Beyond the Internet?

Innovations for future networks and services

Third ITU-T Kaleidoscope academic conference

Pune, India, 13-15 December 2010

DAY 1 — MONDAY, 13 DECEMBER 2010

09:00 – 10:30	**Opening Plenary**
	Plenary chairman: Yoichi Maeda (General Chair, Kaleidoscope; TTC, Japan)
	Welcome Host:
	• Maruti N. Navale (President, Sinhgad Technical Education Society, Pune, India)
	• R. K. Shevgaonkar (Vice Chancellor, University of Pune, Pune, India)
	Welcome GISFI: Ramjee Prasad (Chairman, Global ICT Standardization Forum for India)
	Welcome CMAI: N K Goyal (President, CMAI Association of India)
	Welcome ITU-APT: Anil Prakash (Secretary General, ITU-APT Foundation of India)
	Opening address: Malcolm Johnson (Director, Telecommunication Standardization Bureau, ITU)
	Inaugural speech: Shri Gurudas Kamat (H.E. Minister of Communications and Information Technology, India)
	Vote of thanks: Sunanda M. Navale (Founder Secretary, Sinhgad Technical Education Society, Pune, India)
10:30 – 11:00	**Coffee break supported by Sinhgad Technical Education Society (STES)**
11:00 – 12:30	**Session 1 – Keynote speakers**
	Session chairman: Yoichi Maeda (General Chair, Kaleidoscope; TTC, Japan)
	Keynote speech: Modern academia: teaching, research, development, patents and standards, Uday B. Desai (Director, Indian Institute of Technology, Hyderabad, India)
	Keynote speech: Vehicle communication: a future telecommunication market, Tadao Saito (Professor Emeritus, University of Tokyo, Japan)
	Keynote speech: Future of communications? The individual user experience, Detlev Otto (CTO, Nokia Siemens Networks, Germany)
12:30 – 14:00	**Lunch supported by Sinhgad Technical Education Society (STES)**
14:00 – 15:30	**Session 2 – Rethinking the network**
	Session chairman: Helmut Schink (NSN, Germany)
	S2.1 Invited paper: Toward a polymorphic future internet: a networking science approach Kavé Salamatian (Professor, Université de Savoie, France)
	S2.2 Introducing elasticity and adaptation into the optical domain toward more efficient and scalable optical transport networks* Masahiko Jinno, Yoshiaki Sone, Osamu Ishida, Takuya Ohara, Akira Hirano, Masahito Tomizawa (NTT, Japan)
	S2.3 Introducing multi-ID and multi-locator into network architecture* Ved P. Kafle, Masugi Inoue (National Institute of Information and Communications Technology, Japan)
	S2.4 How can an ISP merge with a CDN?* Kideok Cho, Hakyung Jung, Munyoung Lee, Diko Ko, Taekyoung Kwon, Yanghee Choi (Seoul National University, Korea)
An * denotes papers nominated for best paper award.	

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15:30 – 16:00	**Coffee break supported by Sinhgad Technical Education Society (STES)**
16:00 – 17:20	**Session 3 – The future internet is for all**
	Session chairman: Mostafa Hashem Sherif (AT&T, USA)
	S3.1: Invited paper: Can computational thinking reduce marginalization in the future internet? Peter Wentworth (Professor, Rhodes University, South Africa)
	S3.2: Invited paper: Challenges the Internet poses to the policymaker Arun Mehta (President, Bidirectional Access Promotion Society, India)
	S3.3: Participatory approach to the reduction of the digital gap in Amazon Region of Ecuador in the framework of the "innovation for development" program Alessandro Galardini[1], Daniele Trinchero[1], Benedetta Fiorelli[1]; Salvatore Pappalardo[2] ([1]Politecnico di Torino; [2]University of Padova, Italy)
17:20 – 17:30	**Break**
17:30 – 19:30	**Poster session – Showcasing innovations for future networks and services**
	See the last page for list of papers
19:30 – 21:00	**Networking Reception supported by Sinhgad Technical Education Society (STES)**

DAY 2 — TUESDAY, 14 DECEMBER 2010

09:00 – 10:30	**Session 4 – Protocol evolution and the future internet**
	Session chairman: Daniele Trinchero (Politecnico di Torino, Italy)
	S4.1 Invited paper: A vision on the information and communication technologies using cloud computing environment Hiroshi Yasuda (Professor, Tokyo Denki University, Japan)
	S4.2 Hybrid circuit/packet networks with dynamic capacity partitioning Chaitanya S. K. Vadrevu[1], Menglin Liu[1], Biswanath Mukherjee[1]; Chin Guok[2], Evangelos Chaniotakis[2], Inder Monga[2]; Massimo Tornatore[3] ([1]University of California, [2]Energy Sciences Network, USA; [3]Politecnico di Milano, Italy)
	S4.3 A New Protocol Layer for User Space Functionality Pankaj Chand (Independent Researcher, India)
	S4.4 Quality of service in the future internet Jorge Carapinha[1]; Christoph Werle[2]; Konstantin Miller[3]; Roland Bless[4]; Horst Roessler[5], Heidrun Grob-Lipski[5]; Andrei Bogdan Rus[6], Virgil Dobrota[6] ([1]Portugal Telecom Inovação, Portugal; [2]Universität Karlsruhe (TH), [3]Berlin Institute of Technology, [4]Karlsruhe Institute of Technology, [5]Alcatel-Lucent, Germany; [6]Technical University of Cluj-Napoca, Romania)
10:30 – 11:00	**Coffee break supported by Sinhgad Technical Education Society (STES)**
11:00 – 12:30	**Session 5 – Service innovations in the future internet**
	Session chairman: Peter Wentworth (Rhodes University, South Africa)
	S5.1 Cross-language identification using wavelet transform and artificial neural network* Shawki A. Al-Dubaee, Nesar Ahmad (Aligarh Muslim University, India)
	S5.2 GeoHybrid: a hierarchical approach for accurate and scalable geographic localization* Ibrahima Niang, Bamba Gueye, Bassirou Kasse (University Cheikh Anta DIOP of Dakar, Senegal)
	S5.3 Context-aware smart environments enabling new business models and services Christian Mannweiler[1]; Jose Simoes[2]; Boris Moltchanov[3] ([1]University of Kaiserslautern; [2]Fraunhofer FOKUS, Germany; [3]Telecom Italia, Italy)
	S5.4 Innovative tangible user interface as a mean for interacting telecommunications services Klemen Peternel, Luka Zebec, Andrej Kos (University of Ljubljana, Slovenia)
12:30 – 14:00	**Lunch supported by Sinhgad Technical Education Society (STES)**
14:00 – 15:30	**Special Session: Jules Verne's Corner - make possible the impossible!**
	Session chairman: Paolo Rosa (Telecommunication Standardization Bureau, ITU)
	◆ Eduard Babulak (CORDIS European Commission, EU)
	◆ Mitsuji Matsumoto (Waseda University, Japan)
	◆ Rahul Sinha (Illinois Institute of Technology, USA)
	◆ Daniele Trinchero (Politecnico di Torino, Italy)
15:30 – 16:00	**Coffee break supported by Sinhgad Technical Education Society (STES)**

An * denotes papers nominated for best paper award.

16:00 – 17:00	**Session 6 – Regulation, standardization and stakeholder participation**
	Session chairman: Ian Graham (University of Edinburgh, United Kingdom)
	S6.1 How many standards in a laptop? (and other empirical questions)
	Brad Biddle, Andrew White, Sean Woods (Arizona State University, USA)
	S6.2 A user-centric approach to QoS regulation in future networks*
	Eva Ibarrola[1], Fidel Liberal[1], Armando Ferro[1]; Jin Xiao[2] ([1]University of the Basque Country, Spain; [2]University of Waterloo, Canada)
	S6.3 Competition and cooperation in the formation of information technology interoperability standards: a process model of web services core standards*
	Jai Ganesh (Infosys Technologies Ltd, India)
17:00 – 17:30	**Coffee break supported by Sinhgad Technical Education Society (STES)**
17:30 – 19:10	**Session 7 – Radio technologies and the future internet**
	Session chairman: Felipe Rudge Barbosa (State University of Campinas - Unicamp, Brazil)
	S7.1 Performance comparison of intelligent jamming in Rf (physical) LAYER with WLAN Ethernet router and WLAN Ethernet bridge
	Rakesh Jha, Upena D. Dalal (Sardar Vallabhbhai National Institute of Technology, India)
	S7.2 Self-organized spectrum chunk selection algorithm for local area LTE-Advanced
	Sanjay Kumar[1]; Yuanye Wang[2], Nicola Marchetti[2] ([1]Birla Institute of Technology, India; [2]Aalborg University, Denmark)
	S7.3 On the design of ultra wide band antenna based on fractal geometry
	Pranoti Bansode[1]; Raj Kumar[2] ([1]Defence Institute of Advanced Technology, [2]University of Pune, India)
	S7.4 Design of inscribed square circular fractal antenna with adjustable notch-band characteristics
	Raj Kumar[1]; Kailas Sawant[2], Jatin Pai[2] ([1]University of Pune, [2]Defence Institute of Advanced Technology, India)
	S7.5 Resonant frequencies of a circularly polarized nearly circular annular ring microstrip antenna with superstrate loading and airgaps
	Jayashree Shinde[1]; Pratap Shinde[2], BrajKishor Mishra[2]; Raj Kumar[3]; Mahadeo Uplane[4] ([1]Sinhgad Academy of Engineering, [2]NMIMS University, [3]DAIT University, [4]Shivaji University, India)

DAY 3 — WEDNESDAY, 15 DECEMBER 2010

09:00 – 10:30	**Session 8 – Future internet and the environment**
	Session chairman: Mitsuji Matsumoto (Waseda University, Japan)
	S8.1 A scheme for disaster recovery in wireless networks with dynamic ad-hoc routing
	Guowei Chen, Aixian Hu, Takuro Sato (Waseda University, Japan)
	S8.2 A new study on network performance under link failure in OPS/OBS high-capacity optical networks
	Felipe Rudge Barbosa, Indayara Martins, Edson Moschim (State University of Campinas - Unicamp, Brazil)
	S8.3 Business scheme for shifting from existing networks to trusted green networks
	Yoshitoshi Murata (Iwate Prefectural University, Japan)
	S8.4 Innovative ad-hoc wireless sensor networks to significantly reduce leakages in underground water infrastructures
	Daniele Trinchero[1], Riccardo Stefanelli[1], Luca Cisoni[1]; Abdullah Kadri[2], Adnan Abu-Dayya[2], Mazen Omar Hasna[2], Tamer Khattab[2] ([1]Politecnico di Torino, Italy; [2]Qatar University, Qatar)
10:30 – 11:00	**Coffee break supported by Sinhgad Technical Education Society (STES)**
11:00 – 12:30	**Special Session: Standards Corner**
	Session chairman: Simao Campos (Telecommunication Standardization Bureau, ITU)
	◆ **Keynote presentation:** ITU-T Focus Group on Future Networks - challenges and standardization results, Alex Galis (Vice Chairman, ITU-T Focus Group on Future Networks)
	◆ Trends in transport standards, Helmut Schink (Vice Chairman, ITU-T Study Group 15)
	◆ ITU IPTV standardization activities, Masahito Kawamori (Chair, ITU-T IPTV-GSI)
	◆ Coordinating future internet assembly standardization in Europe, Alain Vouffo (MyFIRE, EU)
12:30 – 14:00	**Lunch supported by Sinhgad Technical Education Society (STES)**

*An * denotes papers nominated for best paper award.*

14:00 – 15:30	**Special Session: Standards Corner**
	Session chairman: Gary Fishman (USA)
	♦ Introduction to ITU Standardization Sector, Simao Campos (Counsellor, ITU-T Study Group 16)
	♦ Standardization from an industry perspective, Mostafa Hashem Sherif (AT&T, USA)
	♦ Introduction to the "standardization tutorial" on 16 December, Gary Fishman (former TSAG Chairman)
15:30 – 16:00	**Coffee break supported by Sinhgad Technical Education Society (STES)**
16:00 – 16:30	**Best paper awards and young author recognition**
	Session co-chairmen: Ramjee Prasad (GISFI); Yoichi Maeda (General Chair)
	Presentation of best paper awards and young author recognition certificates
16:30 – 17:30	**Wrap up session**
	Session chairman: Mostafa Hashem Sherif (AT&T, USA)
	Summary of the third Kaleidoscope conference (panel with session chairs)
17:30	**Closing**
	Yoichi Maeda (Kaleidoscope General Chairman; TTC, Japan)
18:30 – 20:00	**Networking Reception supported by GISFI and ITU**

POSTER SESSION PAPERS
Showcasing innovations for future networks and services

P.1	**Beyond the WiFi: Introducing RFID system using IPv6**
	Labonnah F Rahman, Mamun B.I Reaz, Mohd Alauddin Mohd Ali, Mohammad Marufuzzaman, Muhammad Raisul Alam (Universiti Kebangsaan Malaysia, Malaysia)
P.2	**Comparative analysis of extended geographical wireless networks based on Diversity transmission systems**
	Daniele Trinchero, Alessandro Galardini, Riccardo Stefanelli (Politecnico di Torino, Italy)
P.3	**SIP Trunking the route to the new VoIP services**
	Ivan Gaboli, Virgilio Puglia (Italtel S.p.A., Italy)
P.4	**Global e-Public Service (GePS)**
	Priyantha K Weerabahu (DMS Electronics Ltd., Sri Lanka)
P.5	**Integrating Wireless Sensor Networks and Mobile Ad hoc Networks for an Enhanced End-user Experience**
	Saba Hamedi, Mohammadmajid Hormati, Roch Glitho, Ferhat Khendek (Concordia University, Canada)
P.6	**Telecommunications Business Model For Converged Networks Focusing Final Users**
	Cledson Sakurai, Moacyr Martucci Junior, André Hiyuiti Hirakawa (University of Sao Paulo, Brazil)
P.7	**On Demand Fine Grain Resource Monitoring System for Server Consolidation**
	Arnupharp Viratanapanu, Ahmad Kamil Abdul Hamid, Yoshihiro Kawahara, Tohru Asami (The University of Tokyo, Japan)
P.8	**Describing and Selecting Communication Services in a Service Oriented Network Architecture**
	Rahamatullah Khondoker, Bernd Reuther, Dennis Schwerdel, Abbas Siddiqui, Paul Mueller (University of Kaiserslautern, Germany)
P.9	**Virtualized passive optical metro and access networks**
	Jun Shan Wey[1]; Curt Badstieber[2], Klaus Pulverer[2], Harald Rohde[2]; Ashwin A Gumaste[3]; Ali Nouroozifar[4]; Antonio Teixeira[5] ([1]Nokia Siemens Networks, USA; [2]Nokia Siemens Networks, Germany; [3]Indian Institute of Technology, Bombay/ Massachusetts Institute of Technology, India; [4]Nokia Siemens Networks, Canada; [5]Nokia Siemens Networks, Portugal)
P.10	**Adaptive Resource Allocation for Real-Time Services in OFDMA Based Cognitive Radio Systems**
	Dhananjay Kumar, Shanmugam Mahalaxmi, Jayakumar Sharad Kumar, Rangarajan Ramya (Anna University Chennai, India)
P.11	**All Photonic Analogue to Digital and Digital to analogue conversion techniques for digital RADIO over FIBRE SYSTEM applications**
	Seyed Reza Abdollahi[1], Hamed Saffa Al-Raweshidy[1], Rajagopal Nilavalan[1]; Sied Mehdi Fakhraie[2] ([1]Brunel University, United Kingdom; [2]University of Tehran, Iran)
P.12	**Enhancing CyberSecurity for Future Networks**
	Raj Puri[1]; Anthony Rutkowski[2] ([1]Yaana Technologies, USA; [2]Georgia Institute of Technology, USA)
P.13	**Towards a Service-Oriented Network Virtualization Architecture**
	May El Barachi[1]; Nadjia Kara[2]; Rachida Dssouli[3] ([1]Concordia University, Canada; [2]École de Technologie Supérieure, Canada; [3]UAEU, UAE)
P.14	**Thin Apps Store for Smart Phones Based on Private Cloud Infrastructure**
	Ashish Tanwer, Abhishek Tayal, Muzahid Hussain, Parminder Reel (Thapar University, India)

For more information, please see: **www.itu-kaleidoscope.org/2010**