

Global Communications Newsletter

December 2010

International Conference on Wired/Wireless Internet Communications (WWIC 2010)

*By Evgeny Osipov, Luleå University of Technology, Sweden; Andreas Kassler, Karlstad University, Karlstad, Sweden;
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The eight International Conference on Wired/Wireless Internet Communications (WWIC) 2010 took place on 1–3 June, 2010, in Luleå, Sweden. WWIC has been recognized as a highly selective conference on the rapidly developing field of wireless networking with a focus on interaction between fixed and mobile Internet communications. Collocated with WWIC was the ERCIM e-Mobility workshop. This year, WWIC featured several technical sessions, two keynote speeches given by Mario Gerla (UCLA, USA) and Henning Schulzrinne (Columbia University, USA), and three invited sessions. The invited session on “Cognitive Multihop Networks” was organized by NewCom++ participants Andreas Kassler and Merouane Debbah, the invited session on “QoE Trends in Networking” was organized by Xavier Masip Bruin and Edmundo Monteiro, and the invited session on “Network Monitoring and Measurement Systems” was organized by René Serral-Gracià and Christian Callegariand All presentation slides shown at the conference are available at <http://omega005.sm.ltu.se/wwic2010/program.html> where a video recording of the sessions can also be accessed.

The major themes of WWIC 2010 were Cooperation and Management of Multimedia Traffic, Advancing IEEE 802.11, Cognitive Optimization, Mesh and Multihop Networks, Security, Signaling and Control, and Wireless Sensor Networks. The conference attracted 45 outstanding contributions in the respective areas. Three contributions are worth highlighting in particular. Vijay Raman and Nitin Vaidya from the University of Illinois at Urbana-Champaign presented an efficient routing strategy for multichannel networks providing differentiated levels of quality of service (QoS) for delay-sensitive and best effort applications. Their work was awarded the Best Paper Award. Karl Andersson from Luleå University of Technology, and Andrea Forte and Henning Schulzrinne from Columbia University presented an extended IEEE 802.21 architecture, which allows for competition at all levels and scales due to its distributed nature. An original approach to enforcing the quality of experience in wireless networks was presented by Rene Serral-Gracià, Marcelo Yanuzzi, Eva Martin-Tordera, Xavier Masip-Bruin, and Sergio Sánchez from the Technical University of Catalunya. Their approach is based on using both network and application layer metrics to build up a scalable quality assessment of multimedia traffic. The technique allows drastic improvement in the quality of video perceived by end users over that of the typical wireless network.

The goal of the invited session on “Cognitive Multihop

Networks” was to discuss recent advances in the area where cognition meets multihop networking. Although substantial effort has been devoted to bringing cognition and cognitive radios into network design, a number of research challenges still need to be addressed before this technology can be widely deployed. Following this, the invited session aimed at identifying a number of key pending challenges and discussing possible solutions. In order to tackle the goal, the following leading experts were invited to present their work and ideas in the workshop: Marco Di Felice (University of Bologna), Pol Blas-co (CTTC, Barcelona), Claudio Pastrone (ISMB), Laura Cottatellucci (EURECOM), and Janne Riihijärvi (RWTH).

“QoE Trends in Networking” was the main topic of the second invited session. Network evolution requires a novel service architecture paradigm where the overall services quality must rely on final user subjective satisfaction. Aligned to this framework, papers in this session introduced open problems, key challenges, and brilliant ideas in the field of QoE measurement and evaluation techniques in different network scenarios, technologies, and services. The outstanding researchers contributing to this session were Fernando Kuipers (University of Delft), Isaias Martínez-Yelmo (University Carlos III, Madrid), Enzo Mingozzi (University of Pisa), René Serral-Gracià (Technical University of Catalunya), and Abdelhamid Mellouk (University of Paris-Est Creteil).

The invited session on “Network Monitoring and Measurement Systems” was focused on description of the different trends in traffic monitoring. In particular, the session covered a broad range of topics in the area, from aggregated traffic models in large-scale networks, traffic monitoring systems, real-time anomaly detection in large networks, and analysis of peer-to-peer traffic, to evaluation of traffic load and the offered quality of experience in wireless networks. The experts present in the area were F. Mata (Universidad Autonoma de Madrid), A. Finamore (Politecnico di Torino), U. R. Krieger (University of Bamberg), J. Núñez-Martínez (CTTC, Barcelona), P. Owezarski (LAAS, France), and M. Papadopoulou (FORTH, Greece).

We thank all authors contributing to the technical excellence of WWIC 2010, and all the members of the Technical Program Committee for their effort in providing timely and constructive reviews, which ensured the scientific excellence of the event. We hope the special sessions fulfilled the expectations of the participants. The success of the special sessions relied on the work and commitment of the invited speakers,

(Continued on Newsletter page 4)

The Spanish Omnibus Law: A New Scenario for the Telecommunication Engineering Professional Career

By Antonio-Javier Garcia-Sanchez and Pedro Piñero-Escuer, Polytechnic University of Cartagena, Spain

In December 2009 the Spanish government passed a law on free access to service activities and their exercise. It is denoted Omnibus, a regulation that has incorporated into Spanish legislation Directive 2006/123/EC of the European Parliament and Council, which is related to services in the internal market. The Omnibus law has a twofold objective. On one hand, it responds to the need to achieve more competitive markets. On the other hand, the starting point is the principles of good regulation proposed by the European Directive, which extend to other activities. In this way a deep structural reform of the service industry takes place (the most important sector of the Spanish economy in terms of gross domestic product [GDP] and employment). This happens because the Omnibus Law modifies 46 state laws, setting in motion ambitious and important structural reform, from which significant gains are expected in terms of efficiency, productivity, and employment. According to the Spanish Ministry of Economy estimations, it will create between 150,000 and 200,000 new jobs, and will bring about a GDP increase of around 1.2 percent as a result of the whole process started.

In relation to the professional regulations, article 5 of this law refers to the adaptation of diverse directives about basic aspects of specialized services regulation, mainly in regard to professional associations, among which is the Telecommunication Engineers Association (COIT). These directives carry out deep changes in the traditional work of professional associations such as the elimination of procedures that were obligatory until now, including reporting on practices outside the territory where engineers were registered, the removal of guiding scales of fees or any other recommendations on pricing, the voluntary seal of the Association for certifying professional work (unless it is required by law), the creation of customer support, the implementation and use of web services, and improvement in the inner operations of these associations. According to the government, the objectives pursued by these reforms include the reduction of administrative bureaucracy, costs savings for professionals and clients, the

creation of a free channel in order to allow customers to submit claims, the promotion of price competition, allowing the mobility of professionals around the Spanish territory without additional administrative procedures, and facilitating the development of EU professionals' activities in Spain.

The reform that has generated the most controversy within the professional associations has been the certification of engineers' projects, that is, the seal provided by the Association which guarantees citizens the experience, professionalism, and good service of association membership. Previously, this procedure was obligatory, but once the law was approved, it became voluntary. Only a few cases will necessarily be sealed. A new regulation proposal, which is currently in the publication process, indicates which engineering projects must be certified by the associations. In the telecommunications field, of all the projects the COIT used to seal, this regulation proposal has determined that the only project which will have to be sealed is the one known as Common Telecommunication Infrastructure of buildings. However, other telecommunication projects, like those related to the use of radioelectric public domain and, in particular, those concerning electromagnetic emissions certifications, will not be sealed by the Association and will not pass its involved guarantee process. Electromagnetic emission certifications have a relevant public impact, as a result of the recent development and deployment of mobile telephony.

According to the COIT, the omission of the seal for the previously mentioned activities involves increased vulnerability of citizens and the administration, since these areas will not be backed by technical correction in accordance with the requirements of engineering regulations. Moreover, customers will not be protected by any insurance for civil liability. The COIT also rejects the reform of other aspects, such as the fact that affiliated members do not need to go to their regional Association, as they may deal with their business proceedings through a web application. COIT indicates that the Omnibus

(Continued on Newsletter page 4)

Message from the IEEE ComSoc Asia-Pacific Director

By Naoaki Yamanaka, Keio University, Japan

First of all, I would like to express my gratitude to all the APB officers as well as the many earnest volunteers involved in the APB related activities. Due to their great contributions, the AP region has been recognized as one of the fastest growing regions in terms of both membership development and technical activities. For example, APB is the most active region for conference paper presentation.

In this respect, we are now in the next stage to further expand our highly recognized technical activities. Activities are going to involve not only paper presenters, but also more operational activities such as organizers. We have to do more volunteer work for technical activities and become one of the leaders in IEEE. For membership development, we should supplement the existing 9000+ members by attracting new members, especially vendor and company members. I think today's IEEE is not attractive enough to company members. China, India, and other countries in South East Asia are important. No doubt, this will bring us a lot of challenges. On the other hand, we are surrounded by many opportunities too. For instance, ICC 2011 will be held in Kyoto, Japan, during which nearly 2000 guests are expected to visit our region. ICC

2009 was held in Beijing, and ICC 2011 is the second chance to grow membership in the AP region. These will definitely provide us very good opportunities to further promote our region as well as to strengthen our collaboration with regional activities.

Unfortunately, 2010 will end under a serious economic situation. However, Asia Pacific is a little better than other regions. So we have to try new technologies and bring the future to all IEEE members. To achieve these goals, a strong volunteer team is extremely important and prerequisite. Fortunately, with the help of our advisors, a group of volunteers have agreed to devote their precious time and experience to lead the respective committees, while many more volunteers will be invited to join with them soon.



Naoaki Yamanaka

The 2nd IEEE Latin-American Conference on Communications (LATINCOM 2010)

By Jose David Cely, ComSoc Latin America Director, Univ. Distrital Francisco Jose de Caldas, Colombia; Yuli Andrea Rodriguez, Univ. Distrital Francisco Jose de Caldas, Colombia; Nelson Fonseca, LATINCOM 2010 General Chair, Brazil

The IEEE Latin America Conference on Communications (LATINCOM) was created in 2009 to fulfill the need for a regional conference with international stature. Such a conference was indeed a highly anticipated achievement of the ComSoc Latin America members. Its aim was to put Latin America in the international scenario of conferences. The goal was fully achieved in its first version, held in Medellín, Colombia. Submissions came from over 20 different countries and attendees from four different continents. The success of the conference was a direct consequence of the hard work of volunteers who made attendees feel like they were at home. The first Latincom had as its main theme Digital Cities, and besides a strong technical program and a variety of tutorials, the program also included outstanding keynotes from distinguished ComSoc members such as Abbas Jamalipour and Stefano Bregni.

The second version of LATINCOM consolidated the success of the 2009 version. LATINCOM 2010 was held in Bogotá, Colombia, and again the ceaseless efforts of volunteers made it an exceptional success. It was held at the Compensar Convention Center from 14–17 September, and again was sponsored by ComSoc, the IEEE Colombia Section, and the IEEE ComSoc Colombian Chapter.

In 2010 LATINCOM was collocated with another IEEE conference organized by countries in the Andes, the ANDESCON 2010 exhibition and industry forum.

The main topic of these conferences was “Green Technologies for a Better World.”

(Continued on Newsletter page 4)



The LATINCOM 2010 General Chair Nelson Fonseca speaking at the opening session.

2010 China-Korea Joint Conference on Information and Communications (JCIC 2010)

By Jiandong Li, Xi'an Chapter Chair, China

The 2010 China-Korea Joint Conference on Information and Communications (JCIC2010) was held at Xi'an, China, on 20-21 August, co-sponsored by the IEEE Communications Society Xi'an Chapter, Xidian University, Korea Information and Communications Society (KICS), State Key Laboratory of Integrated Services Networks, and National 111 Project Base of Modern Wireless Information Networks. JCIC2010 is an occasion for academic information exchange among global academic and industrial circles in the fields of information

theory, communication, and networking, especially on the points of communication convergence, fourth generation, resource management, green communications, security in wireless networks, social network optimization, and video processing. The program started with a plenary session followed by two poster sessions. Around 200 participants with over 50 technical papers attended the conference.

Prof. Jiandong Li, director of the State Key Laboratory of

(Continued on Newsletter page 4)



Prof. Baoyan Duan, president of Xidian University, making the welcoming speech.



Group photo of some participants.

CHINA-KOREA CONFERENCE/continued from page 3

Integrated Services Networks, chaired the opening ceremony. Prof. Baoyan Duan, President of Xidian University, made the welcoming speech, and Prof. Eun-Soo Kim, President of KICS, delivered the congratulatory address.

The plenary session included several invited speeches. Professor Byeong Gi Lee, President of IEEE ComSoc, made the keynote speech entitled "Communications in the Mobile Convergence Era." Professor Jong-Seon No from Seoul National University gave the invited talk "Overview of PAPR Reduction Schemes for OFDM Signals with Low Complexity," and Professor Kyungwhoon Cheun from Pohang University of Science and Technology spoke about "Statistical Modeling of Inter-cell Interference in OFDMA Cellular Networks and Its Applications". Professors Jiandong Li, Hui Li, and Kehu Yang from Xidian University delivered the lectures "MIMO Resource Utilization for Future Wireless Communications," "Efficient Certificateless Encryption and Signcryption Schemes," and "Several Application Examples of Convex Optimization in Signal Processing," respectively. In addition, as many as 41 papers were posted in the poster session.

WWIC 2010/continued from page 1

who gave high quality presentations, as well as the participation of the attendees, who triggered many lively discussions. Also, Springer *LNCS* is gratefully acknowledged for their continued commitment to publishing WWIC's Proceedings. Special thanks go to the financial sponsors of WWIC 2010, Ericsson and Centre for Distance-Spanning Technologies (CDT), for providing their support.

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LATINCOM 2010/continued from page 3

LATINCOM 2010 received 112 papers from 21 countries, including 13 outside Latin America, of which 56 papers were accepted in the followings categories: Wireless Sensor Networks, Optical Networks and Power Line Communications, Traffic Management, Radio Communication Technologies, Green Technologies, Quality of Service, Reliability, Security, and Multimedia Communications.

Besides the technical sessions, LATINCOM 2010 included a series of internationally recognized invited speakers such as Nelson Fonseca, Fernando Guarín, Tania Quíel, Paolo Bonato, Saifur Rahman, Ph.D, Cesar A. Gonzales, Xun Luo, Ravi M. Todt, Ken Christensen, Vassilis Kostakos, Arun Somani, and Carlos Andres Peña.

One of the main points of LATINCOM 2010 was the participation of more than 450 attendees from different countries, including Ecuador, Costa Rica, Brazil, Kuwait, Argentina, the United States, Venezuela, México, France, Italy, Peru, and, of course, Colombia.

LATINCOM 2011 will be held in the city of Belem do Para, Brazil. We invite you to participate with submissions and to attend LATINCOM 2011.

SPANISH OMNIBUS LAW/continued from page 2

law will reduce the Association's profits due to the decrease in the number of seals and membership fees. As a result, this regulation will imply the disappearance of a high number of regional offices, with only the headquarters remaining as determined by the Omnibus law.

To sum up, with this new law, the Spanish government seeks to achieve a reduction in the time needed for obtaining licenses, reduce the price of services, and generate jobs. The fulfilment of these goals should not lead to a decrease in the guarantees of citizens' safety or environmental protection. Finally, the likely outcome of this is that regional associations will be restructured, enhancing the development of activities such as courses, sponsorship, congresses, and conferences.