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Chairman's Report of the 17th Global Symposium for Regulators

12-14 July 2017
Nassau, Bahamas

*Living in a World of
Digital Opportunities*



Executive summary



The 17th edition of the Global Symposium for Regulators (GSR-17), held in Nassau, Bahamas, from 11 to 14 July attracted close to 400 participants including government ministers, heads of regulatory agencies and C-level industry executives from more than 60 countries. GSR-17 was organized by the International Telecommunication Union (ITU) in collaboration with the Government of The Commonwealth of The Bahamas. Chaired by Mr Stephen Bereaux, Chief Executive Officer, Utilities Regulation and Competition Authority (URCA), Bahamas, the theme of GSR-17 was: “Living in a World of Digital Opportunities”.

Throughout the four-day overall GSR programme, participants acknowledged the importance of collaboration in an environment where digital transformation is sweeping across sectors and fifth

generation of ICT regulation is coming of age. Unleashing the potential of collaboration among stakeholders to create an enabling environment for innovation, investment and opportunities for all is essential in an increasingly complex and dynamic ICT ecosystem. The event culminated with the adoption by ICT regulators of a set of best practice guidelines on affordable access to digital services.

A series of pre-events took place on 11 July 2017 and the morning of 12 July 2017 including the second edition of the GSR thematic pre-conference, the Global Dialogue on Digital Financial Inclusion, which focused on the security aspects of digital financial services. The pre-event day also included the Regional Regulatory Associations Meeting (RA) and the 8th Private Sector Chief Regulatory Officers Meeting (CRO).



Tuesday

11 July 2017

GSR-17 Pre-Event - Global Dialogue on Digital Financial Inclusion:
The Security of Digital Financial Services



Opening Remarks

The Global Dialogue on Digital Financial Inclusion (GDDFI) was opened by the Deputy Prime Minister and Minister of Finance of The Bahamas, The Honorable Mr. Kevin Peter Turnquest, and Mr. Brahima Sanou, BDT Director, ITU. The pre-event focused on cybersecurity and consisted of two panels and a high-level simulation.

In his opening speech, Mr. Brahima Sanou highlighted that security is key in building confidence in the use of ICTs and continues to be a big challenge that requires a global and coordinated solution. He stressed that the GDDFI, initiated during the GSR last year, is intended to discuss ways to help the more than 2 billion people who are not included in the formal financial system.

While officially opening the GDDFI, The Honorable Mr. Kevin Peter Turnquest highlighted the benefits of modern digital financial services and how they are transforming everyday life in The Bahamas. Recognizing that while new advances in technology can provide tremendous opportunities for growth and development, The Honorable Mr. Turnquest also stressed that awareness of potential threats is key. In his view, there are opportunities for innovation as much as opportunities for mischief and threats, and as regulators, there are opportunities for building and ensuring trust in a system through prudent regulation.



GDDFI Session 1 Technologies that Protect e-transactions

The first panel of the GDDFI was moderated by Dr. Ram Sewak Sharma, Chairman, TRAI, India. Panellists included: Mr. Oliver Gale, President and Co-Founder of Bitt Inc., Mr. Giovanni King, Chief Operating Officer, Directorate General for Energy, Telecommunications and Competition, Curacao, the Netherlands, Mr. John Rolle, Governor of the Central Bank of The Bahamas, Dr. Mark Jamison, Research & Education Director, Warrington College of Business, University of Florida, Ms. Sue Kelsey, Senior Vice President & Group Head, Global Product Management, MasterCard.

The panel explored new financial technologies such as digital currencies and wallets, distributed ledger technologies and blockchain, as well as the role of regulations in this dynamic environment. Panellists explained how digital financial services have evolved in the Caribbean. Others stressed the need to ensure that the

required infrastructures are in place, citing the need for computer incident response teams in particular.

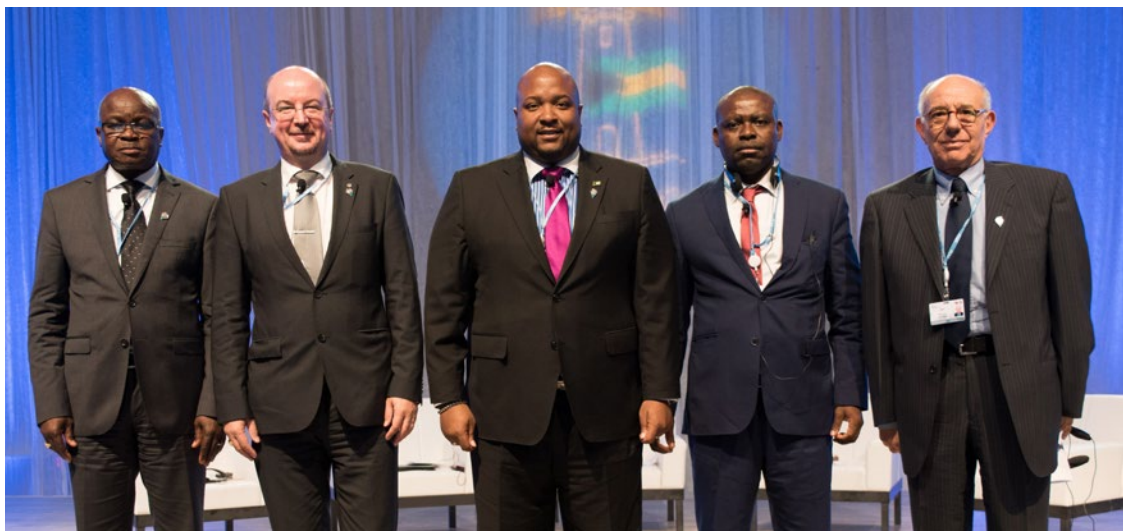
From the Central Bank point of view, the need for balancing privacy requirements against those of money-laundering and terrorist financing investigations was highlighted, while others highlighted a similarity between successfully handling physical and cyber disasters, namely preparedness and the role of human relationships.

From the private sector, it was suggested the challenge of bringing about behavior change from cash transactions to digital financial systems was described, particularly if new systems are complex and the population isn't accustomed to ICTs.

Information Session by ITU-R and ITU-T on 5G roadmap: challenges and opportunities ahead

Moderated by Mr Mario Maniewicz, Deputy Director, ITU Radiocommunication Bureau, the information session started with opening remarks from Mr. Brahima Sanou, ITU BDT Director, followed by a presentation from Mr. Martin Adolph, Advisor, ITU-T Study Group 12: Performance, QoS and QoE ITU Telecommunication Standardization Bureau. A panel discussion saw Dr. Shiv Bakhshi, Vice-President, Industry Relations, Ericsson; Ms. Donna

Bethea-Murphy, Senior Vice President of Global Regulatory, Inmarsat; Ms. Veena Rawat, Senior Spectrum Advisor, GSMA; and Mr. Christopher Woolford, Director of International Spectrum Policy, OFCOM, United Kingdom share their views on how 5th generation of mobile technology – "5G" –will enable a seamlessly connected society in the 2020 timeframe and beyond (ITU standards IMT2020).



GDDFI Session 2 - Ensuring Reliability, Security and Trust in DFS: A Collective Responsibility?

The second panel of the GDDFI was moderated by Mr. Randol Dorsett, Chairman, Utilities Regulation and Competition Authority (URCA). Panellists included: Mr. Dražen Lučić, President of the Council- HAKOM, Croatia and Member of the National Council of Cybersecurity of Croatia, Mr. Diéméléou Amon Gabriel Bile, Director General of ATCI, Côte d'Ivoire, Mr. Tontama Charles Millogo, President of ARCEP, Burkina Faso, and Mr Mahmoud Elgowini, Board Member of NTRA Egypt.

The moderator kicked off discussions by highlighting how unbanked individuals are increasingly gaining access to Financial Services through digital channels. Banks, microfinance institutions, mobile operators, and third party providers, he said, are leveraging mobile phones, point of sale devices, along with networks of small scale agents, to offer basic Financial Services

at greater convenience, scale, and lower cost than traditional banking. Financial Regulators around the world have realized the tremendous role digital financial solutions can play for financial inclusion, and seek to unlock this potential by creating enabling environments for Digital Financial Services. However, he also highlighted that there are an emerging new set of institutions such as agent network managers, payment aggregators and others who are helping build out a more far reaching and efficient digital finance ecosystem. This creates a new ecosystem where there is a collective responsibility to ensure reliability, security and trust in digital financial services. While developing enabling environments, regulators across both sectors face key policy and regulatory questions, such as how to balance openness and innovation with sufficient certainty about the soundness of the regulatory framework.



Professor Marco Gercke setting the scene on cyber-simulation of a cyber-attack.

Panellists stressed that trust is a fundamental aspects of digital financial services, and highlighted the need for collaboration between the telecommunications and financial sector regulators. Panellists also stressed the benefit of exchanging best practices in order to tackle the issue of security and of trust. Some highlighted the behavior change in countries when transitioning from cash to digital payments for various services and the role of regulators in providing an environment that supports innovation while providing customer protection.

To conclude the GDDFI, Professor Marco Gercke of the Cybercrime Research Institute, Germany, delivered a high-level simulation of a cyber-attack against a bank. The simulation involved the audience in the decision-making process through voting devices which allowed the participants to express their collective views on how to handle the cyber-attacks.



Wednesday

12 July 2017

GSR-17 Pre-Events

Regulatory Associations (RA) Meeting

The RA meeting was led by Mr. Ansord Hewitt, Organization of Utilities Regulation (OOCUR) Chair and Director General of the Office of Utilities Regulation (OUR), Jamaica, in the presence of Mr. Brahima Sanou, BDT Director, ITU, and Mr. Bruno Ramos, Head of the ITU Regional Offices for the Americas. More than 60 participants from 12 Associations attended (ARCTEL, AREGNET, ARTAC, ATU, CTO, CTU, EACO, EMERG, FRATEL, OOCUR, REGULATEL, SATRC).

Mr. Sanou, recognized the importance of regulatory associations, particularly as we stand at the beginning of a collaborative connected digital environment. As we enter a new era and face new frontiers, the role of RAs has become more and more challenging, but also offers more opportunities. RAs, he said, have a unique role and position to make a difference, and ITU is a neutral platform where we can discuss

cooperation and share information between various regulatory associations across different regions.

Underscoring their interest in learning from each other's experiences, participants proposed that the RA webpage should not only gather presentations made at RA meetings, but could continue to be enriched between meetings, so that the valuable exchange that takes place at each meeting continues over the year. ITU was encouraged to create a portal for RAs which could include in addition to presentations at RA meetings, reports and activities related to the work of the RAs.

The full report of the Regulatory Association meeting is available at: <http://www.itu.int/en/ITU-D/Conferences/GSR/Pages/GSR2017/default.aspx>



Chief Regulatory Officers Meeting

Following the recommendation of CRO at its meeting in Bangkok in October 2016 to create a working group on Digital Financial Inclusion (CRO WG-DFI), this group met at GSR-17 prior to the 8th Private Sector Chief Regulatory Officers (CRO) Meeting, held on 12 July, to continue discussions on the way forward to achieve the World Bank's Universal Financial Access 2020 goals.

Both the 8th Private Sector Chief Regulatory Officers (CRO) Meeting and the Meeting of its Working Group on Digital Financial Inclusion (CRO WG-DFI) were attended by over 20 high-level industry executives from leading ITU-D Sector Members. The CRO meeting was chaired by Mr Bocar Ba, CEO Samena Telecommunications Council and the CRO WG-DFI meeting was chaired by Ms Sue Kelsey, VP, MasterCard.

In opening the CRO meeting, Mr. Brahim Sanou, BDT Director, highlighted the need for ITU-D

Sector Members, and private-sector members in particular, to contribute to CRO meetings. He recalled that this group has been created as a platform for industry's engagement on regulatory, policy and market issues, and looks forward to future contributions from the group. He commended the group for their work and initiatives, and highlighted the importance of the role of the private sector in development. He further thanked the Chairman for his commendable work.

The CRO Meeting concluded that, recognizing the multi-stakeholder importance to implement the SDGs, the private sector CRO is a platform which ITU BDT uses to inform its members of industry views and solutions to foster the implementation of the objectives of the global community, namely of the SDGs. The full report can be found here <http://www.itu.int/en/ITU-D/Conferences/CRO/Pages/CRO8.default.aspx>

Wednesday

12 July 2017

GSR-17

Opening Ceremony

The opening ceremony welcomed distinguished guests Dr. The Honourable Hubert A. Minnis, Prime Minister, Bahamas; Mr. Houlin Zhao, ITU Secretary-General; Senator The Hon. Carl Wilshire Bethel, Q.C, Attorney General and Minister of Legal Affairs, Bahamas, Mr. Randol Dorsett, Chairman, URCA, Bahamas, Mr. Brahima Sanou, BDT Director, ITU; and Mr. Stephen Bereaux, Chief Executive Officer, URCA, Bahamas and GSR-17 Chair.

In his opening address, Mr. Randol Dorsett stressed that the creation of a more open, productive and competitive society and economy is essential to his country's ability to compete successfully in today's global environment. He emphasized that "URCA is convinced that ICTs provide the most promising platform upon which The Bahamas can build, and enhance our society and economy, and our goal is the accelerated development of ICTs in The Bahamas". He noted that the deliberations at GSR offer opportunities that will help them design and implement those policies and regulations that need to adapt and accommodate new technologies as well.

In addressing the audience, Mr. Brahima Sanou stressed that today no person and no economic sector can imagine life without ICTs. He emphasized that it is our responsibility to embrace emerging technologies such as Big Data, open data, cloud computing, Internet of Things, and artificial intelligence to tap into the huge opportunities offered by ICTs for achieving sustainable development. Our actions, as the ICT sector, should go beyond the ICT sector to take into account the whole digital ecosystem. A new ecosystem where ICTs are about streamlining government processes, providing health, education and other services to remote communities without leaving anyone behind. ICT is just about people. He added that "we need to change the way we are interacting between the policymakers, the regulators, the operators, the academia, the consumers."

After thanking the Government of the Bahamas and URCA for their warm hospitality and for hosting this edition of GSR, Mr. Houlin Zhao emphasized the importance of creating an attractive environment for investment in ICTs



and partnerships for development, to ensure no one is left behind. He stressed the role ICTs play across sectors, from finance to utilities, and how other sectors rely on ICTs for providing secure and sustainable broadband connectivity. He added that “GSR-17 is an important opportunity for regulators, policy-makers, industry leaders and other key ICT stakeholders to unleash the potential of collaboration to create an attractive environment for innovation and investment.”

In introducing Dr. The Honourable Hubert A. Minnis, Senator The Hon. Carl Wilshire Bethel, Q.C. noted that a connected Bahamas is a Bahamas where every resident is able to engage with their social networks, enjoy media and entertainment content, do their jobs and run their businesses, access government services quickly, easily, and with confidence within a framework that connects them, with each other, and with the government.

Dr. The Honourable Hubert A. Minnis warmly welcomed and thanked participants for their

presence in the Bahamas. He announced that the Be Smart Bahamas Initiative, a major partnership between the Government of The Bahamas and the International Telecommunication Union, will establish the Bahamas as Smart Islands, leveraging from the Smart Island project carried out in New Providence. The Initiative will result in the development of a Be Smart Bahamas Master Plan and the delivery of several pilot projects across the Islands. He shared some of the Government’s priorities relating to smart innovation to strengthen the various communications platforms between the government and the citizens, and for other sectors to benefit from technology innovation, including the health and education sectors. He noted the importance of increasing their resilience against cyberattacks and mentioned the launch of a pilot project called “Alert Bahamas”, a national emergency warning system, the improvements to their transportation systems and the project of widespread access to WiFi services in the parks and public spaces.



Leadership debate: New drivers of Digital Transformation

The Leadership debate was moderated by Mr. Brahima Sanou, BDT Director, ITU and set the scene for discussions, focusing in particular on drivers of digital transformation and the regulatory challenges we face. Discussions highlighted how automation, artificial intelligence, deep learning and robots are fundamentally changing our societies and impacting all aspects of our lives, and reflected on what kind of regulatory approach is needed. Kicking off the debate, Mr. Kemal Huseinovic, Chief, Infrastructure, Enabling Environment and E-applications Department, ITU/BDT, put forward that Big Data, Internet of Things, block chain, machine learning, and artificial intelligence will most likely disrupt and transform existing social, political and economic norms, bringing opportunities and challenges for our world. The main question, he provided, is how artificial intelligence

can deliver value to society, the industry and every citizen on this world. Properly understood and properly managed, artificial intelligence is not dehumanizing; rather it can bring value to all.

Panellists recognized that artificial intelligence, virtual reality, algorithms and robots will change the world in ways we could never have imagined up until recently, and noted that how regulators treat these technologies will be very important in shaping the future. They recognized that artificial intelligence is not a homogeneous technology, but a set of methods and techniques that are applied in various contexts, going from computer vision speech recognition, to machine translation and other techniques that are then used in very diverse fields, in many different contexts.

Panellists suggested that given the cross-cutting nature of technology, and the plethora of unknown factors we face, stakeholders should address how to take regulation from being something that was traditionally done in silos across traditional telecoms regulators, broadcasting regulators, electricity regulators, the police, and other government agencies, to a collaborative framework that can effectively address things that are all connected. Panellists also noted that there are new paradigms, new ways to work together across disciplines, so that we are able to react to and to address the challenges of tomorrow, even the challenges of today.

Panellists also noted that while decentralization and disruption of multiple industries is part of the convergence of technology, regulators should seek to balance measures that facilitate entrepreneurship and innovation, with those that protect society. Experimentation is necessary as is the creation of controlled environments, because we do not know what the future holds for multiple technologies.

Thursday

13 July 2017



Mr. Gary Schwarz setting the scene on the new frontiers in technology

TRACK 1:

Trusting the Digital World

To set the scene, a presentation on artificial intelligence (AI), its impact on consumers and how to build trust with that consumer was made by Mr. Gary Schwarz. He defined AI as a high fidelity approximation limited to data sets. He stressed that AI is about data, training and using machine learning to optimize the business processes. He added that the challenge is not about us embracing technology, but technology embracing us. Therefore, we need a design for the human in the middle and we have to design for trust (for making sure there are no biases in the data), to advance where we are now with AI to the point where it is going to become super-intelligent, he said in concluding his presentation.

The full presentation is available here: <https://www.youtube.com/watch?v=JEtW2Gw3xtk>



Session 1: Collaborative Regulation in a Digital Ecosystem: new regulatory paradigms

The debate was moderated by Mr. Germán Arias, Executive Director, CRC, Colombia. Panellists included Mr. Mario Fromow, Commissioner, IFETEL, Mexico; Mr. Abhilash Bhachech, Former Inspector of Banks & Trust Companies, Central Bank of The Bahamas; Mr. Shiv Bakhshi, Vice-President, Industry Relations, Ericsson; Mr. Kevin Martin, Vice President, Mobile and Global Access Policy, Facebook; and Mr. Mark Jamison, Director, PURC, University of Florida.

Noting that we are facing new regulatory paradigms, where the digital economy includes all sectors of the economy, including telecommunications as well as transport, leisure, health, finding the right regulatory responses is important, and raises challenges in terms of mandate, resources and solutions for the different participants in the ecosystem, which also includes regulators from across the sectors. Panellists also noted that this trend is not ending, but becoming more pronounced, as technology and innovation continues to evolve. In the end, they said, the only way to address these questions is through collaboration where all the players in the ecosystem try to work together to reach solutions.

Panellists also noted that although data brings economic benefits and value, issues such as

privacy and security must also be considered. Regulators, it was noted, should collaborate to ensure that the value created by the use of data translates into benefits for society.

Panellists suggested that the digital economy depends on platforms. These were defined as clusters of technologies that create or constitute infrastructure in which different players, such as producers and consumers, can come together to transact whatever business they want and exchange information about themselves independent of the platform itself or of the platform provider. Digitization decouples information from the hardware to which that information is historically tied, thus decoupling content from medium. Unlike an analogue device, a digital device can leverage data created in other realms, because it doesn't have to be tied to a functional silo, blurring product and industry boundaries. This in itself creates the need for collaboration across the sectors.

It is important to collaborate so that innovation can continue and everyone can participate in the digital transformation and receive all the benefits of digitalization. More conversation is needed, as well as more understanding between and among regulators and among all stakeholders.



Session 2: Reliability of networks and devices for digital services

The session was moderated by Dr. Dražen Lučić, President of the Council, HAKOM, Croatia, with panellists Professor Umaru Garba Danbatta, Executive Vice Chairman/CEO, NCC, Nigeria; Mr. Jacques Stern, Board Member, ARCEP, France; Mr. Harinderpal Singh Grewal, Cluster Director (Resource & Interconnection Management), IMDA, Singapore; Ms. Lauren Van Wazer, Vice President, Global Public Policy, Akamai Technologies; Mr. Eric Loeb, Senior Vice-President, International External and Regulatory Affairs, AT&T Inc.; and Ms. Jade Nester, Senior Policy Manager and Global Expert in Privacy, GSMA.

The moderator noted that the rapid uptake of new technologies, such as 4G LTE, and the exponential growth of data traffic being experienced today, which is expected to grow even further with 5G, creates new challenges for industry and regulatory authorities. One challenge relates to the ability to deliver economically sustainable capacity while at the same time enabling performance growth strategy. In addition, cybersecurity and data privacy policies have to be established and revised in order to cope with new challenges and requirements resulting from the deployment of new technologies and services.

Panellists stressed the importance of guaranteed network reliability for seamless communications.

Technological measures such as encryption mechanisms need to be foreseen to ensure that data is securely sent and received over the network and to enhance consumer confidence. New technology solutions need to be tested and standardized to ensure the security of the user and of ICT networks. In a world of connected things and apps, sufficient coverage, availability of the network and ease of provisioning were key elements mentioned by a regulator. Measuring reliability requires openness (using all kinds of data), trust (putting information at the disposal of users) and dissemination of information and data from and to consumers. This is a concept that is referred to as regulation by data in France. The network environment is different today, data traffic is growing exponentially and this is where software defined networks and network function virtualization comes into play, said an operator that called for open collaboration in this area. In this context, it is important to think about cross border data transfers and the free flow of information across the globe, their benefits and the impact of restrictions while protecting privacy and also encouraging trust. Panellists further noted that a distributed architecture helps in terms of cybersecurity and in detecting congestion and outages, this is how content delivery networks can facilitate reliability.



*Mr. Yael Maguire
setting the scene on
connectivity for all.*

TRACK 2:

Creating a World of Opportunities

Mr. Yael Maguire, Connectivity Innovator and Engineering Director leading Facebook's Connectivity Lab set the scene for creating a world of opportunities by thinking in terms of experience rather than speed and latency, and in creating and building communities. He presented connectivity from data perspective, in particular through an analysis of population density to see where people live, the development of a database and the use of machine learning to identify connectivity solutions to connect everyone, in every community. A range of solutions will be

needed he said. Some of the non-traditional solutions developed by Facebook include the Aquila solar-powered aircraft, high throughput over-the-air laser communications systems, the Terragraph urban distribution network and ARIES. Quoting Arthur C. Clark that any sufficiently advanced technology is indistinguishable from magic, he concluded by saying that "the thing that makes this technology magical and connects communities in ways that no toaster will ever do comes from the magic that you all create."

Information Session: ICT Indicators for measuring the Information Society

Dr. Cosmas Zavazava, Chief of Department, Projects & Knowledge Management, ITU/BDT provided an overview of ITU's work on ICT data and statistics for measuring the information society. He explained the data collection process

from Member States, data dissemination and analysis, and the role of the two statistical expert groups (EGTI and EGH) in terms of defining methodologies and new indicators.



Session 3: Affordable access to ICTs in a collaborative economy

The panel was moderated by Mr. Ram Sewak Sharma, Chairman, TRAI, India. Panellists included Mr. Dan Sjöblom, Director-General, PTS, Sweden; Mr. Tom Sullivan, Acting Bureau Chief International, FCC, United States; Mr. Nezh Dincbudak, Director Regulatory Affairs AMEA, Orange; Mr. Pablo Bello, Executive Director, ASIET; and Ms. Patricia Cooper, Vice President, Satellite Government Affairs, SpaceX.

The moderator stressed that accessibility and affordability involve connectivity. Connectivity is not a luxury but a necessity, especially for developing countries, as huge amounts of applications will be running over the networks. For these to run, you need connectivity that is reliable, robust and affordable to people. While there are challenges, there are also a lot of opportunities.

Panellists emphasized that it is easier to attract investment if the outlook for the future is relatively stable and if governments set concrete targets for network development. Different solutions and business models exist around the world, with a shift from voice to data business models being acknowledged. Different regulatory approaches

have been pursued to foster network deployment and investment using market driven approaches, as well as policy and regulatory tools such as universal service funding and flexible, technology-neutral spectrum policies. Technology has driven costs of deployment down. Regulators need to keep abreast of new innovative technologies and consider the cost of regulation to ensure that regulatory frameworks are not barriers to innovation and investment.

Regulation should also address bottlenecks in markets and seek to incentivize investments, said an operator. Providing incentives to invest in flexible and adaptive technology that can interoperate with more services is also important, added another player. In an era of convergence, building a public private dialogue is key to transforming our societies and economies and closing the digital divide. We have to think about regulation and public policies for the 21st century and break away from what was relevant in the 20th century. The moderator emphasized that governments, regulators and the private sector all need to work in harmony to achieve the common purpose of universal and ubiquitous reach of broadband throughout the world.



Session 4: Roaming in the Digital World

The session was moderated by Mr. J. Paul Morgan, Deputy Chairman, URCA, Bahamas with panellists Mr. Manuel Costa Cabral, Chair, International Roaming, ARCTEL-CPLP; Mr. Abdoukarim Soumaila, Secretary-General, ATU; Mr. Shola Taylor, Secretary-General, CTO; and Mr. René Dönni Kuoni, Vice-Director, OFCOM, Switzerland.

The moderator set the scene for discussions by noting that the issue of high mobile rates continues to exist at the national, regional and international level and regulatory solutions are being sought to deal with these high costs. He also set forth that given technology development, regulators should seek to find solutions, warning that if regulators don't find the solution to this particular problem, technology is going to do it for us.

The session started with a presentation by Ms. Sofie Maddens, Head, RME Division, ITU/BDT, on the International Mobile Roaming (IMR) Strategic Guidelines developed within the framework of BDT Director, Mr. Brahima Sanou's Let's Roam the World Initiative. Discussions, she said, are not only focusing on the cost of voice or data roaming, or on international trade-related principles, but also addressing changes in revenue streams, usage and traffic, new business models as well as new opportunities and

innovative measures on roaming for Machine-to-Machine (M2M) communications and the Internet of Things (IoT). She highlighted that the Initiative created a dialogue with stakeholders to reach consensus on the strategic guidelines for international mobile roaming that could be applicable around the world and foster a transparent, harmonized, and forward-looking IMR market environment to benefit consumers and operators. The report (available at http://www.itu.int/en/ITU-D/Conferences/GSR/Documents/GSR2017/IMR_Strategic_Guidelines_Second%20Consultation_DRAFT_FINAL.pdf) includes draft IMR strategic guidelines for consideration and input by stakeholders.

The panel recognized that there are multiple initiatives around the world to address the issue of IMR. Panellists noted that given the needs of business and consumers, especially in a world of IoT, and the importance of IMR for regional economic and social integration, connected devices need to be able to move across borders and networks and this needs to be affordable. There are different models to address the issue and these should all be considered. Apart from price caps, competition has also driven down prices. Initiatives at regional and international level are helpful to guide discussions and reach consensus.

Friday

14 July 2017



REGULATORS TRACK

GSR17 Best practice guidelines: Discussion and adoption

Mr. Stephen Bereaux, CEO, URCA, Bahamas and GSR-17 Chair, presented the draft GSR-17 best practice guidelines on policy and regulatory incentives for affordable access to digital services developed under his coordination and in consultation with ICT regulators from around the world. In his presentation, Mr. Bereaux emphasized that there is no single comprehensive blueprint for best practice but country experiences could be enlightening, and could guide us toward regulatory excellence. In the increasingly complex and dynamic digital ecosystem, it was important to agree on common principles and put forward clear and simple rules. The guidelines presented and adopted, he noted, reflected the consensual spirit of GSR.



Evidence Based Decision Making: Tools for Regulators

The panel was moderated by Dr. Kemal Huseinovic, Chief, Infrastructure, Enabling Environment and E-Applications Department, ITU/BDT. Panellists included, Mr. Filipe Baptista, Secretary-General, ARCTEL-CPLP, Mr Mahmoud Elgowini, Board Member, NTRA, Egypt; Prof. Americo Muchanga, Director General, INCM, Mozambique; and Ms. Dalsie Green Baniala, CEO/Regulator, TRR, Vanuatu. The session started with a brief introduction by Ms. Cynthia Reddock Jones, TATT, Trinidad and Tobago on their draft national ICT Plan that is based on five strategic thrusts: increasing human capacity, enhancing public service delivery, fostering economic development and advancing environmental and societal benefits.

The moderator noted that change, challenge and opportunity is the new normal for regulators everywhere. The role of the regulator is itself changing. Questions and challenges often now extend beyond the sector requiring ICT regulators to address data and consumer protection, quality of service issues, the Internet of Everything, cybersecurity threats as well as OSPs/OTTs treatment. He referred to the newly released ITU Global ICT Regulatory Outlook 2017 Report that suggests a Generation 5 (G5) regulatory approach – one that is open, collaborative, incentive-based and cross-sectoral.

Panellists added that collaboration is key in making evidence-based decisions. Consultation of all stakeholders involved was further recognized as an important element of evidence-

based decision-making to move forward in terms of better regulation. Good regulatory outcomes depend on more than well designed rules and regulations, it relies on the confidence that regulatory decisions are made on an objective, impartial and consistent basis.

Panellists stressed that the quality of decisions made by a regulator is highly affected by the structure of the body of the regulator itself, the policy position of the regulator, the regulatory impact assessment reviews of the decisions made by the regulator and the transparency of the process. We are all working together to make nations competitive, said one regulator, to create wealth for the country, and also to create an environment in which people can benefit from the services ICTs brings to them as well as to other sectors. Recognizing that each country has a different starting point, it is important to change the perception and importantly making sure that the interactions with the operators are always positive said another regulator, to build a cooperative understanding and firm but fair working relationship with all operators, promoting a collaborative approach. Panellists emphasized that learning from the experiences of others is also very important in making decisions. Transparent and practical cooperation, together with communication across sectors and engagement of key players are essential to policies and regulation that respond to market realities, players' needs and consumer demand, stated the moderator in concluding the session.



INDUSTRY TRACK

Industry leaders debate -Session 1: Emerging technologies as enablers of socio-economic development

The Industry Leaders' Debate was opened by Mr. Bruno Ramos, ITU BDT Regional Director for the Americas Region, who emphasized the importance of the private sector's engagement in the work of ITU-D.

The first session was moderated by Mr. Fabio Leite, Vice President, Regulatory and Market Access, Inmarsat Plc. The panellists included Ms. Lauren Van Wazer, Vice President, Global Public Policy, Akamai Technologies; Ms. Tatiana Lawrence, Vice President, Regulatory, Iridium Communications Inc.; and Mr. Robert Pepper, Head of Global Connectivity Policy and Planning, Facebook.

The moderator noted the impact of emerging technologies and of solutions offered by industry across the sectors on digital transformation and society. He also highlighted the need to explore potential opportunities for partnerships between the private sector, government and other actors to leverage the benefits of digital transformation and socio-economic impact. A few examples of emerging technologies, such as cloud computing, mobile payments, global e-commerce platforms, freelancing and outsourcing platforms, platforms for sharing educational resources, smart health applications, telemedicine applications, smart

meters for public utility services and agricultural information services were also highlighted as opportunities for socio-economic development.

Panellists stressed the need for coordinated action amongst all stakeholders so that ICTs can be leveraged to help achieve the SDGs. As more people and devices will be connected and transactions carried out, security was identified as a key topic together with the need for a new public policy framework and enabling environment for ICT enabled solutions that are secure. Satellites, panellists noted, will play an ever greater role in connecting all devices, from cities to remote areas, especially with regards to IoT. Panellists also noted, however, that capacity-building for policy makers and regulators is key to overcome the misconceptions about space technologies and enhance understanding of how it can increase connectivity for all. The debate also touched on the importance of ensuring reliable infrastructure through fiber, robust backhaul and efficient spectrum policies. The private sector also stressed the need for enhanced collaboration with regulators in order to encourage innovation and new technologies. The need for trust in markets was mentioned as one of the conditions for industry to deliver affordable services, as well as the need for flexibility for innovation.



Industry leaders debate - Session 2: Unleashing the potential - collaborative approaches between public & private sector and the role of strategic partnerships

The second session was moderated by Mr. Bocar Ba, Chief Executive Officer, Samena Telecommunications Council, panellists included Mr. Nezih Dincbudak, Vice President Regulatory Affairs, AMEA Orange; Ms. Mariah Shuman, Senior Director of Regulatory Affairs, OneWeb; Mr. Ziad Al Khwaiteer, GM, Regulatory Affairs, STC Group; Mr. Peter Pitsch, Executive Director and Associate General Counsel, Intel Corporation.

Panellists noted that while the industry understands the importance of technology and its benefits, more needs to be done to explain how technology can change people's lives. There is a need for joint efforts to disseminate information and enhance knowledge on what is already being done, its impact and to build real proposals on how technology can include people, and make a real difference to their lives. Today, there are still billions of people without basic connectivity and even more people without broadband. In terms of increasing access in

an inclusive manners, panellists raised issues related to coverage and affordability. It was noted that given that it is expensive for companies to provide infrastructure in remote areas, technology neutrality continues to play an important role, and spectrum availability is key. Panellists also stressed the need for enhanced collaboration among operators, policy makers and regulators as well as development banks to create partnerships for development that can focus on rolling out new access networks and greater backbone and backhaul networks. There is a need for broader cooperation among regulators, operators and OSPs/OTTs, and this is an area where ITU can be helpful in providing a neutral platform to exchange knowledge and build capacity. Finally, it was noted that while it is important to learn from past actions based on the historical development of several regulatory regimes, it is crucial to have flexible regulatory approaches as the ICT environment is changing much more quickly than 36 years ago, and to adapt to the new times.

Way forward and Closing



Celebrating the successes of GSR-17, the closing session was presided over by Mr. Brahima Sanou, BDT Director, ITU.

Mr. Stephen Bereaux, CEO, URCA, Bahamas, and GSR-17 Chair reported on the GSR-17 best practice guidelines on policy and regulatory incentives for affordable access to digital services adopted by the regulatory community in the morning. He noted that the developments that are happening in ICTs are bringing together every aspect of our existence and stated that "Our world of digital opportunities presents a world of regulation that is perhaps not new to us. We have to make sure that we are open enough, as regulators, to the adjustments, changes and collaboration that we need to be able to move forward."

Mr. Ansord Hewitt, Director General, OUR, Jamaica and Chairman, Organisation of Caribbean Utility Regulators (OOCUR) reported on the Regulatory Associations' meeting held on 12 July. The meeting was attended by more than 60 participants from 12 associations who reported on their current activities and engaged in discussions on international mobile roaming, and universal access and service strategies. The meeting also encouraged ITU to create a portal for the RAs which could include presentations delivered at RA meetings, reports and links to reports of the RAs.

Mr. Bocar Ba, CEO, Samena Telecommunication Council and Chair of the Private sector Chief Regulatory Officers' (CRO) Meeting, shared the conclusions of the 8th CRO meeting reporting that the meeting agreed on a set of principles for adopting the achievement of an optimal regulatory environment, the promotion of market

access and infrastructure, and the support and creation of added value of ICT applications. He reported as well on the work of the Working Group on digital financial services, established to align key stakeholders towards a formal commitment under the Universal Financial Access 2020 objective, which discussed legal and regulatory frameworks and pilot implementation in selected countries.

Turning to the next edition of GSR, Mr. Sanou, BDT Director, ITU, invited participants to make proposals for topics to be considered. He indicated that the consultation on topics will be open until 15 August 2017 and announced that under the theme "New regulatory paradigms in a digital economy", the next GSR will be held in Geneva, Switzerland, from 9 to 12 July 2018.

In his closing remarks, Mr. Dorsett, Chairman of URCA, Bahamas extended his thanks to ITU for organizing GSR in the Bahamas. He thanked the Government of the Bahamas for entrusting URCA with the responsibility of organizing this event. He expressed his thanks to participants for coming to the Bahamas and for contributing to the success of the event.

Mr. Sanou expressed his gratitude to the Government of the Bahamas for hosting the symposium. He thanked as well URCA for the hard work and the dedication of the team and the warm welcome received. In closing the event, Mr. Sanou stated that "we are given today a golden opportunity to be relevant to our economy, we have to redefine ourselves as regulators, to continue to be relevant for the sector, indeed relevant for the economy as a whole, as we are now implementing the Sustainable Development Goals."

GSR17 best practice guidelines on policy and regulatory incentives for affordable access to digital services

The rich potential of the transformative digital economy is within our reach. The digital world offers a host of opportunities in various sectors such as agriculture, health, education, financial services, artificial intelligence and public governance. Digital services can enable economic growth and social development across the board.

Regulation has a pivotal role to play to help today's fast-evolving markets thrive while shaping future markets for digital services that are innovative, balanced and inclusive. More inclusive, incentive-based and collaboration-driven regulation will not only benefit consumers and businesses, but will help fast-track a digital future for the billions who remain unconnected.

We, the regulators participating in the 2017 Global Symposium for Regulators, recognize that there is no single, comprehensive blueprint for best practice, but agree that country experiences can be enlightening and guide us towards regulatory excellence. In the increasingly complex and dynamic digital ecosystem, it is important to agree on common principles and put forward clear and simple rules.

We have, therefore, identified and endorsed these regulatory best practice guidelines for affordable digital services for all.

I. Strengthening the regulatory foundation for affordable access to digital services

Recognizing the transformative power of the following regulatory instruments for reducing the cost of ICT infrastructure deployment and the adoption of end-user services, we reiterate their relevance and call for strengthening and further streamlining rules and practices with regards to:

- Adopting and leveraging national digital policies, strategies and plans which seek to ensure that broadband and IP technologies are available to as wide a community of users as possible
- Adopting a flexible, transparent approach to promoting robust competition in the provision of network access and end-user digital services
- Designing flexible, incentive-based and market-oriented policy and regulatory frameworks with regard to allocation and assignment of spectrum, in particular for broadband services
- Promoting cross-border fiber networks as well as the build-out of pervasive national backbone networks complemented by terrestrial wireless and satellite infrastructure where necessary
- Synchronizing domestic network demand with international capacity deployment
- Encouraging the deployment of Internet exchange points as well as content distribution networks at the national, regional and international level
- Removing barriers to market entry at all levels and adopting incentives for open access and infrastructure sharing at the international and regional levels, with a view to reducing the cost of connectivity to submarine cables, regional fiber backbone and satellite infrastructure
- Adopting innovative licensing regimes and incentivizing new business models for covering remote and rural areas that more effectively integrate the use of terrestrial, satellite, and submarine telecommunication infrastructure.
- Fostering multi-infrastructure mapping and deployment, including working with local government to lift restrictions on infrastructure deployment
- Monitoring and, if necessary, setting mobile and fixed interconnection rates, including through sound regulatory accounting
- Requiring dominant incumbent providers to provide wholesale, unbiased access to its network for the purposes of interconnection and infrastructure sharing
- Enabling number portability over fixed and mobile networks
- Considering the efficiency of licensing and spectrum fees
- Using holistic universal access and service strategies and financing mechanisms for both network expansion, connectivity for public institutions and the community as well as demand-stimulation measures, such as end-user subsidies.
- Promoting the development of innovative new technologies that enhance rural and remote coverage at lower cost

We recall and reconfirm the importance of such measures and incentives, as iterated in the GSR best practice guidelines from previous years.

II. Further adapting and scoping incentives for delivering digital services

Building on the foundation of such widely-recognized practices, we furthermore call for recalibrating current regulatory paradigms for the digital markets of the future keeping in mind that the affordability of digital services depends on multiple factors related to their infrastructure, cost, resale and provision.

Governments and regulators should do more to address the affordability and use of digital services by promoting policies and regulatory measures to:

- Providing regulatory and policy incentives for investment in high-speed and high-capacity broadband networks
- Incentivizing competition among ICT and other sector players, which brings opportunities for innovation and price reduction in digital services
- Encourage co-investment and the co-location and shared use of infrastructure, where appropriate, including through active infrastructure sharing and national roaming arrangements and sharing with other public utilities that lead to cost reductions and reduce consumer prices
- Encourage the resale of mobile services by licensees, including MVNOs
- Promote cross-border regional mobile roaming agreements
- Encourage the conclusion of agreements establishing minimum technical conditions between licensees operating public telecommunication/ICT networks and on the determination of the interconnection tariffs based on a mutually-agreed calculation methodology
- Apply proportionate and transparent tariff regulation, preferably at the wholesale level, in markets where competition fails to produce satisfactory results in terms of affordability of digital services
- Avoid exclusive arrangements on pricing of end-user services, fostering fair and non-discriminatory tariff setting
- Facilitating the market entry and operation of online service providers
- Monitor and apply proportionate enforcement measures against any anti-competitive behavior in markets for digital services
- Promote fiscal, para-fiscal and related incentives to encourage operators to lower tariffs, including the elimination of customs duties on telecommunication/ ICT equipment for infrastructure providers as well as on end-user terminals and devices
- Create an enabling environment for Cloud service providers by developing a set of policies that promote network security and data privacy protocols, thus enabling Cloud as a main delivery mechanism for digital services by all kinds of market players and SMEs in particular
- Where the use of government-owned datacenters is required, develop strategies to consolidate those as well as datacenter investment, hence reducing government spending while improving Cloud resource management amongst government agencies
- Define a public procurement policy for government agencies to adopt and use digital services as well as the underlying technological platforms, such as Cloud and mobile broadband
- Explore new policy formulas to address affordable access to digital services for the various target groups and communities and implement strategies for universal access irrespective of the demographics and location of users
- Adapt enforcement rules and regulations and ensure appropriate consumer redress mechanisms for digital services
- Promote the creation and wide availability of consumer-facing tools to enable consumers to find the most suitable service offers for them, plan for the cost of their usage of data services, check and report the quality of service and experience and find out about redress mechanisms or access a catalogue of type-approved devices.

III. Next-generation incentives for affordable digital services

We believe it's important that today's fast-evolving markets – rich in innovative digital technologies, products and services – continue to thrive and grow.

- We further reiterate that an open, collaborative approach to regulation can go a long way towards addressing affordability of digital services. Regulators from all sectors where digital services have become available need to cooperate proactively, in particular:
- Outreaching to fellow regulators from other sectors to put in place concrete mechanisms for formal or informal cooperation
- Promoting the development of cross-cutting services such as e-commerce, e-finance and e-governance
- Cooperating with academia in studying and anticipating regulatory challenges and designing policies to leverage on the rise of new technologies in the digital economy and society
- Putting in place innovative, out-of-the-box measures to stimulate the adoption of services and the creation of locally-relevant apps and content, and to preserve local heritage.
- Promoting digital skills for all, which are essential for the wide adoption and efficient use of digital services and apps.
- Advocating widely for the benefits of new technologies in the digital economy and society



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