IEEE CCNC 2013 Showcases Innovative Consumer Information and Communications Technologies

IEEE

New York, NY – The IEEE Consumer Communications and Networking Conference (CCNC 2013) [1], the leading international conference dedicated to driving the advance of on-demand consumer electronics technologies, recently held its 10th annual event at the Las Vegas Flamingo Hotel devoted to next stage anytime, anywhere entertainment and information communications.

Extending from January 11 to January 14, the conference was specifically designed to open on the final day of the 2013 International CES and even boasted a new, collaborative CES booth highlighting IEEE initiatives as well as IEEE Communications Society (ComSoc) standardization projects, upcoming conference details and IEEE CCNC prototype demonstrations. Included in these demos were the presentations of Dr. Frank den Hartog of the Netherlands Organization for Applied Scientific Research (TNO), who showed his latest efforts for “enabling new e-health business models by converging IP-based and non-IP-based home networks” as well as Arun Jagatheesan of Samsung R&D Center, who explored “Application Defined Computing in Smartphones and Consumer Electronics.” Also at the CES IEEE booth was Dr. Pascal Urien of Telecom ParisTech & EtherTrust, who addressed “LLCPS: A New Security Framework Based On TLS For NFC P2P Applications In The Internet Of Things” and Dr. David Llewellyn-Jones of Liverpool John Moores University, who showcased his “Prototype for Design-time Secure and Trustworthy Service Composition.”

IEEE CCNC 2013 then officially commenced on January 11th with a full day of tutorials and workshops dedicated to topics such as “Consumer eHealth Platforms, Services and Applications,” “Internet of Things - RFIDs, WSNs and Beyond,” “People Centric Sensing and Communications” and “Advances in Home Networking Standardization and Related Research Opportunities.” Among these was also the session on “Emerging Technologies for Future Telecommunications,” which displayed new teleconferencing techniques providing “high-realism” telepresence experiences utilizing 3D capture displays, panoramic views, circular microphone arrays, multiple-depth cameras and facial expression tracking technologies. Other notable sessions included the tutorials on “Connecting Smart Phones to Your Car” and “Erasure Coding: Meeting Three Screens & the Cloud” that detailed the global collaboration to develop solutions using smartphones as the main user interface for in-car infotainment experiences as well as erasure coding’s key role in improving network performances and reducing cloud storage costs related to mass-participant gaming applications over heterogeneous networks.

On Saturday morning, IEEE CCNC 2013 then opened with IEEE CCNC Steering Committee Chair Dr. Robert S. Fish of NETovations welcoming all attendees and thanking the patronage of sponsors such as Samsung, Harman, Microsoft, TNO,

EtherTrust, Quby and Aniketos. Afterwards, the conference's first keynote speaker Dr. Donald L. Schilling, Chairman of LINEX Technologies and former President of IEEE ComSoc, spoke on his "Vision of Wireless Consumer Communications." This included illustrating the physical similarities between Direct Sequence and Frequency Hopping Spread Spectrum mechanisms and Multi-Carrier OFDM, while pointing out that "OFDM appears today to be the best Spread Spectrum technique." He also addressed the significant benefits of deploying MIMO in conjunction with Spread Spectrum/OFDM systems in order to mitigate the negative effects of channel fading and multipath, while increasing system capacities.

Over the next three days, the conference's technical agenda then proceeded with the presentation of more than 100 technical papers, demonstrations, Work-in-Progress and executive business sessions highlighting subjects like "Robust Wearable Health Monitoring Systems," "Audiovisual and Haptic Interactive IP Communications," "Energy Efficient Green Cellular Networks," "Multihop Vehicle-to-Vehicle Communications Over TV White Spaces" and "Real-Life Applicable Fall Detection Systems." Later Saturday afternoon, this also included the keynote of Dr. Kilsu Eo, Senior Vice President of Samsung, who was introduced by General Chair Dr. Eunsoo Shim of Samsung Electronics.

During his talk on "Smart Life with Convergence," Dr. Eo outlined his company's goal to advance the everyday use of consumer electronic devices, future cars and health care devices through the ongoing deploy of advanced cloud services, data analytics, web-centric solutions and convergence platforms. He also suggested that "in order to compete in the market, device manufacturers must find a way to provide differentiated experiences to users. Samsung sees the solution is in technology convergence (in which) previously separate devices, networks, and services now converge to offer new, exciting applications and user experiences."

On the following morning, Technical Program Committee Chair Dr. Jin Li opened the day by welcoming the conference's third keynote speaker, Albert Greenberg, Partner Development Manager of Microsoft, who presented "SDN in Windows Azure Cloud" and the "real world" problems of achieving reliability and scale of operations for a large public cloud. Among his multi-tenancy and virtualization recommendations were the need for automated network management solutions integrated with cloud infrastructures, network functions involving load balancing, standards-based network management, and SDN technology advances that enable more agile, simple, reliable, inexpensive and scalable networks.

In the evening, the IEEE CCNC 2013 keynote program ended at the annual banquet with the address of Dr. I.P. Park, Executive Vice President & CTO of HARMAN International. Focusing on "Game Changers of Future Consumer Communications," Dr. Park explored the core concepts of big data and smart connectivity in relation to the rapid pace of technological change and the impact on user experiences. He pointed out that 25 years ago mainframe computers rapidly succumbed to compact desktop devices and the world enjoyed exponentially multiplied available processing power per user. According to him, today we are in the middle of a far more dramatic paradigm shift in Information and Communications Technologies (ICT). The shift is occurring because of the mass proliferation of mobile devices and

applications and the deployment of cloud services. This included emphasizing HARMAN's vision for the future, which entails the necessity of leveraging these latest technological trends for consumer audio/visual and infotainment products and services.

IEEE CCNC 2013 then concluded Monday, January 13 with another full day of tutorial and Work-in-Progress sessions detailing the latest advances in “Vehicular Networking: Applications, Standards, Protocols, Deployment Plans and Open Issues,” “Smart Switch: Optimize for Green Cellular Networks,” “Mainstream Media vs. Social Media for Trending Topic Prediction” and “Improved Feature Representation for Robust Facial Action Unit Detection.”

For information on the 10th Annual IEEE Consumer Communications & Networking Conference, including links to the event’s Facebook, LinkedIn and Twitter sites, visit http://www.ieee-ccnc.org/2013 [1].

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[1] http://www.ieee-ccnc.org/2013