



ITU/BDT Regional Economic and Financial Forum of Telecommunications/ICTs for Africa

Victoria Fall, Zimbabwe, 30-31 January 2017



Final Report of the Forum

The International Telecommunication Union (ITU) Regional Economic and Financial Forum of Telecommunication/ICT for Africa, organized by the **Director of the Telecommunication Development Bureau (BDT), Mr Brahim Sanou**, in collaboration with the Postal and Telecommunication Regulatory Authority of Zimbabwe (POTRAZ), was held in Victoria Fall, Zimbabwe, from 30 to 31 January 2017.

This Forum is a discussion platform for Member States and Sector Members in the African region, and brings new and topical regulatory and economic issues, ideas and innovative solutions, to the front, responding to the Dubai Action Plan (DuAP) mandate. 91 delegates from 25 countries as well as the African Telecommunications Union (ATU), South African Development Community (SADC), Ecole supérieure multinationale des télécommunications (ESMT), HAYO, Senegal, and the Universal Postal Union (UPU) participated in the Forum. The complete list of participants as well as all presentations and material is available at the Forum Website: www.itu.int/en/ITU-D/Regulatory-Market/Pages/Events2017/Zimbabwe/home.aspx.

A meeting of the ITU-T Study Group 3 Regional Group for Africa (SG3RG-AFR) followed the Forum from 31 January (afternoon) to 3 February 2017.

Opening session:

The Forum commenced with remarks of **Mrs Hilda Mutseyekwa, Director, Economics, Tariffs and Competition, POTRAZ and Acting Chair SG3RG-AFR**. She introduced the main activities of the ITU-T Study Group 3 focusing on the work done by the Regional Group. **Ms Carmen Prado-Wagner; Representative of the International**



Telecommunication Union, presented her remarks on behalf of the Telecommunication Development Bureau. She noted the profound gratitude of ITU to the Government of Zimbabwe for hosting this important Forum, the only platform dedicated to the discussion of Regulatory, Economic and Financial issues of telecommunication/ICTs, as well as for hosting the ITU Regional Office for Southern Africa. **Mr Franklin Zingani, Deputy Director Legal, Ministry of ICT, Post and Courier Services** welcomed all participants in the beautiful city of Victoria Falls. The official Opening ceremony held on 31st January, 2017 was officiated by **Dr. Engineer Samuel Kundishora, Permanent Secretary, Ministry of ICT, Postal & Courier Services** in the presence of the Principal Director, Ministry of ICT, Post and

Courier Services; **Mr. Cosmas Chigwambwa** and the **Dr. G. K Machengete**, Director General of POTRAZ. He welcomed all participants and highlighted the importance of the Forum as the only platform to discuss regulatory, economic and financial issues. The Economic and Financial Forum is an excellent opportunity to present solutions and challenges for countries, he said. He encouraged all countries to push forward in the digital economy and called for enhanced partnerships and collaboration among Member States in the Africa Region.

Mr Nicholas Muzhuzha, Manager Telecommunication Networks, POTRAZ, chaired the Regional Economic and Financial Forum.

Session 1: Developments and regulatory approaches in a digital converged world

Ms Anne-Rita Ssemboga, ITU/BDT presented on ICTs Digital Trends in the African Region. She reviewed the ICT global trends over the past 10 years, the performance of Africa in comparison with the rest of the regions and



noted some of the key policy and regulatory decisions that have affected the growth of the ICT sector in Africa, such as increased competition in the domestic market, investment in the International Internet cables on the East and West coast of Africa. She concluded by highlighting the need for increased investment in national broadband connectivity and last mile access and for the region to continue adopting policies that address affordability.

Mr Simon Molloy, ITU Expert provided a macro analysis of the impact of OTT-Digital services on the global economy with case studies for Ghana and South-Africa. He highlighted the economic disruption caused by App economy; Africa's readiness for the App economy, opportunities and challenges therein. He concluded by calling for policy that encourages:

- the formation of App start-ups that target at both global markets and addressing niche markets in Africa;
- the uptake of cost-effective entry-level smartphones and other mobile smart devices;
- the rollout of high-speed mobile broadband networks throughout the region including high capacity fibre backhaul and backbone;
- to encourage the development of app economy skills throughout national education systems including coding, business, marketing and entrepreneurship.

Finally he encouraged to increase collaborative regulation between the different national regulatory agencies and the industries affected by app-based.

Ms Carmen Prado-Wagner, ITU/BDT presented on Collaborative Regulation in the App Economy. In today's converged digital environment, where ICTs and digital technologies are known as the foundation for economic and social development and the growth of smart connected societies, it is recognized that we need ecosystems that include ICT operators and service providers, but also various stakeholders from other sectors, such as, health, education, financial services, agriculture, as partners to connect the world and create value for individuals, businesses and communities. To analysis this evolution, BDT is working on the ICT Regulatory Outlook 2017 which is an analysis on the Generations of regulation, based on research, and data from the ITU Regulatory Survey and the ICT Regulatory Tracker. She concluded by highlighting that a key element to ensure successful collaborative regulation is the clear definition of the role and mandate of each institution. This avoids duplication, legal uncertainty, disputes and unclear decision-making.

Panel Discussion on Country Experiences

The second part of this session addressed a panel discussion which included the following panelists: **Mr Alain Sawadogo**, from Ecole superieur multi-nationale de télécommunications (ESMT), **Ms Pauline Tsafak**, Directrice de la



réglementation des Postes, des Télécoms et TICs, Cameroun, and Ms Rumbidzai Panavanhu, POTRAZ, Zimbabwe. The moderator of this panel, **Mr Alain Sawadogo**, presented on advent of OTT in the Sub-Saharan African countries; a direct result of increased penetration of smartphones and development of mobile broadband. OTT are now prevalent and albeit the benefits to consumer. He highlighted that OTTs are affecting operator's topline and government tax revenue.

The Panelists from Cameroon, Zimbabwe and Senegal shared their country experiences from a policy and regulatory perspective and provided proposals on what should be done at regional and international to address the OTT challenges. In their conclusion, the panelists agreed on:

- The importance of adopting regulatory frameworks that are forward-looking, robust, encourage OTTs in the region with an emphasis on ensuring the confidentiality and protection of personal data of the users, consumer rights and that OTT providers contribute fairly to domestic and related taxes.
- The need to integrate for OTTs providers to invest in broadband infrastructure required for guaranteeing the quality of service for OTTs and to contribute to universal access in the region.
- The need to create an enable environment of fair and sustainable competition that promotes the best interests of consumers and promotes economic growth
- Encourage innovation and promote the development of local OTT services and applications, and
- Adopt coordinated regional policy and regulatory frameworks for OTT and to engage with OTT providers as a regional block

Session 2: Economic and financial issues in a converged broadband environment

Mr David Rogerson, ITU Expert (UK), presented on Costing methodologies and tariff policies – including costing and pricing of international Internet Connectivity (IIC). He reviewed the costing methodologies and tariff policies for the digital economy and pricing of IIC noting the need to shift from the traditional cost models to



accommodate the digital economy built upon ubiquitous IP (internet protocol) networks. IP in networks in general exhibit a flatter cost structure, with more fixed costs, more shared costs and higher levels of spare capacity. In the digital economy multiple services, each with its own profile in terms of network usage and price elasticity of demand, will share a common network platform. Furthermore, services will tend to be provided to end users in bundles often on the basis of a fixed monthly

tariff. Cost-based pricing will need to ensure that total revenues cover total costs and give a reasonable return on capital, but there will generally be no need to set individual service prices on the basis of a computed cost per MB. To do so, it would undermine the benefits of convergence and restrict the development of new applications and services. There remains a place for regulatory cost models in the digital economy, but rather than being used to determine prices directly, cost models will increasingly be used ex-post to resolve disputes and rule on accusations of anti-competitive behaviour, for example within in price imputation and margin squeeze tests.

Mr Lanciné Fofana, ARTCI, Côte d'Ivoire, presented on the experience of International Internet Connectivity (IIC) in Côte d'Ivoire. He introduced the ICT ecosystem in the country focusing on Internet services and the strategy for the development of Broadband which is based on three main fundamentals: the development of infrastructure focusing on last mile, the reduction of tariffs and access, use and development of content.

To achieve this strategy the government is working on the selection of a new cable operator by a bidding process, with the objective to increase market competition in the IIC market to obtain reduction of wholesale prices. In this sense Mr Fofana concluded by informing that the ARTCI is working in a series of actions including the development of cost models to evaluate the IIC capacity at national and international level, as well as the management of the exceed capacity.

Mr Simon Molloy, ITU Expert, presented on the implications of the advances in VoLTE (Voice over Long-Term Evolution) to the pricing and costing of interconnection approaches. He noted that moving to VoLTE will have a number of implications for access regulation and pricing. Regulators and operators need to undertake extensive review of technical, financial and regulatory aspects, including roaming, to explore implications, specifically; the need to adapt rules and pricing models for an IP interconnection model. For instance, Interconnect capacity (and any associated rules) between networks need to change to move away from E1s with multiple network points of connection (POI) to a small number of IP connection points. VoLTE interconnection if set by a costing study will likely led to a 30 percent or lower of the current mobile termination rates. If such terminating rates are going to be significantly reduced then there may be a need to move into IP peering arrangements after all voice, as a percentage of total network traffic, is falling substantially.

Panel Discussion

The second part of this session addressed a Panel Discussion on Consumer Protection: costing and pricing of Bundled services moderated by **Mr Lwando Bbuku, ZICTA, Zambia**. Panellists in this session included: **Mr Matarr**



Touray, PURA, Gambia, Mr Steven Noamesi Kofi Zikpi, ART&P, Togo, Mr Talent Munyaradzi, POTRAZ, Zimbabwe and Ms Liza Roussot, TELKOM SA, South Africa. The discussion focused on the regulatory approaches applied by countries in respect to costing and pricing of telecom services focusing on bundled services, and how these approaches are being transformed in light of the changing business models and emergency of OTT services. It was concluded that:

- Bundled services are positive if operators respect market competition and avoid anti-competitive behaviour and cross-subsidisation.
- Operators should be encouraged to apply cost based pricing and apply analytical accounting.
- Competition is the best way to regulate the market but

regulation should continue to be applied to guarantee the good evolution of the market and maintain a level playing field.

- Adoption, as far as possible, of cost models that cater for quad-play / bundled services and integrate IP.

Session 3: Challenges and opportunities in the Digital Ecosystem

Mr Mbagu Tuzinde, Uganda Communications Commission (UCC) presented on Infrastructure Regulation and sharing for TowerCo and FibreCo, noting that the regulatory and policy aspects for Network infrastructure sharing



shifts over the past 5 years following a strategic shift from vertically integrated incumbents, holding upstream infrastructure, to niche actors specializing in different levels of the telco value chain such as the passive infrastructure market. A number of regulatory questions have emerged and need to be addressed. For instance; should tower providers be licensed and subject to regulations, do regulators have the mandate, if price regulation is required, what costing approaches should be applied, how about vertical foreclosure abuses? He

concluded by noting that more dialogue at national and regional level is required for a coordinated policy and regulatory environment that promotes both the efficient use and investment in infrastructure.

Mr David Rogerson, ITU Expert presented on the economic and policy aspects of big data and digital identity in telecommunication services and networks. Big data is the ability to capture, aggregate, and process an ever-greater volume, velocity, and variety of data, to ensure ongoing public trust and confidence in the Big Data revolution. Most definitions reflect the growing technological data¹. Another way of looking at this is the characterization of Big Data in three words: more, messy and correlations. It's not just the amount of data that signifies the challenge, it is the fact that so many data points are gathered from so many sources thus creating a confused picture; and the natural tendency to find links between the data can, unless a lot of care is taken in the analysis, lead to erroneous conclusions. He concluded highlighting that policy and regulatory authorities have a very important role to play in ensuring the trust of citizens and consumers in Big Data, so as to achieve its potential and avert its threat by:

- Ensuring data protection and privacy for consumers;
- Informing consumers and giving them control - anonymization in data analytics;

¹ White House, 2014, p2

- Limiting the use of probabilistic predictions - secondary use of data for trend analysis should be functionally separated from any application of the data concerning the individual;
- Keeping data markets fluid - given the ability to consumers to modify, delete or transfer their own data.

Collaborative methods of regulating big data are becoming a real need to maximize national economic welfare, as many groups are concerned, including private sector, governments, national security, ICT and competition authorities, consumer associations, etc.

Mr Simon Molloy, ITU Expert presented on eSIMs – Regulatory Implication on competition, ICT measurement and SIM registration. Since its deployment in the early 1990s, the SIM card has provided secure, identifiable and authenticated access to mobile networks. However, the traditional form of a physical, removable SIM card has become dated as technology advances – with a range of manufacturers including Apple, Samsung and others developing a range of products which move to eSIMs (particularly wearable devices). In this sense, three types of ‘new generation SIMs’ have emerged in this process, namely:

- Embedded SIM or eSIMs: a physical SIM that is permanently embedded in the device;
- Remote Provisioning ‘reprogrammable’ SIMs: SIM that can be removed from the device (e.g. Apple SIM);
- Soft SIMs: collection of software applications and data that resides in the memory and processor of the device.

A critical feature of all these new generation SIMs is remote provisioning technology, this will be a disruptive Business Models enabled by the new generation SIM Evolution. In addition, this will give the consumer and/or supplier the ability to remotely change the SIM profile without having to physically change the SIM. SIM card registration is the process of recording and verifying mobile phone number(s) and personal information of a subscriber by a communications service provider. In terms of regulation, eSIMs pose a potential problem for identification purposes as it removes an avenue for identification by eliminating the need for a consumer to buy their SIM card in person. A regulatory regime should provide a transition scheme for an environment of users with physical and eSIMs including registration of physical SIM that permits eSIM registration.

ROUND TABLE – Challenges and opportunities in the Digital Ecosystem - recommendations and way forward

This round table was moderated by **Mr Nicholas Muzhuzha, Manager Telecommunication Networks, POTRAZ**, and included the following panellists: **Mr Djibrilla Ballo, Representative, African Telecommunications Union (ATU)**, **Mr Frank Andrew Manja, Commissioner and Sub-Committee Chairman Finance, National Telecommunications Commission (NATCOM), Sierra Leone**, **Ms Fatima Ba, ESMT, Senegal**, **Mr Diouf Samba, Legal Adviser, HAYO, Senegal**,



Ms Rosinah Hove, Head of Finance, Liquid Telecom, Zimbabwe, **Ms Nancy Murove, NetOne, Zimbabwe**. **Mr Douglas Muranda, from the Reserve Bank of Zimbabwe** also participated in this panel. The discussions focused on what are the main challenges that all stakeholders have to

face in the digital economy, and the main opportunities and recommendations to go forward in the digital ecosystem.

Noting that the challenges in the present digital ecosystem are not technological but a shift in business models; the forum called for:

- **Education-** encourage and create platforms to promote the development of APPS in Africa such as innovations hubs and incubators and facilitate App developers, including women to publish and market their Applications.

- **Regional Coordination and Partnerships-** Involving all stakeholders, develop harmonized policy and regulatory framework for digital/OTT services in Africa and adopt a coordinated regional approach to engage with global OTT providers to explore opportunities, to invest in infrastructure required, to guarantee the desired quality of services for OTT services, to contribute to universal service; in recognition of the declining revenue of telecommunication carriers in Africa
- **Consumer trust, education and protection** –consumer trust and awareness is the foundation for the uptake and adoption of digital services. Policy makers and regulators should put consumers at the center of discussions for socio economic development and adopt regulatory measures to, among others: protect consumers, ensure data confidentiality, prevent crime and fraud over Internet.
- **Collaborative regulation-** The Digital economy affects all facets of society, from banks, health, education, utilities, among others. The increasing number of actors in the digital economy calls for collaborative approaches and Public-private partnerships in order to build synergies, foster collaboration, extend reach and enhance competition. Regulating big data, digital financial services, cyber security, etc. all call for collaborative approaches.
- **Robust Economic regulatory regime-** recognizing that countries may be at different levels of maturity, there is a need to gravitate towards light handed, forward looking economic regulatory regimes. Cost models will increasingly be used ex-post to resolve disputes and rule on accusations of anti-competitive behaviour, for example within in price imputation and margin squeeze tests. Innovative pricing approaches such as bundling of services should not be discouraged if deemed uncompetitive.

Concluding Remarks and Closing

During the closing, the Chair of the Forum, **Mr Nicholas Muzhuzha** from POTRAZ, presented a summary of the discussions. He expressed his gratitude to the **BDT Director, Mr Brahim Sanou**, and his staff for organizing a very informative and successful Forum and for allowing the honor to organize this Event in Victoria Falls. He



congratulated the Delegates for their active participation, and for the interesting discussions on the most current and topical issues for the African region He added that the exchange of views and experiences was very interesting and fruitful for all participants as well as to the works of the ITU-T Study Group 3 meeting. He finalized by congratulating the POTRAZ organization team for the excellent organization of this event

It was informed by the Representative of ITU that this Forum will continue to be organized in the future in a more interactive manner involving all stakeholders, back to back with other events that could be of interest for the region.