

# Global Communications Newsletter

March 2011

## *ICIN 2010 – Weaving Applications into the Network Fabric: The Transformational Challenge*

*By Warren Montgomery, Insight Research, and Chet Mc Quaide, StraDis Consulting, USA*

Over 150 delegates from 29 countries representing about 80 different organizations met for the 14th ICIN conference to discuss how new Internet and telecommunications technologies blend to deliver rich new services worldwide. ICIN 2010 took place in Berlin, Germany, on 11–14 October, with the technical co-sponsorship of the IEEE and IEEE Communications Society, and the support of many patrons including Deutsche Telekom Laboratories, Ericsson, Nokia Siemens Networks, Huawei, Alcatel-Lucent, EICT, Orange, and Berlin Partner. ICIN has a 21-year history of anticipating the key trends in the telecommunications services industry, and showcasing technologies and architectures that have become vital to the delivery of new services.

The conference began with two tutorials, one focusing on identity management in web 2.0 and telecommunications, and the other covering service enabling technologies in fixed and mobile networks. The tutorials laid the foundation for key aspects of next-generation networks discussed throughout the week.

The conference was formally opened by Max Michel (France Telecom), Chair of the ICIN 2010 Technical Programme Committee, and Heinrich Arnold representing Deutsche Telekom Laboratories, the local host. A series of keynotes accented the theme for the conference. Malcolm Johnson of the ITU delivered a video presentation concerning standards needed to achieve consistent user experience. Philip Kelley of Alcatel-Lucent presented a keynote on the market impact of the iPhone and similar devices. Bengt Nordström of Northstream presented a keynote on the critical issue of increasing operator revenue to support the cost of handling the rapid growth of mobile data traffic, given the impact of Internet players on communications. Thomas Michael Bohnert of SAP presented a keynote highlighting recent research on a next-generation Internet and the need for industry cooperation.

The second keynote session focused on host country perspectives. Thomas Aidan Curran of Deutsche Telekom suggested that carriers should become more like software companies. Sigurd Schuster from Nokia Siemens Networks presented the challenges of managing user identities, highlighting the role carriers can play. In a final keynote, Felix Zhang of Huawei discussed the migration of applications to cloud computing and the role that the network can play in enhancing user experience. The keynote sessions were capped by a reception (sponsored by Deutsche Telekom Laboratories and Berlin Partner) attended by both ICIN attendees and leading Internet and communication entrepreneurs from the Berlin area.

The main body of the conference took place on Tuesday and Wednesday at the Park Inn Berlin-Alexanderplatz, and

included 55 presentations in 14 sessions in two parallel tracks, plus eight demonstrations and poster presentations available for viewing both days and during an evening reception on Tuesday.

The conference programme included a session on the industry impact of marketplaces and app stores, proposing that applications are much more important in motivating device purchases and service subscriptions than generating new revenue, and that they have the potential to profoundly change the user experience with networks. Another session presented three practical applications of IP Multimedia Subsystem (IMS) and discussed the application of IMS principles to all-IP networking going forward. A session on content distribution addressed the business and technical challenges of content delivery, including both new solutions to the problem of efficient content delivery to many types of devices and new challenges resulting from content sharing in social networking. A session on privacy highlighted the need for greater user control over private information, and for great care by network operators and application builders to avoid inadvertent release of private user information.

A session on home networking discussed home network security challenges, secure sharing across home networks, and new types of home networking services. A session on the key service enabler context management highlighted the need to provide common access to the many sources of context information to enhance user experience. A session on service composition and several of the demonstrations illustrated the progress of service composition from theory to practice to become important in generating new services revenue. A session on social networking described the combination of social networking and multimedia, and the use of social networking as a viral marketing tool.

On Wednesday the conference opened with sessions on “X as a service,” and intersystem and interdevice mobility. The XaaS session covered the migration of many applications to “cloud”-based implementations, and the natural role of the network in enhancing service implementation and delivery, while the mobility session focused on the Third Generation Partnership Project (3GPP) Enhanced Packet Core (EPC) architecture, identifying both strengths and gaps in supporting service and device migration. Sessions on content delivery and sensor networks filled out the morning. The content delivery session addressed some novel aspects of content delivery, including delivery of content-associated advertising and presenting user content recommendations. The sensor network

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## IEEE RNDM 2010 Workshop, Moscow, Russia

By Jacek Rak, Gdansk University of Technology, Poland, David Tipper, University of Pittsburgh, USA, and Krzysztof Walkowiak, Wroclaw University of Technology, Poland

RNDM 2010, the Second International Workshop on Reliable Networks Design and Modeling, held in Moscow, Russia, 19–20 October, 2010, was a two-day event organized by Gdansk University of Technology, Poland, in cooperation with the University of Pittsburgh, United States, and Wroclaw University of Technology, Poland. The workshop was technically co-sponsored by IEEE Communications Society and IFIP TC6 WG 6.10 (Photonic Networking Group). It was collocated with the 2nd International Congress on Ultra Modern Telecommunications and Control Systems (ICUMT 2010).

RNDM '10 followed up on a very successful first edition that took place last year in St. Petersburg, Russia. The objective was to provide a forum for researchers from both academia and industry to present high-quality results in the area of reliable networks design and modeling. Special attention was paid to network survivability.

Submitted papers were extensively reviewed by 45 members of the TPC and 18 external reviewers. The 23 accepted papers were organized into six technical sessions: Fault Management and Control in Survivable Networks; Survivability of Anycast, Multicast, and Overlay Networks; Fast Service Recovery; Methods for Measurement, Evaluation, or Validation of Survivability; Design of Dedicated/Shared Backup Paths; and Models and Algorithms of Survivable Networks Design and Modeling.

The workshop program was enriched by the keynote talks of two speakers: Professor Tibor Cinkler (Budapest University of Technology and Economics, Hungary) and Professor James P. G. Sterbenz (University of Kansas, United States, and Lancaster



Presentation of the best paper award (left to right: Jacek Rak, Gdansk University of Technology, Poland, and Wouter Tavernier, IBBT, Ghent University, Belgium).

University, United Kingdom). A panel discussion entitled “Future Research in Reliable Networks” chaired by Professor Maurice Gagnaire (Telecom ParisTech, France) concluded the event.

Conference papers were published in printed proceedings and are also available at IEEE Xplore. Authors of the top papers have been invited to publish extended versions of their contributions in a special issue of *Telecommunication Systems Journal* (Springer). The next edition will be held in Budapest, Hungary, on 5–7 October, 2011. More information on the workshop may be found at <http://www.rndm.pl>

## Addressing Europe's Digital Divide: Toward Sustainable Public Service Media in South East Europe Roundtable International Conference, Sarajevo, 14–15 October 2010

By Dinka Zivalj, Regional Cooperation Council, and Kerim Kalamujic, University of Sarajevo, Bosnia and Herzegovina

Broadcasters and government officials pledged to ensure a smooth digital transition in southeast Europe, and called on European institutions for financial support in the interests of European cohesion. This was a key message of a two-day roundtable conference entitled “Addressing Europe's Digital Divide: Towards Sustainable Public Service Media in South East Europe.” Organized by the Regional Cooperation Council (RCC) Secretariat and the Geneva-based European Broadcasting Union (EBU), the meeting was held in Sarajevo, Bosnia and Herzegovina, on 14–15 October, 2010. It was attended by more than 50 general directors, media experts, and government, broadcast and regulatory officials.

In a “way forward to 2020” signed by EBU Vice-President Claudio Cappon and RCC Secretary General Hido Biscevic, the conference participants agreed:

- To establish an enduring cooperation to ensure the sustainability of all public service broadcasters in southeast Europe by 2020
- To promote the values and principles of public service media, as recognized by the Council of Europe and the European Union
- To call on the European Union to support these goals politically and financially under its aim to guarantee European cohesion

The conference highlighted the need for the public broadcasters, relevant ministries, and regulators in southeast Europe to join forces to ensure that the region does not lag behind the rest of Europe in meeting deadlines for digitalization and analogue switch-off. The participants agreed that the region's public broadcasters in the digital era need to remain key actors in the evolving knowledge society, provide reliable information, quality educa-

tional, cultural and entertainment programmes, and be motors for regional development and investment in the creative industries.

Speaking at the conference, Minister of Communications and Transport of Bosnia and Herzegovina, Rudo Vidovic, told the conference that digitalization would create a “free and open media market. This momentum needs to be seized.” Mr. Biscevic said sustainable public service media were vital for the countries of southeast Europe as a whole, and for the European Union they hope to join. But he said their role was threatened by a lack of investment in infrastructures “and also in human capital.” In an opening keynote speech, EBU Director General Ingrid Deltenre said public service broadcasters needed to play a leading role in the digitalization process in southeast Europe as they have played elsewhere on the continent.

Conference speakers included Peter Karanakov, Executive Director, MKRT; Natasa Vuckovic Lesendric, Assistant Minister for the Media, Ministry of Culture of Serbia; Marija Nemic, Deputy HRT General Manager for International Relations; Bledar Meniku, Ministry for Innovation, Information Technology and Communication of Albania; Maria Luisa Fernandez Esteban, Directorate General for the Information Society and the Media, European Commission; and Oliver Vujovic, Secretary General of the South East Europe Media Organisation.

The participants comprised senior representatives of governments, broadcasters, and regulators from Albania, Bosnia and Herzegovina, Croatia, Greece, Moldova, Montenegro, Serbia, Slovenia, the Former Yugoslav Republic of Macedonia, and Turkey, as well as the EU and other relevant institutions.

# **Report on the 3rd International Conference on Advanced Infocomm Technology (ICAIT 2010)** **20 – 23 July 2010, Hainan, China**

*By Xinwan Li and Yikai Su, Shanghai Jiaotong University, China*

The 3rd International Conference on Advanced Infocomm Technology (ICAIT 2010) was held from 20–23 July, 2010, Hainan, China.

ICAIT is a three-day event comprising keynote speeches by both leading academic researchers and industrial experts, focused symposia, technical oral presentations, and updates by industrial presenters. This event provides a platform to introduce advanced infocomm technologies that will shape the next generation of information and communication systems and technology platforms.

The conference was hosted by Hainan University in collaboration with Guangxi University, HoChiMinh City University of Technology, Huazhong University of Science and Technology, and Ningbo University. IEEE Communications Society Shanghai Chapter was the technical co-sponsor.

ICAIT has been a yearly event since 2008 to bring together researchers, scientists, engineers, academicians, and students all around the world to share the latest updates on new technologies that will enhance and facilitate the next generation of information and communications systems and technologies. ICAIT forges links between nations, and builds bridges between the academic and non-academic communities, and between government and non-government organizations.

Submissions from about 20 countries for technical presentations were received for ICAIT 2010. The papers went through peer reviews, nominally two or more reviews per paper, to ensure quality. We were highly honored to have two renowned keynote speakers, Prof. Muriel Medard from MIT, United States, and Prof. Anthony TS Ho from Surrey University, United Kingdom, to share with us their insight and perspectives on current trends, convergence technologies, and the strategic updates.

ICAIT 2010's venue, Hainan, the second largest ocean island and smallest land province in China, is located at the

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*ICAIT 2010 Conference Opening: (from left to right) Prof. Du Wencai from Hainan University; Prof. Muriel Medard from MIT; Prof. Fu Guohua, Vice president from Hainan University; and Prof. Anthony TS Ho from Surrey University.*



*Student volunteers from Hainan University.*

## **Jitel and Telecom I+D: Spanish Rendezvous Points for TLC Professionals**

*By Pilar Manzanares-Lopez and Josemaría Malgosa-Sanahuja, Spain*

The 9th Conference on Telematic Engineering (IX Jornadas de Ingeniería Telemática, JITEL 2010) took place from 29 September to 1 October in the University of Valladolid, Spain. This conference tries to be a propitious forum for the Spanish research groups on networking and telematic services. It tries to encourage both the interchange of experiences and results and the cooperation among the researching groups working in this field of knowledge.

The origin of this conference dates back to 1997 when, coinciding with the centenary of the Telecommunication Faculty of Bilbao, it took place in the University of the Basque Country. Since then, JITEL was organized biannually until 2005 and, due to its great success, it has been held annually since 2006. Each edition takes place in a different city, at Spanish universities all around the country.

JITEL is co-sponsored by the IEEE Spanish Section. Traditionally, the best papers are published in *IEEE America Latina Transactions Magazine*. In addition, the best two papers related to telematic engineering education will be published in a book called *TIC Aplicadas a la Ingeniería (TICAI)*, an initiative of the Spanish IEEE Education Society.

In this last edition of JITEL, with the challenge of adapting the current studies to the new European Higher Education Area, the 1st Symposium on Educational Innovation on Telematic Engineering (I Jornadas de Innovación Educativa en Ingeniería Telemática, JIE 2010) was created. This is a new forum where university staff can meet and exchange experiences in innovations in networking and telematic teaching, and also in the use of information and communication technologies in higher education in general and this technical area in particular.

JITEL 2010's schedule was coordinated with the XX Telecom I+D conference, with part of the session program coinciding with it. Telecom I+D is a meeting point for members of the academic world (universities and the main research centers) and members of the business world (national and international leading companies in this sector) to advance the interchange of experience and dissemination of knowledge, focused on the promotion of technological innovation. Under the lemma "20 Years Leading the Innovation to Change the Future," Telecom I+D 2010 was focused on the commitment of ICT to society. Social networks, the television of the future, vehicular network

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# ICUMT 2010 Congress in Moscow, Russia

By Vladimir Vishnevsky, Konstantin Samouylov, Yevgeny Koucheryavy, Alexey Vinel and Dmitry Tkachenko, Russia

The 2nd International Congress on Ultra Modern Communications and Control Systems was held in Moscow, Russia, on 18-20 October 2010. The congress was organized by SPIIRAS (an institute of the Russian Academy of Sciences), Peoples' Friendship University of Russia (Moscow), and Tampere University of Technology (Finland). The IEEE Russia Northwest BT/CE/COM Chapter was a technical co-sponsor of the conference along with the Popov Society (a professional society of Russian radio and communication engineers). Patrons and supporters of the congress were Nokia, Nokia Siemens Networks, and other organizations.

The technical program of ICUMT 2010 included five keynote talks by internationally recognized industrial and academic speakers, seven specialized workshops, and two main congress tracks: telecommunications and control/robotics. Congress proceedings include about 200 papers selected from more than 320 submissions with the help of more than 250 Technical Program Committee members, reviewers, and workshop chairs. The congress was attended by over 200 participants.

New insights in radio technologies as well as the coexistence of research in control systems, robotics, and telecommunications were key topics of the congress. Keynote speakers presented insights and trends in vehicular ad hoc networks, networking security, multicarrier solutions, society of robots, and human-robot interaction. Significant scientific contributions were presented in the areas of applied problems in theory of probabilities and mathematical statistics, advanced sensing and control, systems of systems, mobile computing, reliable network design, and fiber optic systems. An industrial panel session, "The ICT Future by the Year 2015," was organized by representatives of the top management from Hewlett-Packard, Alcatel-Lucent Bell Labs, Oracle Communications, Nokia, Nokia Siemens Networks, and Telecom Italia.

The conference was really international, with speakers and attendees arriving in Moscow from 49 countries. The conference proceedings are available at IEEE Xplore. Some results of the conference are also available at the conference web site, <http://www.icumt.org>.

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session described several applications and illustrated the importance of interfacing sensors to communications networks, especially in machine-to-machine communication.

The final two sessions in ICIN covered business opportunities in networks and future trends. The business opportunities session explored the impact on communication business of convergence with the Internet, necessitating operator strategy adjustments. The future opportunities session presented a series of new concepts including application of peer-to-peer networking concepts to increase network flexibility, techniques for using context, and strategies for managing data volume increases required to deliver multimedia services with high quality of service (QoS).

At the closing session, TPC Chair Max Michel reviewed highlights of the conference, and Roberto Minerva (Telecom Italia Laboratories) discussed a recent *ConnectWorld* article on "deperimeterization." Delegate feedback on ICIN was extremely positive.

On the final day, two workshops were provided in conjunction with ICIN: The Second International Workshop on Business Models for Mobile Platforms, chaired by Pieter Ballon of Vrije Universiteit Brussel, Belgium; and Telecom Transformation: Are You Ready? delivered by Eileen Healey of Healey & Co. Both were well attended and thought provoking.

Planning for ICIN 2011 is already underway under the leadership of Roberto Minerva of Telecom Italia Laboratories, TPC Chair for ICIN 2011. The conference will take place from 4-7 October, 2011 in Berlin. For more information, visit <http://www.icin.biz>.

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technology, the digital home, and energy efficiency are fields of interest that were analyzed in different workshops and round tables. The strategic contribution of ICT to public education, public health, and administration were covered by discussions about social communications, smart health, and smart government, and emergency and disaster support.

JITEL and Telecom I+D coordination aims to strengthen the links among the different agents of R&D&I in the scope of networking and telematic engineering. The success of participation and positive assessments indicates that, to participants and organizing committee members, it is desirable that this coordinated organization and collaboration be maintained in the future for the sake of progress in periods of both crisis and economic and social growth.

## ICAIT 2010/continued from page 3

south end of the country. Boasting a pleasing climate, golden sunshine, white beaches, and lush forests, it is dubbed "the oriental Hawaii." Hainan is blessed with a charming tropical landscape, contributing to its unique folklore and culture. It is known as a Chinese all-season garden.

For more information, please see the web site [www.ica.it.org](http://www.ica.it.org) or contact the authors at [lixinwan@sjtu.edu.cn](mailto:lixinwan@sjtu.edu.cn) and [yikaisu@sjtu.edu.cn](mailto:yikaisu@sjtu.edu.cn).

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A publication of the  
IEEE Communications Society