



MAIN OUTCOMES

1 Introduction

The Regional Conference on "Regulation of Electronic Communications Market" was held from 26 to 27 September 2016 back to back to the **Regional Development Forum (27 - 28 September 2016)** in Budva, Montenegro, within the framework of the Festival of ICT Achievements – INFOFEST 2016, the 14th edition of this conference.

Organized in collaboration with the Agency for Electronic Communications and Postal Services of Montenegro (EKIP), the conference provided an opportunity for dialogue between the stakeholders on strategies and policies directed towards broadband development in the region, while discussing the challenges and opportunities offered via high speed networks and e-services provided over the modern infrastructure.

2 Participation

Representatives of European Regulatory Agencies, Ministries, Operators of electronic communications, as well as representatives and experts of international organizations and institutions in charge of the regulation and development policy of electronic communications participated in the Conference. The meeting was attended by over 120 participants representing 30 Member States from the region. The list of participants can be found here.

3 Documentation

RC-EUR was paperless. 30 presentations were delivered during the meeting. Relevant documentation, including the [Agenda](#) and [Presentations and Reference Materials](#) were made available at the RC-EUR [website](#).

4 Opening ceremony

The following dignitaries addressed the opening ceremony:

- **Mr Zoran Sekulic**, Executive Director, Agency for Electronic Communications and Postal Services (EKIP), Montenegro
- **Dr. Kemal Huseinovic**, Chief of the Infrastructure, Enabling Environment and E-Applications Department, Telecommunication Development Bureau (BDT), International Telecommunication Union (ITU)
- **Dr. Saleta Djurovic**, President of the Council, Agency for Electronic Communications and Postal Services (EKIP), Montenegro
- **H.E. Dr. Vujica Lazovic**, Deputy Prime Minister and Minister for Information Society and Telecommunications in the Government of Montenegro

The speeches are available on the RC-EUR [website](#).

Mr Sekulic highlighted and thanked ITU for its long standing collaboration for Infifest evidenced and honoured by the presence of ITU Secretary General in 2008, the ITU Deputy Secretary General and the BDT Director this year. Dr Huseinovic highlighted the immediate need to brainstorm on the regional priorities in this Conference for closer cooperation while leveraging on the transformative power of regulation to contribute to socio-economic development through "Affordable communications in a borderless world". Dr Djurovic looked forward to quality discussions on Broadband, analysis market for operators, Quality of Service, Net neutrality and Roaming to further ICT development with the challenge of using limited resources. H.E Dr Lazovic recognised ICT's role as a main lever of sustainable development where dependence on the digital ecosystem and building on the digital dividend have been fully recognised by Montenegro.

RC-EUR benefited from welcome remarks from

- **Mr Piro Xhixho**, Chairman at Electronic and Postal Communications Authority (AKEP), Albania
- **Mr Predrag Kovač**, General Director, Communications Regulatory Agency (RAK), Bosnia and Herzegovina
- **Mr Veselin Bozhkov**, Chairman, The Communications Regulation Commission (CRC), Bulgaria
- ~~Mr Jaromir Novak~~, ~~Chairman of the Council at Czech Telecommunication Office (CTO), Czech Republic~~
- **Mr Sasho Dimitrijoski**, Director, Agency for Electronic Communications (AEC), TFYR of Macedonia
- **Mr Dejan Šuput**, Deputy Director, Regulatory Agency for Electronic Communications and Postal Services of the Republic of Serbia (RATEL), Serbia
- **H.E. Franc Dolenc**, Director of the Agency for Communication Networks and Services of the Republic of Slovenia

All remarks made converged on inviting all participants to take this unique opportunity (provided by the conference) to share the current challenges faced and identify future ones. At regional level we can achieve the best possible results by providing reliable and affordable information and communications services to all citizens of Europe and of the world as a key enabler to achieve sustainable social, economic and ecological development.

5 Session 1: Regulatory Trends and Emerging Regulatory Challenges at the International and Regional Level

The following presentations were made

- Trends in Telecommunication Reform 2016: Regulatory Incentives to Achieve Digital Opportunities & The State of Broadband 2016 by *Mr Jaroslav Ponder, Coordinator for Europe Region, Telecommunication Development Bureau, International Telecommunication Union (ITU)*
- Implications of Technical Standardization for Regulation: Towards WTSA-16 by *Mr Frederic Werner, Senior Communication Officer Telecommunication Standardization Bureau, International Telecommunication Union (ITU)*
- Digital Single Market: Current and Forthcoming EC Activities by *Ms Jagoda Peleponjko, Senior Expert for Legal Affairs, Croatian Regulatory Authority for Network Industries (HAKOM), Croatia*
- Regulatory Considerations for Satellite Broadband by *Mr Jose Toscano, Director General and Chief Executive Officer, International Telecommunication Satellite Organization (ITSO)*

All presentations are available [here](#).

This session brought forward the following key elements for collaborative and smart regulation :

- The need to extract guidance for regulators to actively contribute to building the enabling environment for a smart society while working together with all ecosystem stakeholders.
- The great potential of ICTs as evidenced by the new telecom usage figures and the need to look at
- National broadband strategies have started (10 out of 151) to address Internet of Things (IoT)
- The special attention to be given to Quality of Service
- Winning formula for fixed Broadband
 - Competition in DSL/cable
 - Fixed number portability enabled
 - Infrastructure sharing for fixed either allowed or mandated
 - Converged licensing framework in place

- National broadband plan adopted
- Winning formula for fixed Broadband
 - Competition in mobile broadband
 - Competition in international gateways
 - Mobile number portability enabled
 - Band migration allowed
 - Infrastructure sharing for mobile (either allowed or mandated), including MVNOs
 - National broadband plan adopted
- The use of ITU tools and platforms namely ICT tracker, Global Symposium for Regulators (GSR), Trends in Telecommunications Reform 2016, The State of Broadband 2016
- Regulators to engage in preparatory process for new questions on the next study group period post WTDC 201
- Policy and Regulation can affect/shape standards (ITU-T Study Group 3) and hence Regulators (and other stakeholders present) were requested to be involved in shaping new standards through (dedicated experts with facility for remote) participation in ITU-T Study Groups
- The Digital Single Market Strategy for Europe aims at
 - better access for consumers and businesses to online goods and services across Europe
 - creating the right conditions for digital networks and services to flourish
 - maximising the growth potential of the European Digital Economy
 and requires National Regulatory Agencies to have a minimal set of harmonised competencies with current milestones being
 - September 2016– legislative proposals
 - End 2017–Adoption by European Parliament and the Council
 - 2019–implementation by the EU member states
- Regulators and Governments may assess the cost-benefit of embracing satellite communications and work towards the required enabling regulatory environment with assistance of ITSO.

6 Session 2: International Mobile Roaming Services: Existing Regional and International Initiatives and Future Trends

The following presentations were made

- Let's Roam the World: The ITU Global Initiative – Building Blocks for IMT Best Practices Guidelines
Mr Kemal Huseinovic, Chief of the Infrastructure, Enabling Environment and E-Applications Department, Telecommunication Development Bureau (BDT), International Telecommunication Union (ITU)
- Regional Initiatives: Follow up to the Memorandum of Understanding on International Roaming
 - Initial Insights of the Regional Roaming Study
Ms Maja Handjiska-Trendafilova, Senior Expert on Connectivity, Regional Cooperation Council (RCC)
 - Case Study on Montenegro
Ms Ljiljana Pesalj, Deputy Executive Director for Legal Affairs, Agency for Electronic Communications and Postal Services (EKIP), Montenegro
 - Case Study on Serbia
Ms Vesna Tintor, Chief of Department for Market Analysis and Cost Accounting, Regulatory Agency for Electronic Communications and Postal (RATEL), Serbia
 - Case Study on Bosnia and Herzegovina: Impact of Regional Roaming Agreement (RRA)
Ms Slavica Bodiroga, Communications Regulatory Agency (RAK), Bosnia and Herzegovina
 - Roaming Agreement: Case Study on TFYR Macedonia
Aleksandar Kocevski, Expert in Market Analysis, Agency for Electronic Communications (AEC), TFY Republic of Macedonia
 - Roam Like at Home (RLAH): A Step Toward Telecom Single Market (TSM)
Mr Mislav Hebel, Senior Expert for Communication Network, Croatian Regulatory Authority for Network Industries (HAKOM), Croatia

All presentations are available [here](#).

Session highlights are

- Define appropriate International Mobile Roaming (IMR) policies and strategies

- through inclusive dialogue and collaboration with market players to stay in touch with market realities
- with all stakeholders across the sectors]and across countries and regions
- Successful implementation of IMR requires commitment from all stakeholders to work together and move forward with
 - Global and universal approach –interconnect the global ecosystem with a regional integration and coordination
 - Concrete mandate -Political support and prioritization
 - Support from ITU
 - Data collection –information sharing
 - Clear deliverables and milestones for economic and consumer welfare -harmonization
- The current status of the implementation and results of the International Roaming MoU between Bosnia, Macedonia, Montenegro, Serbia indicate
 - General reduction of prices
 - General increase in data traffic
 - No disputes and no complaints from operators in Bosnia and Herzegovina
 - Increase in the number of subscribers for Montenegro
- A Regional Roaming Study (market impact) by RCC is at draft stage covering legal frameworks and roaming traffic trends for all RCC
 - No significant identifiable growth in roaming traffic within RRA signatories yet registered that might be directly attributed to the regulation of lower roaming prices
- As of April 30, 2016, the Telecommunication Single Market (TSM) Regulation applies to mobile international roaming
 - Retail international mobile roaming surcharges will no longer apply from June 15, 2017
 - Roaming wholesale market will have to be reformed first by December 31, 2016 the latest
 - Operators can implement fair use policies to prevent the abuse of regulated roaming services
 - Operators can retain surcharges -they have to demonstrate to their NRA that they cannot cover costs of providing roaming (sustainability)
 - Main dispute between „southern“ and „northern“ countries –price of wholesale roaming data caps

7 Session 3: Quality of Services and Experience, Network Neutrality and User Protection

- Regulatory Challenges Related to the Quality of Service and Experience by *Mr Milan Janković, ITU Consultant*
- ~~Ms Vesna Krzman~~/Ms Ivana Furtula, Regulatory Agency for Electronic Communications and Postal Services of the Republic of Serbia (RATEL), Serbia
- Challenges in Consumer Protection by *Ms Aleksandra Ristić, Regulatory Agency for Electronic Communications and Postal Services of the Republic of Serbia (RATEL), Serbia*
- Mobile networks QoS and DVB-T Network Measurement by *Igor Bojadjev, Adviser of Executive Director for Radiocommunications, Agency for Electronic Communications (AEC), TFY Republic of Macedonia*
- Specure - Nettetst - Implementation of BEREC's Recommendations by *Mr Andreas Gaber, Specure GmbH, Austria*
- Internet of Things: Challenges and Opportunities by *Mr Zeljko Popovic, Ericsson Nikola Tesla, Croatia*

All presentations are available [here](#).

Session highlights are

- Some Governments define, by Law, obligation about QoS to NRA. Examples are: india,, Pakistan, Malaysia, Bangladesh and Ghana
- QoS is relates to the overall ranking of the IDI measurement
- QoS monitoring is required in 92% of the countries worldwide
- QoS measurements need to be
 - practical for operators
 - important to consumers
 - comparable between operators (even cross border)
- IoT brings in new challenges including security, data quality, interoperability, privacy, open data, connectivity and information management. It will impact QoS.
- Collect QoS data in such a way that you can compare between years for same country and also between different countries – need to use similar methodology
- Macedonia regulator adopted a bylaw to measure QoS

8 Session 4: Strategies and Policies for Broadband Development

- EU Broadband Cost Reduction Directive by *Ms Lidija Antonić, Senior Expert for Legal Affairs, Croatian Regulatory Authority for Network Industries (HAKOM), Croatia*
- Auction of RF Spectrum in Context of Broadband Development in Montenegro, by *Mr Elvis Babačić, Agency for Electronic Communications and Postal Services (EKIP), Montenegro*
- National Broadband Plan (NGN) of Republic of Croatia by *Ms Ivancica Urh, Head of the Electronic Communications Department, Ministry of Maritime Affairs, Transport and Infrastructure, Croatia*
- Broadband Development in Lithuania: Trends, Challenges, Lessons by *Mr Paulius Vaina, Acting Head of International and Public Relations Division, Communications Regulatory Authority (RRT), Lithuania*

All presentations are available [here](#).

Session highlights are

- Directive 2014/61/eu of the European Parliament and of the Council of 15 May 2015 on measures to reduce the cost of deploying high-speed electronic communications networks
- High speed BB networks=30Mbps and above
 - Easier achievement of Digital Agenda goals
 - Lower cost of deploying
 - Less digging
 - Synergy across sectors
- Croatia's implementation experience was shared and involved
 - Law on measures to reduce the cost of deploying high-speed electronic communications networks
 - Electronic Communications Act (OG 73/08, 90/11, 133/12, 80/13, 71/14)
 - In-building physical infrastructure
 - Law on State Survey and Real estate Cadastre (State Geodetic Administration)
 - National Broadband Access Strategy – third one
 - Users say broadband access services are expensive as accessibility is low
 - Construction of access to broadband – national programme – unification and better service quality management on optical infrastructure
 - Fully aligned with goals of Digital Agenda
- Montenegro has a broadband auction procedure which implied training of bidders. However
 - Coordination is complex
 - There is a lack of best practices
- Desi (Digital Economy and Society index) indicates that Lithuania is doing very well. Low price for consumers with a competitive edge for operators which is not easy to balance

9 Session 5: Mapping of Broadband Infrastructure and Services

- Broadband Mapping and Electronic Communication Infrastructure - Croatian Model by *Mr Danko Ćurepić, Senior Expert for Infrastructure, Croatian Regulatory Authority for Network Industries (HAKOM), Croatia*
- Mapping NGA in Czech Republic by *Mr Marek Ebert, Expert, Czech Telecom Office (CTO), Czech Republic*
- Common Use of Electronic Communication Infrastructure and Mapping by *Ms Dubravka Aleksić, Mr Matija Tomčić, Agency for Electronic Communications and Postal Services (EKIP), Montenegro*
- Mapping of Broadband Infrastructure/Services and Quality of Service : The Polish Experience by *Mr Marek Ostanek, Director of Department of Data Management, Office of Electronic Communications (UKE), Poland*
- Broadband Mapping Project in AKOS by *Ms Tanja Muha, Head of Telecommunications Department, Agency for Communication Networks and Services (AKOS), Slovenia*
- Mapping of Shared Infrastructure by *Ivana Furtula, Regulatory Agency for Electronic Communications and Postal Services (RATEL), Serbia*

All presentations are available [here](#).

Session highlights are

- Croatia has a GIS map done via World Bank funding with a company in Slovenia which includes broadband mapping as well as a cadastre of real estate law being amended so that data is transferred and managed via the GIS

- Broadband density increase has direct positive impact on economy growth. Government, counties and communities, as well as national regulatory authority, have to enable preconditions for a faster growth of broadband access density.
- Establishing a national GIS database in SGA (State Geodetic Administration), visualized on an interactive map which will provide an insight into electronic communications infrastructure such as cable, ducts routes, pipes, manholes, locations of antennae masts will be more, challenging.
- Development of spatial data base is one of preconditions in order to fulfil the targets and goals set by Digital Agenda 2020, Single Telecommunication market in EU and “Connected Continent”
- GIS projects for electronic communications market in Republic of Croatia are one of the preconditions for investments worth millions €.
- Lessons learnt for the Czech republic include
 - To be transparent through workshops with sector, public consultation, etc.
 - To have close cooperation with the Ministry and Sector and also have a Working group for mapping procedure (Nov. 2015 – Jan 2016).
 - Allow Sufficient time for preparation
- GIS only for visualisation but Poland uses advanced software for more and this is the value added
- Mapping initiatives aim to provide governments, national regulatory authorities, consumers, operators and industry with essential information on existing physical infrastructure. They also support investors in the planning and decision-making processes regarding broadband networks.
- Broadband mapping initiatives provide critical information that enables key stakeholders to identify:
 - underserved areas (using gap analyses techniques);
 - areas for improvement;
 - areas for future expansion and investment plans; and
 - areas where synergies may exist between the telecommunications sector and other utility sectors (e.g. for the deployment of smart grids, infrastructure sharing and common investment co-ordination to reduce costs)
- Poland is ready to share its tool for mapping demand and supply and calculate cost with other countries present.
- Poland allowed data collection via a change in legislation which leads to threats as
- some nodes are sensitive and critical and revealing exact location puts them at risk of sabotage / attacks – Poland did it but such nodes should be protected as a critical information infrastructure

10 Session 6: Market Analysis and Regulatory Measures Prescribed to the Operators with Significant Market Power

- Market Analysis: Case Study of Republic of Albania by *Ms Enkeleđa Pojani, Shefqet Meda, Chief of the Sector of Market Analysis, Electronic and Postal Communications Authority (AKEP), Republic of Albania*
- Market Analysis in Accordance with Recommendation 2014/710/EU by *Ms Milena Petkova, Head of Research and Analysis of the Electronic Communications Market Department at the Market Regulation Directorate, Communication Regulation Commission (CRC), Bulgaria*
- Market Analysis: Case Study on Montenegro by *Ms Nata Marković, Manager for Accounting Separation and Cost Accounting Control, Agency for Electronic Communications and Postal Services (EKIP), Montenegro*
- Review process of the EU Regulatory Framework for Electronic Communications by *Ms Veronica Bocarova, Principal Analyst, Cullen International*

All presentations are available [here](#).

Session highlights are

- Gigabit Society by 2025 are Ambitious but non-binding targets from EU
 - 100 Mbps for all European households by 2025
 - 1 Gbps for ‘socio-economic drivers’ – by 2025
 - 50% households subscribing to 100 Mbps by 2020
- 5G Action Plan by 2025
 - Commercial introduction of 5G in 2018
 - One major city to be ‘5G enabled’ by 2020
 - Uninterrupted 5G coverage for urban areas and major terrestrial transport paths by 2025
 - Spectrum bands to be harmonized for 5G

- Provisional list of bands for initial launch by 2016
- Full set of bands to be agreed by 2017
 - 700 MHz band to be available by 2020
 - 3.5 GHz seen as potentially a “strategic band”
- Affordable broadband in focus
 - Access to functional internet at an affordable price, “at least at a fixed location”
 - based on wired or wireless solution
 - defined as the ability to reach specific “online services which enable end-user participation in civil society” (i.e. not based on minimum speed)
 - Access to voice communications services and measures for disabled users maintained
 - Directories, directory enquiry services and payphones removed
 - Universal service net cost to be financed through state budget only, and not through an industry fund

11 Session 7: Future Regulatory Initiatives: Conclusions and Closing Ceremony

- Mr Jaroslav Ponder, Coordinator for Europe Region, International Telecommunication Union (ITU)
- Mr Zoran Sekulic, Executive Director, Agency for Electronic Communications and Postal Services (EKIP), Montenegro

Both speakers expressed their satisfaction that the presentations provided elements that deserved further discussion and consideration for injecting in the Regional Development Forum proposals that will be formulated in the coming days.

12 Conclusion

All stakeholders were thanked for their contributions to the regional conference.

BDT and Participants thanked the Agency for Electronic Communications and Postal Services of Montenegro (EKIP), Montenegro for hosting the Regulatory Conference for Europe and for the warm hospitality during the stay in Budva.