ITU-D Regional Development Forum for the EUR & CIS Region: "NGN and Broadband"

Chişinău, Moldova, 4-6 May 2010

Preface

This document provides a summary of this Regional Development Forum for the EUR and CIS Region, some observations on the achievements of the Forum, and a report on the Forum

Introduction

This Regional Development Forum took place in Chişinău, Moldova, 4-6 May 2010. The Forum was hosted by the Republic of Moldova Ministry of Information Technology and Communication (ITC) The ITU-D web page for this event may be accessed here.

This event was addressed to CIS and Europe Telecommunication Administrations, Regulatory authorities, telecommunication operators and others.

The event took place at the facilities of the Hotel Codru located in central Chişinău.

Per the list of registered participants, one hundred thirty people participated in the Forum (including audience and speakers but not local organizing staff or interpreters.) from 9 CIS Countries (Azerbaijan, Armenia, Kazakhstan, Kyrgyz Republic, Republic of Moldova, Russian Federation, Tajikistan, Uzbekistan, Ukraine) and 9 countries from Europe and other regions (Albania, Bulgaria, Croatia, France, Germany, Serbia, Slovenia, Canada, India, Romania). A summary is provided at Annex 3. Maximum participation was observed in the opening session of the Forum at which several senior officials of the Moldovan government were present.

The Forum was opened by Mr.Alexandru Oleinic, Minister of Information Technology and Communications of the Republic of Moldova. Prime Minister of the Republic of Moldova Mr. V. Filat made a welcome speech.

Welcome speeches were also made by:

- Mr Svein Tenningås Senior Advisor, BDT / DDIR / EUR
- Mr O. Kaiykov, Head of the ITU Area Office for CIS countries made welcome speech on behalf of the BDT Director
- Mr. Vitalie Iurcu, General Director of JSC "Moldtelecom"
- Mrs. Liudmila Climov, General Director, "Orange" in Moldova
- Mr. Sergiu Sitnic, Director of National Agency for Regulation in Communication in Moldova

The opening ceremony was also attended by:

- Mr. Valeriu Lazar, Deputy Prime Minister, Minister of Economy of Moldova
- Mrs. Mihaela Iacob, Deputy Minister of Information Technology and Communications of the Republic of Moldova
- Mrs. Dona Scola, Deputy Minister of Information Technology and Communications of the Republic of Moldova
- Mr. Dorin Recean Deputy Minister of Information Technology and Communications of the Republic of Moldova

The dignitaries offered a warm welcome to Moldova, and also provided some context on the state of the telecommunications infrastructure of Moldova and the aggressive plans to move forward with Next Generation Networks.

Summary of the Forum

The Forum consisted of opening and closing ceremonies, an initial orientation session, eight technical sessions plus a panel discussion.

The orientation session focussed on Next Generation Networks as a tool for bridging the Digital Divide. Points emphasized include the immediate applicability of NGN and the fact that the evolutionary steps followed elsewhere did not need to be followed everywhere. Rather, advantage should be taken of the technologies available to leapfrog these stages and achieve an advanced infrastructure with all its advantages in terms of high capability and low cost.

Session 1, "EUR and CIS Regional Developmental issues and Regional Initiatives on NGN and Broadband," focused on ITU-D activities on NGN and Broadband. Regional Initiatives were highlighted and the work of the ITU-D Regional Office in the Region was highlighted.

Session 2 was on "ITU Standardization Activities on NGN and Broadband." It provided an overview of current standardization topics from the three ITU Sectors via presentations from people deeply involved in the work of each of the sectors.

Session 3 was on "Broadband Wireless Access Technologies and Solutions." It included presentations on deployment strategies along with aspects on technology, policy and the need for an enabling regulatory environment. Of particular interest was a presentation on some Broadband deployment planning case studies in the region.

Session 4 dealt with "Trends of NGN Technology and Migration Aspects." Presentations noted the importance of good planning supported by appropriate tools, a review of early and recent deployments and their successes, and a review of ITU-D work in support of NGN deployment.

Session 5 looked at "Policy and Regulatory aspects for NGN and Broadband." A key message in this session and alluded to elsewhere is that regulatory frameworks should not be based on technologies or on service specific licensing, both being approaches which impose limitations due to the differences in the rate of change of technology vs. services vs. regulation.

Session 6 addressed "Interconnection, Interoperability and Security Aspects in NGN." This session looked at interconnection opportunities and issues. An area of significant interest in the work of the ITU-T is conformance and interoperability per Resolution 76 of WTSA-2008. While there are issues in how this is being progressed, there is wide agreement that this area needs more attention than it has been getting, with the aim of minimizing issues in these areas, especially for developing countries.

Session 7 focussed on "NGN and Broadband, New Services and Applications." The convergence of information and communications technologies coupled with the rapid deployment of broadband access provide opportunities to service providers to offer new revenue generating competitive services of high interest to end users, whether enterprise users or individual consumers.

Session 8 on "NGN and Broadband, Opportunities and Challenges," provided an extensive set of presentations on this area. The positive economic impact of investment in telecommunications was noted. A challenge for less wealthy economies is the investment required but this can be substantially mitigated by infrastructure sharing. The opportunities and value of widespread broadband deployment were promoted. Orange Moldova offered a presentation on their HD Voice service first introduced in Moldova, and the participants greatly appreciated how this global "first" created a great deal of positive visibility and publicity for Moldova within the telecommunications world, a country previously not especially well known.

The Panel Session looked at "Ways Forward: How to foster the development of NGN and Broadband in the Region?" The aim was to examine experience and lessons learned in the Region, and how the points raised in this Forum may be applied to address specific problems encountered or anticipated. An outline of the panel including its membership and the topic of each participant's brief statement is provided at Annex 2.

A discussion session followed with interesting comments and questions which continued through to the end of the available time. A relaxed and open environment contributed to the liveliness of the discussions.

In the closing ceremony Dr. Hamadoun I. Toure, ITU Secretary General took part. He made a closing speech and thanked Administration of Moldova for excellent organization of the Forum.

Areas of Special Interest and Key Messages from the Forum

The main aim of this Regional Development Forum was to inform participants of the latest technological developments in the telecommunication sphere, particularly network migration to NGN and the implementation of broadband infrastructures which will facilitate the elaboration of deployment strategies in each country.

The forum also lay emphasis on exchanges of experience in regard to the technical, economic and regulatory considerations aspects of the multimedia networks and broadband multiservice currently in the process of being introduced.

About forty presentations with about one thousand charts were presented over three days. With this volume of information and content, individual presenters face a considerable challenge in achieving a memorable and lasting impact. Overall there were several points that emerged as the key messages across multiple presentations:

What the user sees:
- services
- responsiveness
- available anytime and everywhere

For operators:
- broadband to support user expectations
- convergence on a common IT and communications infrastructure

For everyone, it's all about:
- connectivity anytime, anyplace, any device
- ubiquitous low cost broadband, there whenever you want it, and inexpensive
- convergence of applications across devices without specific user intervention

Achievements of the Forum

This second Regional Development Forum in Chişinău further raised the profile of both the ITU in the EUR and CIS Region, and the visible progress in NGN and Broadband of Moldova. It provided considerable breadth and depth of information for the participants and enabled them to direct their research and investigations in a more coherent and effective manner. It provided many direct references for additional information on topics of concern to he participants.

The program was very full as it normally is for these events. It provided a substantial opportunity for local personnel to present on their direct experiences and needs, an aspect which was very valuable to not only the participants but also to the presenters as it assisted in making the presentations more meaningful to the audience.

The organizers within the ITU-BDT, are deserving of considerable credit in the planning and execution of this event, particularly when noting that many of the speakers volunteer their time and energy.

**ITU-D Regional Development Forum
for
the EUR& CIS Region:**

"NGN and Broadband"

Chisinau (Moldova), 4-6 May 2010

Day 1, 4 May 2010	
09:30 — 10:00	**Opening Ceremony** **Opening Remarks**: ▪ Host country ▪ Chairman of the Forum ▪ Representative of ITU
10:30 — 12:00	**ORIENTATION SESSION : New Telecommunication Technologies Bridging the Digital Divide for Developing Countries** **Session Chairman**: **Representative of the Moldova Administration** **Objectives**: This session will focus on NGN and Broadband new technologies as tool for bridging the Digital Divide for Developing Countries • New Telecommunication Technologies bridging the Digital Divide, **John Visser (Consultant)** • Radiocommunications and Digital Divide, **Alexandre Vassiliev (ITU/BR)** • Trends in ICTs development, **Anatoliy A. Kopylov (Training Institute of the Moscow Technical University for Communications and Informatics)**

13:30 — 15:00	**SESSION 1: EUR and CIS Regional Developmental issues and Regional Initiatives on NGN and Broadband** **Session Chairman**: **O.Kaiykov (Head, ITU Area Office for CIS)** **Objectives**: This session will focus on ITU-D activities on NGN and Broadband with special reference to Regional Initiatives. The activities of the ITU-D Regional Office and experiences in the Region will be highlighted. • The ITU-D Sector Regional Initiatives and Activities for EUR and CIS, **Orozobek Kaiykov (ITU, Area Office, Moscow) and Svein Tenningas (ITU/BDT, Coordination EUR)** • ITU-D Activities on Broadband and NGN, **Riccardo Passerini (ITU/BDT)** ▪ Perspectives of the Russian market of broadband access, **Svetlana Yarlikova (ZNIIS, Russian Federation)** ▪ Development of Broadband in the Republic of Moldova, **Pavel Sincariuc and Denis Dotenco (Ministry of Information Technologies and Communication)**
15:30 — 17:30	**SESSION 2: ITU Standardization Activities on NGN and Broadband** **Session Chairman**: **Albert Nalbandian (CPM-11 Chairman, Advisor to Minister of Transport and Communication of the Republic of Armenia)** **Objectives:** This session will present an overview of current standardization topics from ITU Sectors. ▪ ITU-T Standardization Activities and External Organizations, **John Visser (Consultant)** ▪ ITU-R Standards on Broadband Wireless Access, **Alexandre Vassiliev (ITU/BR)** ▪ WRC as means to facilitate the development of Broadband Wireless , **Albert Nalbandian** (**CPM-11 Chairman, Advisor to Minister of Transport and Communication of the Republic of Armenia)** ▪ ITU-T Standards and activities for bridging the Digital Divide, **Boguslaw Georges Sebek (ITU/TSB)**

Day 2, 5 May 2010

08:30 — 11:00	**SESSION 3: Broadband Wireless Access Technologies and Solutions**

Session Chairman: **Alexandre Vassiliev (ITU/BR)**

Objectives: This session will discuss the status of BWA deployment in the Region. The role of technology, policy and enabling regulatory environment for encouraging wide scale deployment of broadband in the Region will be also discussed

- Broadband deployments and products, **Christoph Legutko (Intel)**
- Broadband Access Network Planning: Case Studies from the Region, **Ignat Stanev (Assoc. Professor, HCTP, Bulgaria, ITC member)**
- Overview of Broadband Wireless technologies, **Albert Nalbandian (CPM-11 Chairman, Advisor to Minister of Transport and Communication of the Republic of Armenia)**
- Broadband systems' features, Statistics and customer expectations, **Christoph Legutko (Intel)**
- Wireless access system evolution, **Anatoliy A. Kopylov (Training Institute of the Moscow Technical University for Communications and Informatics)**
- Architecture of broadband access network – modern vision, **Svetlana Yarlikova** (ZNIIS, Russian Federation)

11:30 — 14:00	**SESSION 4: Trends of NGN Technology and Migration Aspects** **Session Chairman**: **Nikolay Sokolov (St. Petersburg Telecommunication University)** **Objectives:** This session will present the evolution of NGN and future perspectives in the relevant access technologies, service and network architecture with special focus on convergence. The evolution of the network architecture towards NGN (IMS based or otherwise), cases studies and scenarios taking into consideration the relevant business models and opportunities will be highlighted. • Benefit of using appropriate Planning Tools for Broadband and NGN, **Ignat Stanev (Assoc. Professor, HCTP, Bulgaria, ITC member)** • Overview and Progress in implementing next generation networks, **John Visser (Consultant)** • NGN Planning and Migration Paths for Developing Countries, **Nataša Gospić (University of Belgrade)** • The evolution of core transport networks and access technologies, **Nickolay Biryukov (Ukrainian Research Institute of Communications)** • Next generation network planning, <u>Part 1</u>: Methodological aspects, <u>Part 2</u>: Computer-oriented methods, **Nikolay Sokolov (St. Petersburg Telecommunication University)**
15:00 — 16:30	**SESSION 5: NGN and Broadband: Policy and Regulatory aspects** **Session Chairman**: **Anatoliy Kopylov (Training Institute of the Moscow Technical University for Communications and Informatics)** **Objectives:** This session will focus on the challenges that the policy makers and regulators face while considering introduction of NGN and Broadband technologies. Current regulatory frameworks based on technologies and/or service specific licenses have limitations. In order to ensure investment in NGN and Broadband, regulators need to encourage conditions, which lowers entry barriers, promotes competition and encourage investment in infrastructure. • Broadband: changing the game, **Christoph Legutko (Intel)** • International and national spectrum regulatory frameworks, **Alexandre Vassiliev (ITU/BR)** • Broadband Policy and Regulation- Case study from Emerging Market, **Satya N. Gupta (BT Global Services)**

17:00 — 18:00	**SESSION 6: Interconnection, Interoperability and Security Aspects in NGN** **Session Chairman: Svein Tenningas (ITU/BDT, Coordination EUR)** **Objectives:** This session will present the common requirements needed to allow for vendor product interoperability, conformance testing Recommendations and network interconnection. Moreover, Number Portability and Network Address, Translation and Protocol Translation issues will be considered as well as Interconnection of NGN and legacy networks. This session will also provide an overview of security standards and current security standardization work. Security topics will include technologies and convergence • NGN migration in developing countries- Interconnection challenges, role of CBC and IX, **Satya N. Gupta (BT Global Services)** • WTSA-08 Resolution 76: Conformance and Interoperability **, Boguslaw Georges Sebek (ITU/TSB)**

Day 3, 6 May 2010

08:30 — 10:15	**Session 7: NGN and Broadband, new services and applications**

Session Chairman: **Nickolay Biryukov (Ukrainian Research Institute of Communications)**

Objectives: This session will address applications and new services offered by NGN and broadband due to convergence. These applications and services provide opportunities to the service providers for offering new revenue generating services as well as for offering new competitive service for consumers.

- Services Scenarios and Migration to NGN, **John Visser (Consultant)**
- The main trends of synchronization and time distribution in NGN networks, **Nickolay Biryukov (Ukrainian Research Institute of Communications)**
- New Technologies and Services: change and Convergence, **John Visser (Consultant)**
- IMT-Advanced process: current status, new Services and applications for the users, **Halina Uryga (Orange France Telecom Group)**

10:30 — 12:45	**SESSION 8 : NGN and Broadband, Opportunities and Challenges**
	Session Chairman: **Boguslaw Georges Sebek (ITU/TSB)**
	Objectives: NGN provides a number of opportunities for variety of businesses. Those include service providers, application providers, transport providers in the access and the backbone. NGN also provides mechanisms to offer services to residential and business users as well as to re-sellers. Challenges arise from a number of sources like competition, implementation costs, changing marketplaces, complex migration scenarios and regulatory uncertainties. This session aims to provide a state-of-the-art overview on global trends with a focus on Region from different perspectives. This session will present some of the challenges and problems related to the implementation of Broadband Wireless Networks. Security and aspects related to Infrastructure sharing will be analysed
	• Economic Impact of Broadband Implementation: Service bandwidth upgrade and Broadband access technology, **Ignat Stanev (Assoc. Professor, HCTP, Bulgaria, ITC member)**
	• Infrastructure Sharing for Broadband Deployment, **Satya N. Gupta (BT Global Services)**
	• Broadband as an enabler for new services and economic growth for all, **Divna Vuckovic (Ericsson)**
	• Use NGN networks to provide information and financial services to individual customers, **Alexei Chamaiko (Intervale, Russian Federation)**
	• Situational Network resource management and data transmission, **Stepanenko Oleksandr Volodimirovich (Odessa National Academy of Telecommunications)**
	• Mobile HD Voice, **Liudmila Climoc (Orange Moldova)**
13:30 — 14:45	**SESSION 8 (continued) : NGN and Broadband, Opportunities and Challenges**
	• Universal Service Broadband Opportunities and Challenges, **Nataša Gospić (University of Belgrade)**
	• Operators HSPA experience and path towards LTE, **Peter Zidar (UMTS Forum)**
	• Mobile Broadband Everywhere: Spectrum for Services, **Wladimir Bocquet (Orange France Telecom Group)**

15:15 — 16:15	**SESSION 9: Panel Discussion** **Session Chairman**: **John Visser (Consultant)** **Ways Forward**: How to foster the development of NGN and Broadband in the Region? **Objectives**: This discussion aims to examine experience and lessons learned in the Region, and how the points raised in this Forum may be applied to address specific problems encountered or anticipated. The Forum will close with a brief summation by the Chairman of the Forum.
16:15 – 17:15	**Closing Ceremony** • Closing remarks: ITU/BDT • Closing remarks: Host country

Annex 2 - Panel Session Participants and Topics

Ways Forward: How to foster the development of NGN and Broadband in the Region?

Moderator: John Visser (ITU Consultant)

Objective: This discussion aims to examine experience and lessons learned in the Region, and how the points raised in this Forum may be applied to address specific problems encountered or anticipated.

Panellists:

- **Divna Vuckovic (Ericsson):** Experience in supporting operators in fostering Broadband and NGN development and related services; the importance of convergence.
- **Peter Zidar (UMTS Forum):** Operators' experience and the path for introducing new technology for the development of Broadband in the Region.
- **Denis Dotenco (Republic of Moldova):** Challenges and action for facilitating the development of Broadband in the Region.
- **Alexandre Vassiliev (and on behalf of Boguslaw Georges Sebek and Riccardo Passerini):** ITU assisting the developing countries for the development of NGN and Broadband in the Region; unified standards, spectrum allocation, wireless Broadband development and operation.
- **Ignat Stanev (ITC Forum, Bulgaria):** Use of Network Planning Tools to facilitate the development of NGN and Broadband in the Region.
- **Satya Gupta (BT Global Services, India):** how Policy makers and Regulatory bodies can facilitate the development of NGN and Broadband in the Region.
- **Nataša Gospić (University of Belgrade):** Universal Service and opportunity for development of Broadband in the Region.
- **John Visser (ITU Consultant):** from PSTN/ISDN to NGN Migration: how to select the right strategy.
- **Svetlana Yarlikova (Russian Federation):** Perspective of the market for Broadband access in the Region.
- **Jerome Poulnin (Orange Moldova):** Moldova experience in HD Voice and mobile Broadband.

Annex 3 - Overview of Participation

The Participant List is available [here](#).

Participations came from:

Country	Government / Regulator	Industry	Other
Armenia	1		
Azerbaijan	1		
Bulgaria			1 ITC
Canada			1 ITU Consultant
Croatia	2		
France		2 Orange	
Germany		1 Intel	
Kazakhstan	1		
Kyrgyz Republic	2		
Moldova	24 MTIC 22 SE "SIRC "Registru" 5 SE NCRF 5 SE "MoldData" 6 SE "Radio communications" 3 SE "ELIRI" 1 Cancelaria de Stat 1 PST 1 Moldpak 3 Poșta Moldovei 1 RENAM	3 Moldtelecom 1 Ericsson 2 ZTE 1 SUN Communication	3 Institute of Mathematics and Informatics 7 NRAECIT 1 UNDP 1 Independent Expert 1 Softprom 2 TUM 1 RISCOM 1 KVAZAR-micro SRL
Romania	2		
Russia			1 Intervale 1 Moscow Technical University 1 SPSUT, St. Petersburg 1 ZNIIS Research Institute
Serbia		1 Ericsson	1 University of Belgrade
Slovenia		1 Mobitel	
Switzerland			1 ITU Sec.-Gen. 2 ITU-D 1 ITU-R 1 ITU-T 2 ITU Area Office - CIS
Tajikistan	1		

Country	Government / Regulator	Industry	Other
Ukraine			1 Ukrainian Research Institute of Communications 1 Odessa National Academy of Communications
Uzbekistan	1		

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