for a structured, timely and efficient review process.

Mr Fábio Casotti, ANATEL (National Telecommunication Agency), Brazil, presented an analysis of the ITU ICTEye database global SMP results, which pointed specifically to increased uptake of the concept of dominance or SMP. The main criteria used to define SMP globally were market share in terms of number of subscribers, followed by control of essential facilities and barriers to entry. The *ex ante* obligations imposed most frequently worldwide were interconnection and access obligations, transparency and non-discrimination. He suggested that regulators should consider the following questions when defining SMP: What kinds of incentive were there for anti-competitive behaviour (vertical leverage, discrimination, etc.)? What markets (or relationships) were candidates for *ex ante* regulation? How were traditional regulatory asymmetries to be applied?

Mr Denis Villalobos, ICE (Costa Rican Institute of Electricity), Costa Rica, presented the methodological elements that regulatory principles had to encompass when defining the market and identifying SMP operators. That was the starting point for a discussion of the need for national regulatory authorities to have methodological reference tools providing general and impartial guidelines that the regulatory authorities could apply irrespective of each country's market structure, specific normative frameworks and social and economic conditions. Specific regulations defining the criteria to be applied should, as a minimum, consider the following criteria specifically:

- market share
- control of essential installations
- entry barriers
- economies of scale and scope
- definition and assessment of the influence of a multicountry, regional or global presence

- potential degree of competition
- ease of access to financial resources.

Ms Trevonne Clarke-Ferguson, TATT, Trinidad and Tobago, said that the TATT had decided to conduct a pilot study from June to August 2014 using the hypothetical monopoly, small but significant and non-transitory increase in price test on the domestic fixed voice market. The main objective was to discern whether the existing market for fixed voice suppliers in Trinidad and Tobago still constituted a relevant market, or whether mobile voice services should be considered to reside in the same market as traditional fixed voice services, and/or whether OTT VoIP services could also be considered to reside in the same market. The study also sought to assess whether individual fixed voice service providers could be considered to hold significant market power and thereby to constitute a market on their own. Ms Clarke-Ferguson presented the two methodologies used and the regression results before concluding that, given the limitations of the pilot study and its importance for effective market regulation, the TATT was considering undertaking an expanded survey and a robust econometric study to formally determine the market boundary of the domestic fixed voice market.

Session 5: Regulatory accounting, costing methodologies and tariff regulation for broadband services – best practices in the region

Mr Oscar Cabello, ITU expert, Chile, presented the cost methodologies for next generation networks and accesses, explaining the purpose of price regulation and briefly reviewing the main methods used to set prices (long-run incremental costs, benchmarking, fully distributed costs and the “retail minus” criterion), to some extent emphasizing long-run incremental costs. He then explained why costs were estimated but prices set (by a market, an SMP operator or a regulator). He also briefly explained the concepts of technological convergence, next generation networks and next generation accesses. On that basis, he explained how next generation network costs were estimated, stressing that the main problem was that most of the costs were shared. He ended with a brief description of regulatory accounting and a review of best practices in the Caribbean and Latin America when it came to long-term incremental costs and regulatory accounting.

Statements by the panellists

Mr Tito López, CONATEL (National Communications Commission), Paraguay, described how regulatory accounting was implemented, broadband prices regulated and cost methodologies applied in Paraguay. In 2013, Paraguayan regulator CONATEL had hired external consulting services to draw up a technical handbook and legal regulatory accounting principles within the framework of the CONATEL-UNDP-ITU contract. As a result of that project, CONATEL now had draft regulatory accounting and draft market regulations, an ABC cost model and matrix for estimating the cost of services, and an accounting plan and forms for presenting the data to the regulator. The process was currently in a period of public consultation, to give industry the possibility to participate. Approval and implementation of regulatory accounting required a regulatory framework providing adequate market definitions. Regulatory accounting could have broad and effective results but depended greatly on the ability and capacity of national regulatory authorities to implement and administer it.

Mr Fábio Casotti, ANATEL, Brazil, presented an update on Brazil's competitive landscape, describing the Brazilian National Wholesale Trading System (SNOA) and other remedies. The SNOA had been presented the previous year at the [ITU-D Regional Economic and Financial Forum of Telecommunications/ICTs for Latin America and the Caribbean](#), held in Costa Rica. He briefly described the Brazilian telecommunication market and framework for competition in terms of relevant markets and SMP operators. A total of 230 telecommunication firms had been accredited to trade in the SNOA to date, and the system had received over 34,000 requests since September 2013. Most of the requests related to mobile interconnection, tower sharing and leased lines. In addition, under the SNOA regulators benefited from a better vision of the wholesale market, reduced information asymmetry, greater transparency and fewer disputes. For operators, the SNOA was a one-stop shop for wholesale assets, leading to lower transaction costs and standard requests and procedures. It also guaranteed non-discrimination. In the short term, ANATEL planned to: (a) hold a public consultation on net neutrality; (b) regulate the replicability test for wholesale offers; (c) reform interconnection regulations; and (d) conduct a review of relevant markets and SMP operators.

Session 6: Network neutrality: best practices and challenges for regulation

Mr Germán Pérez Benítez, ITU expert, Peru, provided a brief overview of the meaning of net neutrality and quality of service, explaining that Internet access was the foundation stone and building block for a series of applications, services and contents. Without exaggerating the normative acceptance of the word, the Internet could be considered a “bearer” of third services. It was one of the causes of convergence (of services, networks, trade, businesses, technology, regulations, etc.) and the degree of user satisfaction (perceived quality of service) depended on its use of and relationship with variations in access attribute values (e.g. speed, constant availability), which in turn depended on the type of application. In a converging telecommunication network, traffic management measures could be considered to be purely and simply “non-neutral”, since the different types of traffic carried over the network were handled differently. Some of those measures were broadly accepted, while others had been criticized or directly penalized. The countries that had looked into the matter of net neutrality had adopted one of three normative positions:

- 1) Cautious observers: they were alert to questions pertaining to net neutrality but had decided to take no specific concrete action.
- 2) Tentative refiners: they had tweaked their regulations without prohibiting certain types of behaviour.
- 3) Active reformers: they had prohibited some ISP behaviour (even of a kind that in other places would be considered “reasonable” for adequate network management).

Statements by the panellists

Ms Annie Baldeo, TATT, Trinidad and Tobago, presented the position of various international bodies on net neutrality and the situation in Trinidad and Tobago, which had not yet published an official position on net neutrality. However, during the NETmundial meeting, the government had directed that, “An internal policy model and external relations addressing the public policy aspects of the Internet should be formalized.” In an effort to obtain the public's views on net neutrality, the following statement had been added to the TATT's OTT Consultation Paper: “The concept of a

‘free and open’ Internet should be applied in the treatment of OTT services, therefore there should be no blocking of lawful content.” The consultation remained open in Trinidad and Tobago.

Mr Pablo Bello, Secretary General, Hispano-American Association of Telecommunications Research Centers and Enterprises (AHCET), presented best practices and challenges for net neutrality regulation. Network management was crucial in order to deal with the congestion caused by growing network data flows and the distinct nature of data packets (e.g. services such as video or voice streaming required better quality). Network management was also important as a means of protecting users (e.g. fighting spam and viruses, protecting privacy, enabling parental control) and made it possible to enforce national legislation on unlawful content. Traffic management therefore also helped maximize the level of quality of service and protection offered to users, and should at all times be transparent and non-discriminatory and avoid generating anti-competitive effects.

Session 7: Mobile money service oversight by telecommunication regulators

Ms Lara Srivastava, ITU/TSB, presented the global situation with regard to mobile money and the work being done by ITU in coordination with the Bill and Melinda Gates Foundation within the ITU Focus Group on Digital Financial Services. The Focus Group’s main objective was to increase people’s ability to visualize and realize opportunities to generate income using mobile money tools and to reduce the time and money needed for financial transactions in developing countries. The main barriers to that service were currently the lack of global ICT standards in that field, lack of interoperability, and the non-uniform regulatory framework across countries. What was needed, therefore, was a global platform for dialogue between regulators and operators from the ICT and financial service industries.

Statements by the panellists

Mr Joel Escoto, CONATEL (National Telecommunications Commission), Honduras, discussed competition and the economic aspects of mobile money. The mobile money service consisted in making payments and other financial transactions using an electronic wallet. The service constituted added value for mobile telephony, as it used non-banking distribution channels (agents) and the mobile phone network. It promoted financial inclusiveness, especially in rural areas, and was thus a spur for development and economic growth, enabling secure payments between companies, people and the government, facilitating access and reducing the participants’ costs. In Honduras, which had a population of 8.5 million and where mobile penetration stood at 89 per cent but only 21 per cent of inhabitants had a bank account, the number of mobile money service users had exceeded one million in the first months of 2015. Regulations had been drafted that were intended to serve and protect users, specifically: to establish due policies and procedures in order to ensure reliable service provision; to communicate sufficient information clearly, in timely fashion and in a way that allowed users to understand and take informed decisions; to establish mechanisms for ensuring that complaints were efficiently handled and problems rapidly solved; and to process and/or transmit personal data properly and securely. Operators also had to meet the security requirements indicated in ITU Recommendations.

Mr José Lapadula, Tigo Money, talked about mobile financial services in Latin America and the business strategy of Tigo Money, which was currently operating in six countries in Africa and seven in Latin America. Responsibility for regulating such services usually fell to the national financial system regulator. In Latin America, regulation of mobile financial services, to the extent that it

existed, was used to limit access to non-banks to perform financial activities (payments, savings, remittances, microloans). Most countries were considering opening that space to non-banks, given the slow progress being made towards financial inclusion under the banking model and the ubiquity of mobile phones. Educating regulators and the population at large about the features and benefits of mobile financial services was paramount for further progress. Like the other panellists, he stressed that the regulatory framework adopted could benefit from regional standardization (nature of activity, transactional limits, the know-your-customer requirement, use of agents, etc.).

Mr José Sanin, GSMA (Groupe Speciale Mobile Association), presented the ecosystem of financial transactions worldwide, focusing on Latin America and on the system's regulations, as mobile money could generate considerable revenues for mobile operators. The mobile money business involved operating expenditure (OPEX) as opposed to capital expenditure (CAPEX), and the commissions charged by the network of agents making the transactions ate up 40 to 80 per cent of mobile money revenues. Mobile money had a negative impact on the earnings before interest, taxes, depreciation and amortization of mobile operators, at least in the short term. The role of telecommunication regulation and policy was to help build a broader ecosystem that leveraged mobile money to offer socio-economic benefits to the population, to support the harmonization of know-your-customer processes for mobile money and SIM (Subscriber Identity Module) registration, to contribute to the development of technology and security standards, and to support a competitive mobile money market.

Session 8: International mobile roaming: The ITU cost analysis tool

Mr Simon Forge, SCF Associates, United Kingdom, reviewed the subject of roaming to the present day, noting that international mobile roaming incurred additional charges that were too often not cost-based but instead random and arbitrary levels of retail tariffs. It was important for regulators, in order to counter overcharging for international mobile roaming, to understand the real mobile network operator cost-basis for roaming, both wholesale and retail. To understand both the national operator's costs and those within the international wholesale interoperator tariffs required international cooperation, probably among a group of national regulators within a region and then further. It also required the development of wholesale and retail cost models that could be applied to the various cases of roaming and ultimately the collation of information for the cost model's application. In that respect, he provided information on the technical study of the methodology used to calculate international mobile roaming prices and the online implement being developed by ITU to calculate wholesale and retail prices and how it functioned. That implement would be of great use to national regulatory authorities and operators wishing to learn more about roaming costs. He also provided information on the procedures used for a data-collection questionnaire. All the relevant information would shortly be available on the ITU website.

IV Conclusions and closing of the Forum

The Chairman thanked the BDT for having organized the Forum, which had provided the participants with a good opportunity to hear excellent presentations and explanations by international experts and to share the experiences and knowledge of various countries. Such events were needed to update knowledge, as the sector was a very dynamic one and national

regulatory authorities had to be abreast of developments. The participation of operators and regional associations had boosted understanding of how the sector worked and was changing.

The participants thanked URCA for having hosted the Forum and for the welcome they had received. They congratulated the BDT on the Forum's interesting content.

During the Meeting of SG3RG-LAC, the BDT was asked to continue organizing the Forum each year, as it dealt with current topics of great use to the region and the Group's deliberations and was therefore of great interest to the participants, and to continue cooperating in the Group's work. The representative of ANATEL, Brazil, invited all the participants to the next ITU Regional Economic and Financial Forum of Telecommunications/ICTs for Latin America and the Caribbean, which would be held in conjunction with the Meeting of SG3RG-LAC in June 2016 in Brasilia.

Carmen Prado-Wagner
Regulatory and Market Environment Division (RME)
ITU Telecommunication Development Bureau (BDT)