GLOBAL Communications NEWSLETTER

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12th Conference of Open Innovations Association (FRUCT) and Regional Seminar on e-Tourism, Finland

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The article summarizes our experience on development of open innovations cooperation framework in the field of ICT between Finland and Russia. This project is financially support by KA-179 grant of ENPI Karelia CBC programme1 and targeted in development of regional open innovations ecosystem by using help and best practices of FRUCT Association2.

Petrozavodsk State University, University of Oulu and St. Petersburg Institute for Informatics and Automation of Russian Academy of Sciences (SPIIRAS) have positive history of the cross-border collaboration and the new development has helped to enhance it and take to the next level on top of FRUCT principles. The last 1.5 years of project work resulted in good contribution to development of the regional ecosystem and the key milestone in these activities was invitation of FRUCT community to Oulu. The 12th conference of Open Innovations Association FRUCT was hosted by Center for Internet Excellence, University of Oulu on November 5-9, 2012.

The 12th FRUCT conference was organized in a form of vivid forum to foster mutual dialogue and knowledge sharing between industrial and academic researchers and facilitate search of new partners and cooperation opportunities. Consequently, the conference social interactions and informal ad hoc meetings of the attendances have the key role for community development. Most of time one could see as much people chatting and making ad hoc demos in the areas next to the conference rooms, as in conference sessions. Remarkable amount of attendances from Russia and Finland and not only have approved increasing awareness of cross-border cooperation importance. Taking into account that networking and partnership development between academy and industry from different countries, especially Russia from one side and Finland on another side, are the core FRUCT conference objectives, we can conclude that the 12th FRUCT conference has reached its goal.

All together 52 papers were submitted, out of which 25 were published as full papers in the conference proceedings with ISSN 2305-7254. All accepted papers are also available online at http://fruct.org/publications/fruct12/.

At the FRUCT conference variety of intensive courses, workshops, trainings, seminars and demo section were conducted. For instance, intensive course on Mobile Healthcare and e-Healthcare, training on 3D Internet programming with open source development platform realXtend http://realxtend.org/, workshop on Rapid Low-Fi prototyping techniques for design and many other events targeted in exchanging competences and best practices. For more information we welcome you to visit www.fruct.org/program12.

e-Tourism in Karelia and Oulu Region

Dialogue and interactive discussions between academic researchers and tourism business representatives from Russia and Finland were an integral part of the seminar on e-Tourism in Karelia and Oulu Region3 held on November 7, in co-location with the FRUCT conference.

A set of presentations given by invited academic and industrial experts, the round table discussion and training on Geo2Tag open source platform (http://geo2tag.org), have created productive atmosphere for exchanging of best practices on using perspective approaches and latest information technologies for the development of e-tourism services and infrastructures in Karelia and Oulu regions. A number of interesting and perspective ideas targeted in increasing tourist awareness about the region were discussed and to be deployed by our team and FRUCT within scope of ENPI Karelia CBC KA322 project.

Call for Participation in the 13th Conference of Open Innovations Association FRUCT

To enhance success of the 12th conference, FRUCT Advisory Board has recommended to organize the next conference on Russian side in the same region. The 13th FRUCT conference will be held at Petrozavodsk State University on April 22-26, 2013. The conference focus will be on enhancing cross-boader cooperation ecosystem, development of academia-to-industry community and presenting research results in the hottest areas of ICT. As usually the conference is free of charge and we welcome all to submit your research papers and benefit of joining the community. More detailed information about the 13th FRUCT conference can been found at FRUCT web page www.fruct.org/conference13.

1 The Karelia ENPI CBC Programme is a cross-border cooperation programme implemented in the regions of Kainuu, North Karelia and Oulu in Finland and the republic of Karelia in Russia. The programme is funded by the EU, Finland and Russia.

2 Association FRUCT is Open Innovation community established in 2007. More information about FRUCT can be found in MBA thesis of Sergey Balandin, http://publications.theseus.fi/handle/10024/48117.

3 This seminar was a part of ENPI Karelia CBC KA322 project "Development of cross-border e-tourism framework for the programme region (Smart e-Tourism)" co-funded by the European Union, the Russian Federation and the Republic of Finland.

Romania Ten Years of Telecommunications Liberalization and Regulation: An interview with Marius Catalin Marinescu, President of ANCOM, Romanian Telecoms Authorithy

By Nicolae Oaca

Which was the Romanian way from monoply to competition?

By market liberalization, 1st January 2003, only a few important players were active in Romania: RomTelecom, the incumbent, four cellcos, Telemobil, CosmoRom, MobiFon and MobilRom, and a lot of smal cablecos covering different parts of the country. Ten years later, our market is richer: four cellcos (Orange, Vodafone, Cosmote, RCS&RDS), a few large telcos -RomTelecom, RCS&RDS, UPC, DCS- and a lot of small players spread througout of the country, many of them providing bundled services: three/four/five plays, RCS&RDS being a frontruner.

After liberalization, we had the most important M&As consolidating the market: MobilRom became Orange Romania, MobiFon became Vodafone Romania, Astral became UPC Romania, while RCS&RDS became an important national and regional player.

Marius Catalin Marinescu

Mobile usage has increased rapidly from 5mn SIMs in 2002 to 23mn ten years later. Fixed telephony penetration was one of the lowest in Europe, ~20% in 2002, and after ten years it remains low at 25%, due to mobile telephony adoption. Interent usage, low at 17%, has increased continuosly fueled by investments in optical fiber and 3.5G networks, Romania being constantly ranked in top ten by the acces speed. Tv services users stagnate at 5.9mn, but in the last decade quality and competition were improved by the new technologies: DTH, IPTV and digital TV.

Since 2009, Romania, as other European countries, is facing an economic downturn, strongly influencing telecommunications. Industry turnover has experienced a 23.5% decrease from 4.6 billion euros in 2008 to 3.5 billion euros in 2011. The number of mobile users decreased 6.8% from 25.1mn in 2009 to 23.4mn in 2011. The only increase was that of Interent usage, due to poor penetration, and high speed packages. In 2009, economic crysis revealed a failure: Greece's Cosmote aquired Telemobil, our first cellco, due to the company's problems exacerbated by the crysis.

Due to Romania's macroeconomics and strong competition, our tariffs are among the lowest in Europe, but the market leaders, Orange and Vodafone, reported huge net profit margins: over 30% before the economic crysis and about 20%, respectively 13% in 2011.

Our first decade of liberalization was dedicated to guiding the industry from monopoly to competition and this has proved to be a succes story, as now Romania is one of the most competitive markets in Central Europe, according to the statistics.

What about the Romanian spectrum auction in 2012, the"largest ever" in CEE?

This was the first Romanian spectrum auction. We started preparing it in 2010, after the German auction. The team in charge with the auction design, planning and organizing included people with legal, technical, economic and IT expertise. We started by studying classical references in spectrum auctioning, analyzing the worldwide spectrum auctions, and attending workshops. ANCOM also hosted, on 30 March 2012, a regional workshop dedicated to planning and organizing a spectrum auction held by NERA experts and attended by the members of the CEE Regional Working Group.

In early 2011, we started consulting with the industry on specific topics: MVNOs regulation, spectrum pricing, prolongation of expiring licenses, freeing-up 800 and 2600MHz bands, etc.

On March 14th 2012, we launched a public consultation on the spectrum auction documents including offered spectrum, licenses duration, starting prices, auction format and schedule, while on July 2nd we officially launched invitations to attend the first Romanian spectrum auction. On 10th September, the bell rang for the first auctioning round, and the auctioning process was concluded on 24th September after the last allocation round.

We sold 485MHz in the 800MHz, 900MHz, 1800MHz and 2600MHz bands, increasing the spectrum available for cellcos by 77% and raising 682 million euros. Orange, Vodafone and Cosmote won licenses in all the offered bands, RCS&RDS got a paired bloc in the 900MHz band and a newcomer, 2KTelecom, obtained two unpaired blocks in the 2600MHz band.

For the first time in Romania, Cosmote, RCS&RDS and 2K Telecom have undertaken the obligation to host MVNOs, while any cellco covering 30% of the population with its own radio access network may benefit from national roaming for three years, two important steps in fostering competition. 676 rural localities underserved with communications networks will be covered with priority.

We did it without a consultant and we did well, as all the objectives were attained and the participants were unanimous in appreciating the quality of the auctioning process. I am expecting a period of massive investments in new networks, new jobs, and an important contribution to the country economic growth to help economic recovery.

How did ANCOM become a national and regional excellence center?

Organizational excellence

Romanian regulatory body was set up in September 2002, while todays authority is the results of many transformations and a merger with the national frequncy agency. The peace from the last few years allowed us to think about our organisation, improving structure, culture and resources and building on a new image. Organizational excellence is at the center of our activity, but our key succes factor is our personnel, keeping people well-trained and motivated in an economic stormy context, A very successful spectrum auction in a critical time period and unanimous positive opinions of the participants, a competitive market are proving a proactive, independent and performant authority, able to cope with critical topics in hard times.

ANCOM: an important international player

ANCOM is also very active internationaly, in the last few years we obtained the vice-chair position of BEREC and also vice-chair of the European Regulators Group for Postal Services.

The Digital Divided is coagulating the CEE

At the South-East Europe Ministerial Summit on the Digital Dividend, in Belgrade, June 2010, we proposed a portal dedicated to coordinating the digital dividend band usage in our region, expressing our readiness to create and operate such a portal together with a working group. Our proposal was accepted.

In March 2011, we prepared a draft version of the regional portal and invited the regulators in our region to join the regional project.

On 12th May 2011, we organized in Bucharest the first meeting of the CEE Regional Working Group, deciding on the main issues on the portal: content, technical functionalities, working rules.

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Distinguished Lecturer Tour of Xavier Fernando in Colombia and Panama

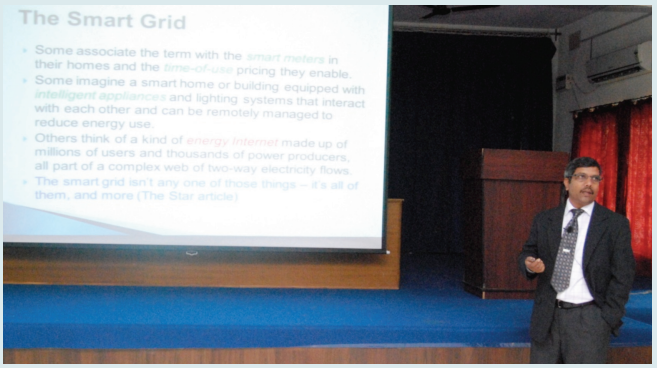
By Xavier Fernando, Amir Sepasi Zahmati, and Thambu Kuganeswaran, IEEE Toronto Section, Canada

Prof. Xavier Fernando has delivered invited lectures on various exciting topics in the past including Cambridge University, UK and Princeton University, USA. Consecutively, he was recognized with IEEE Communications Society Distinguished Lecturer designation in January 2012. He received number of invitations from various countries, especially from South American countries due to his popular lecture series on underground wireless communication systems and communication requirements for the smart grid.

He agreed to visit Colombia and Panama during May 16 – 23, 2012 where he had a very successful Distinguished Lecturer Tour. He visited three different cities delivering four lectures, thanks to the support of Eng. Carlos Andrés Lozano Garzón, IEEE Colombia Section Chair and DLT Coordinator, Prof. Andres Navarro Cadavid, the IEEE Section Chair and the key organizer of the COLCOM, Prof. Juan Manuel Madrid Molina (Cali), Prof. Gonzalo Ulloa Villegas, and Prof. Roberto Bustamante Miller.

The tour started at the Cali Chapter in Colombia. On Wednesday, May 16, Dr. Fernando arrived in Cali. He visited the ICESI University in Cali on May 17, and received warm welcome from Professor Gonzalo Ulloa Villegas (Dean of the School of Engineering). His DL was part of the IEEE Colombia Communications Conference (COLCOM http://ieee-colcom.org/) 2012, a very well organized conference that played a valuable role in enhancing Colombian student experience. He also attended the welcome ceremony and technical sessions of COLCOM on Thursday, 17th and Friday 18th.

Dr. Fernando delivered a lecture on underground communication systems in COLCOM. He started the lecture with bringing awareness to the challenges faced by miners and the difficulties in providing basic communication services to the deep mines underneath the earth. His referral to the Chilean miner incident where 33 miners were trapped 2300 feet deep for 69 days triggered an emotional moment among the audience. Then he highlighted design challenges, and addressed cross-layer optimization issues. He elaborated the radio-over-fiber systems that play a key role in bringing the radio signals to deep mines, associated nonlinear distortion issues and his patented compensation technology. Then he discussed the MINER act that requires tracking of coal miners, the technical challenges associated with developing a reliable tracking system in irregular harsh mines with ever changing topology.



Xavier delivering the talk regarding the smart grid in Bogota, Colombia.

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6th IEEE Lebanon Communications Workshop (IEEE LCW'12) Attracts More Than 200 Participants at the University of Balamand

By: Dr. Chafic Mokbel, Lebanon

The 6th IEEE Lebanon Communication Workshop 2012 (IEEE LCW'12) has been hosted in the University of Balamand on Saturday November 17, 2012 and was jointly organized by the IEEE Communications Society Lebanon Chapter and the University of Balamand. Thanks to the platinum corporate support from Alfa, the first Lebanese mobile operator managed by Orascom Telecom, and silver corporate support from National Instruments Arabia, the workshop attracted more than 200 participants including students and professors from different universities in Lebanon in addition to telecom professionals from various companies. The workshop formed an excellent forum to exchange information and discuss the very state of the art topics of machine-to-machine communications, internet of things and green communications.

In the opening ceremony, the topics were well motivated by showing their importance and their potential and strategic positions in the current communications ecosystem. This opening session was also the occasion to present the IEEE Communications Society Lebanon Chapter and to welcome the participants at the University of Balamand.

A first technical session was dedicated to machine-to-machine (m2m) communications. A presentation from Ericsson showed clearly the potential of this technology in building the networked society across several sectors that include smart transportation, e-health, smart grids, etc. A presentation by Nokia Siemens Networks then focused on standardization aspects and how m2m is being considered within LTE-A. Finally, a speaker from Alfa provided the audience with the operator's point of view, about the role of the operator in paving the way for m2m and green communications to proliferate into the market, and by describing the challenges/opportunities m2m provides in terms of dimensioning, pricing, and marketing.

Opening plenary session.

The second session started with a presentation from the Lebanese Telecom Regulatory Authority (TRA) on the regulatory aspects of m2m communications in terms of numbering, security, and market competition. A second presentation from Cisco highlighted the vision towards the internet of things in developing the virtual world and virtual communities. Finally, a presentation from Orange Labs discussed solutions currently under research to reduce the energy consumption in cellular networks.

The third session focused on smart power grids and how wire-

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FERNANDO LECTURE/*continued from page 3*

There were about 60 attendees, some faculty members, a few industry people, and many graduate and undergraduate students, from ICESI and other nearby universities. The audience showed a great interest in the topic, and actively participated in the Q&A period after the presentation.

Dr. Fernando's second stop was at Bogota, the largest city in Colombia. He arrived in Bogota Saturday afternoon, and the DL was arranged at 5 PM at the Universidad de los Andes. He was introduced by the Engineering Head Prof. Roberto Bustamante Miller who was very interested in space division multiple access and multiple input multiple output (MIMO) systems. Dr. Fernando delivered two lectures, 'Communication Systems for the Smart Grid' and 'Underground Communication Systems' in Bogota. There were 75 attendees for the event. Most of them were from the industry.

He started the lecture with a discussion on how the smart grid is referred as the 'Internet of Energy' by some people. There are some big challenges before the grid transforms from the traditional centralized generation to upcoming distributed generation approach. The (analog) energy upload to the grid is not as simple as the data upload to the Internet. In addition, storage of energy is a very expensive practice in the power industry (compared to data storage in the IT industry). Therefore, the power grid has to be continuously optimized catering for fluctuations in demand and generation. Smart grid communications infrastructure will play a very critical role in this scenario. He elaborated on the smart grid communication networks can be categorized into Home Area Networks (HANs); Neighborhood Area Network (NAN) and Wide Area Network (WAN).

Especially, he highlighted how the emerging plug-in electric vehicles create a new challenge to the grid. The electric vehicles can be considered as the mobile portion of the smart grid. In addition to the well known range anxiety to the users, these vehicles also create a demand anxiety to the utilities. He also mentioned how his research project (funded by utilities and government) help providing wireless connectivity to electric vehicles to partly solve this problem.

The audiences, many of them are from utilities, showed a very keen interest in learning about the smart grid as they were new to communication technologies. Especially there was keen interest on IEEE P2030, how it emphasizes the inter-operability at higher layers.

After the Bogota lecture, Dr. Fernando met Mr. Andres Assmus who is the CEO of the IT-Green Group that has some operations in Montreal. Mr. Assmus was very keen on some of Dr. Fernando's research initiatives. During Prof. Fernando's visit in Colombia, IEEE student members provided great hospitality. On Sunday May 20 and Monday May 21, they took Prof. Fernando around the Bogota city.

On Tuesday, May 22, Prof. Fernando delivered his fourth lecture at the Panama Section. It was at the Doubletree by Hilton Hotel. The meeting room was full although they had to pay and register in advance. Most audiences were from the local utilities, and they were interested in learning the upcoming standard on the Smart Grid. The audience got into discussion about the broadband over power line standard P1901 and its similarity with 802.11 series standards, especially in OFDM related aspects.

Some professors were also keen on learning about Prof. Fernando's current research of providing wireless communication solutions in special areas such as aircrafts, hospitals and underground mines. Some others were interested on how he incorporates communication solutions in other areas such as smart grid and smart buildings.

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ROMANIA TELECOM/*continued from page 2*

The CEE Regional Working Group is now composed by 13 authorities from Albania, Bosnia&Herzegovina, Croatia, Greece, Hungary, FYRMacedonia, Moldova, Montenegro, Romania, Serbia, Slovenia and Turkey.

ANCOM organized in Bucharest, on 29-30 March 2012, the first technical meeting of the Regional Group, http://www.ceeregionalworkinggroup.net/news.php?extend.16.4, on spectrum coordination. 14 authorities from 11 countries attended this event, the first day being dedicated to the regional spectrum coordination. At the end of the day, principles for a regional coordination were presented, and, based on them, two draft agreements for regional coordination of 800MHz and 2600MHz bands. Both agreements were in consultation within the group in 2012, their signature being expected in 2013.

Looking to the future?

We strongly believe in the driver role of telecommunications for Romania's economic growth and we are looking to remain an independent, proactive and market oriented authority aiming at connecting Romania to high speed networks to stimulate businesses and national welfare. Predictable and stable rules are very important, so we are thinking about a medium term strategy to attract investments, to protect end-users, to better use the scarce resources. Balancing investment and competition is the key factor in developing national broadband networks and providing modern and cheaper services to our administration, citizens and businesses. We have to look to the rural areas to reduce the gap and increase coverage, competiton and adoption. For adoption, we have to act on both sides: supply, by stimulating high speed networks deployment, and demand side, by increasing Internt usage in administrating Romania.

LEBANON WORKSHOP/*continued from page 3*

less sensors can be used as part of an infrastructure to optimize power distribution efficiency. First, a speaker from the CEDRO-UNDP project presented an overview on smart grids and highlighted ongoing activities to install renewable energy sources in public schools in Lebanon. This was followed by a speaker from the Lebanese University who highlighted various research projects regarding wireless sensor and actuator networks for monitoring and control in power grids.

The workshop day ended with a small conclusion iterating the strategic importance of the topics covered. For more details, please check http://www.comsoc-lebanon.org/.