

GLOBAL Communications NEWSLETTER

April 2014

2013 IEEE Latin America Conference on Cloud Computing and Communications

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and Antonio Tadeu Gomes (LNCC), Brazil*

The 2013 IEEE Latin America Conference on Cloud Computing and Communications (LatinCloud 2013) is the second edition of a conference that aims at becoming the premier forum for discussions of recent advances in cloud computing and communications, virtualization, utility computing, grid computing, service-oriented architectures, and software-defined networks for the datacenter in this region of the world. The Cloud Computing and Communications paradigm has defined unprecedented business models, promoting on-demand computing resource allocation, elastic scaling, and elimination of up-front costs. Capitalizing on paradigms such as virtualization, utility computing, grid computing, and service oriented architectures, cloud computing and communications has already changed the way we compute and communicate. To cope with technology challenges for the support of diverse services and applications, the IEEE Communications Society (ComSoc), Latin America Region, with the support of the IEEE Cloud Computing Initiative, supported the 2013 IEEE Latin America Conference on Cloud Computing and Communications (LatinCloud 2013). The conference has the goal of establishing a scientific forum for the discussion of the rather relevant topic of cloud computing and its critically associated aspects of communications in the Latin American context.

The second edition of LatinCloud was held in Maceió, Brazil, in 09-10 December 2013 at the Ritz Lagoa da Anta Urban Resort. In this second edition, LatinCloud received 25 submissions from nine different countries, and 38 TPC members selected 10 papers for oral presentation along four technical sessions. The topics of accepted work included applications, services selection, middleware platforms, and testbeds, among others. In addition, two keynotes (From Cloud Computing to Cognitive Computing: Challenges and Opportunities – Marco Netto, IBM; Mobile Cloud Computing – Guy Pujolle, Pierre et Marie Curie University – Paris 6), two panels (Industry Perspective of Cloud Computing and Communications; Research Trends in Cloud Computing and Communications), and one lab tools session were presented. The success of the LatinCloud 2013 was possible due to the submission of high quality research papers from the authors, as well as



Industrial panel session.



Keynote speaker session.

the careful work done by the TPC members and reviewers in the review process.

The success of the second edition of the conference was a reality because of the efforts and critical support and help from key people. LatinCloud is now a reality because of these people. We thank Doug Zukerman for his invaluable support and also Kathy Grise from the IEEE Cloud Computing Initiative and Bruce Worthman from ComSoc. Organizing a conference like LatinCloud was only possible because of the support of sponsors and the volunteer work of general and local organizing committees. Because they made the second LatinCloud edition possible, we would like to thank CAPES and CGI.br for their financial support as well as Aloo Telecom for the infrastructure support. We also thank the precious contribution of the organizing committee members, namely: Jose Neuman de Souza (Keynote Chair); Nelson Fonseca (Steering Committee and Discussion Panel Chair); Heitor Ramos (Local Arrangement Chair); Marco Aurelio Stelmar Netto (Cloud Tools Lab Chair); João Henrique Kleinschmidt (Financial Chair); and Javier Baliosian (Publicity Chair).

Finally, because we believe the success of the first two editions of LatinCloud paved the way for the next editions to come, we also need to thank the Federal University of Alagoas (UFAL), the Federal University of the ABC (UFABC), the Federal University of Pernambuco (UFPE), and the Brazilian Computer Society (SBC) for their invaluable support. Last, but not least, we want to thank the great team of students from the Scientific Computing and

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4th International FOKUS FUSECO FORUM: Smart Communications Platforms for Seamless Smart City Applications

By Prof. Dr. Thomas Magedanz, General Chair, Fraunhofer FOKUS/TU Berlin, IEEE Senior Member, Germany

The FOKUS FUSECO FORUM (FFF) 2013 was the fourth event in the successful series of FFF and attracted again around 250 academic and industry telecommunication specialists from 30 different countries. Two full days with technical tutorials, workshops, conference, booths, and live demonstrations were offered. As part of the evening program and before the dinner, a keynote on “New Strategies for Network Operators to assure Innovation and Sustainability in a new Competitive Environment/Smart Cities” was given by Heinrich Arnold (Deutsche Telekom AG, Germany).

The FUSECO FORUM has proven again to be a unique annual event discussing hot topics of service control platforms evolution for fixed and mobile next generation networks toward Smart Cities. The FUSECO program started with four parallel lines of tutorials and workshops, which found great interest. The second day of FUSECO managed to bring together further aspects of the previous day in the form of a four session conference with presentations and a panel. Among the demonstrations were the presentation of the new features of OpenEPC Rel.5 - Open Evolved Packet Core (<http://www.openepc.net/>), the official release of the OpenSDNCore – The Future Massive Broadband Communications Platform (<http://www.opensdncore.org/>), and the public presentation of the OpenMTC Rel.2 (www.open-mtc.org/).

Tutorial and Workshop 1 – RCS vs. OTT

Tutorial 1, “Understanding NGN Control and Service Platform Evolution – SDP/IMS/MTC/EPC vs. Clouds/OTT/WebRTC/HTML5,” held by Prof. Dr. Thomas Magedanz and Dr. Niklas Blum, was attended by approximately 80 delegates and set the floor for this year’s FUSECO FORUM. It defined Smart Cities as a major Future Internet research use case which now becomes very relevant for the industry. The half-day interactive workshop on “VoLTE/RCS vs. OTT – Challenges and Advances for Launching Successful Fixed and Mobile Broadband Services,” was led by Dr. Niklas Blum from Fraunhofer FOKUS, Germany, and Prof. Dr. Axel Küpper from TU

Berlin/Deutsche Telekom Laboratories. The workshop featured 10 presentations reflecting a Telecom and Internet/over-the-top (OTT) service provider perspective on service-related topics such as a RCS/VoLTE introduction, an operator view of the integration of carrier voice services with OTT voice, WebRTC and cloud-based service platforms for future rich communication services to be deployed on a global scale.

A lively panel discussion titled “Tackling Time to Market for Telco Service Provisioning – Platform Requirements and Business Opportunities” concluded this workshop.

Tutorial and Workshop 2 – M2M

The M2M tutorial presented different M2M and IoT topics covering key technological and business aspects. The tutorial started with the economic perspective, related business models, requirements and various challenges. Then it explained the M2M and the IoT terminology and the evolution path from M2M toward IoT.

Two workshops addressed the topics “M2M Platforms and Enabling Capabilities” and “M2M Services & Applications,” followed by a panel. The sessions have been chaired by Adel Al-Hezmi, Fraunhofer FOKUS, Berlin, Jürgen Hase, Vice President M2M Competence, Deutsche Telekom, Germany, and Timo Pötzlberger, M2M, Telefónica Germany GmbH & Co. OHG, Germany.

Both sessions dealt with the current status of the M2M market from different perspectives presented by operators, industry, and research. During the latter the panelists discussed the current key challenges for deploying M2M solutions to enable smart cities.

Tutorial and Workshop 3 – SDN & NFV

Approximately 40 to 50 telecommunication experts participated in the third tutorial and workshop on day one of FUSECO entitled “Getting Started on Your Core Network Evolution using OpenEPC: SDN and NFV,” given by Dragos Vingarzan and Marius Corici, both from Fraunhofer FOKUS. Workshop 3 with 11 presentations on “Evolution of the Operator Networks beyond EPC: SDN, NFV and MCN” also included an EU FP7 MCN Workshop hosted by the Chairs: Thomas Michael Bohnert, ZHAW, Switzerland, Julius Mueller, TU Berlin, Fraunhofer FOKUS, and Marius Corici, Fraunhofer FOKUS, which consisted of two interactive sessions and one panel that brought together standardization organizations and network operators.

Workshop FI-PPP

With more than 50 guests and speakers participating, the international FI-PPP

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Distinguished Lecturer Tour of K. K. Ramakrishnan in Kolkata, India, 2013

By R. Nandi and P. Venkateswaran, ETCE Dept., Jadavpur University, Kolkata, India

With the approval of the IEEE RAB Committee, the IEEE ComSoc Kolkata Chapter (affiliated with the IEEE Kolkata Section) was formed on Oct. 13, 2003, and the Chapter is now fully active. The Chapter had participated in the DLT in 2007, 2008, and 2010. The Chapter had also participated in the DLT in 2013, with Dr. K. K. Ramakrishnan, Fellow, AT & T Labs–Research, Florham Park, NJ, USA, as Distinguished Lecturer.

The Lecture was organized on August 10, 2013 (Saturday) at Wipro Limited, Salt Lake, Kolkata between 11am and 1pm. In his welcome address, Prof. R. Nandi, Chairman, IEEE ComSoc Kolkata Chapter, highlighted the activities of the Chapter, especially the membership recruitment drive initiated by the Chapter. Then Dr. K. K. Ramakrishnan delivered his lecture, entitled “Networking the Cloud: Enabling Enterprise Computing and Storage.” He started the Lecture with a brief introduction of Cloud Computing. He proposed a Virtual Cloud Pool abstraction to logically unify cloud and enterprise data center resources, and presented the vision behind CloudNet, a cloud platform architecture that utilizes Virtual Private Networks to securely and seamlessly link cloud and enterprise sites. Dr. Ramakrishnan explained how WAN latency between a cloud site and an enterprise can become a major performance bottleneck when synchronously replicating an application’s data into the cloud, and then described their pro-



Dr. K. K. Ramakrishnan, Distinguished Lecturer, addressing the gathering.

posal, called “pipelined synchrony,” to address this problem.

The audience interacted with the Speaker during the Lecture and just after the conclusion of the Lecture. The program provided a rare opportunity for the researchers and industry members of the ComSoc Kolkata Chapter to have first-hand information on Cloud Computing from the Distinguished Lecturer. A total of 50 participants (IEEE members – 30, student members – 5, non-members – 15) attended the DLT 2013. Dr. Swarup Mandal presented a memento to the speaker on behalf of Wipro Limited. Ms. Shilpa Basu proposed a vote of thanks. Prof. R. Nandi and Dr. P. Venkateswaran, Dept. of Electronics & Tele-Communication Engineering at Jadavpur University, Kolkata, India were the Joint-Co-ordinators of DLT 2013.



(Left to right) Ms. Shilpa Basu, Dr. P. Venkateswaran, Prof. Rana Dattagupta, Dr. K. K. Ramakrishnan, Prof. R. Nandi, Dr. Swarup Mandal, Mr. Samir Kr. Sadhukhan, Dr. S. Sankaralingam, Mr. Saran Basappa.



Participation profile: IEEE members — 30; student members — 5; non-members— 15.

workshop was very well attended and provided a comprehensive overview of the status of all currently running projects of the FI-PPP program. To discuss synergies and sustainability options and give an outlook on the next phase, the workshop especially involved FIRE and EIT ICT Labs representatives.

The agenda started with an overview of the current status of the FI-PPP at the program level. Subsequently, the status of the FI-PPP Core Platform FIWARE, FI-PPP's Usage Areas (FISTAR, FI-SPACE, FI-CONTENT, FINESCE, FITMAN), as well as the status and achievements of FI-PPP's Infrastructure and Capacity Building projects (INFINITY, XIFI) were presented.

With representatives and presentations from the European Commission, the FI-PPP's program-wide coordination action CONCORD, Europe's Future Internet Research and Experimentation (FIRE) initiative, and from the European Institute of Innovation and Technology (EIT) ICT Labs, several options for sustaining FI-PPP's results and also approaches for future exploitations were openly and lively discussed.

FUSECO Conference Day Two

The second day united the different tracks of the previous day under the main theme of this year's FFF by a full-day conference on "Smart Communication Platforms for Emerging Smart Cities," which featured 18 presentations from various international network operators and standardization bodies.

After the conference opening by Prof. Dr. Thomas Magedanz, Prof. Dr. Radu Popescu-Zeletin, Director of Fraunhofer FOKUS, delivered a keynote on "Smart Cities and the Role of Smart Communication Platforms." The

first session, chaired by Prof. Dr. Noel Crespi from Telecom SudParis, France, addressed the status quo of Fixed and Mobile Broadband Deployment and Evolution Path. The second session, chaired by Prof. Dr. Magedanz, looked deeper into the SDN/NFV work performed in the NGMN Alliance and ETSI. After the lunch break Dr. Anastasius Gavras, Eurescom, Germany, chaired a panel discussion on "Do We Need Common Smart Communication Platforms or Will Smart Cities Finally be a Loose Aggregation of Smart Services?" with experts from various standards bodies and network operators. Prof. Dr. Stefan Fischer from the University of Lübeck, Germany led Session 3, which provided talks on ongoing M2M standardization work within 3GPP as well as emerging M2M platforms from Deutsche Telekom and Telefonica. The final session, entitled "Integration of M2M and H2H Communications within Smart City Infrastructures," chaired again by Prof. Magedanz, looked at major international initiatives toward prototyping Smart Cities.

Outlook – FUSECO Forum Asia and FOKUS FUSECO FORUM 2014

Following the continued success of FUSECO in Berlin, Germany, the new established first FUSECO Forum Asia is about to take place in Nusa Dua, Bali, Indonesia on June 11-12, 2014 under the theme: "Future Telco Ecosystem within Smart City and Beyond." This event will be co-chaired by Joddy Hernady (Senior General Manager of the Innovation Development Centre (IDEC)) and Prof. Thomas Magedanz (TU Berlin/Fraunhofer FOKUS). The 5th FOKUS FUSECO Forum themed "ICT Platforms for Flexible and Innovative Ecosystem Enablement within Smart Cities and beyond" in Berlin on November 13-14, 2014 in Berlin will be chaired by Prof Magedanz. Please find more information, event minutes, presentations and photos at www.fuseco-forum.org/ and www.fuseco-forum.asia.

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Visualization Laboratory (LCCV) of UFAL who formed the local organizing committee. Without their unconditional dedication the realization of LatinCloud 2013 would not have been possible.

For further information about LatinCloud, please visit the conference portal at <http://www.ieee-latincloud.org>.

Executive Committee

General Co-Chair: Carlos Kamienski, Federal University of ABC (UFABC).

General Co-Chair: Stenio Fernandes, Federal University of Pernambuco (UFPE).

TPC Co-Chair: Lisandro Zambenedetti Granville, Federal University of Rio Grande do Sul (UFRGS).

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