The Future of Wi-Fi

- 5G Networks: End-to-End Architecture and Infrastructures
- Green Communications and Computing Networks
Having the opportunities to deliver several lectures on data networking and Internet computing in Asia and Pacific, Europe, North America and South America, I have been honored to be appointed as an IEEE Communications Society Distinguished Lecturer in January 2014.

China is my home country where I grew up and was educated. In recent years I have participated in several EU-sponsored or bilateral projects involving some Chinese partners, which provided much enjoyment and fresh experiences with different Chinese colleagues. Nevertheless, my personal feeling is that they are more project-driven, unlike a global organization such as IEEE ComSoc, which could bring a different value for the whole research community.

Upon the invitations of the IEEE ComSoc Shanghai Chapter and the Beijing Chapter, I had the opportunity to make my first DLT to China. IEEE ComSoc Asia-Pacific Project/Admin Executive Ewell Tan was extremely efficient and professional in communicating with local chapters and sectors on my DLT schedule. The initial thought was to deliver lectures in Nanjing, Shanghai, Wuhan, and Beijing, but due to time conflicts I could not visit Wuhan, and some of my lectures (“Fine-Grained Multi-Resource Scheduling in Cloud Datacenters” at Nanjing University in Nanjing and Fudan University in Shanghai, as well as “Content Distribution: from Client/Server to Content-Oriented Publish/Subscribe System” at Tsinghua University in Beijing) were delivered outside the DLT program due to synchronization issues with the local chapters. Although these lectures were not directly under the IEEE DLT flag, Ewell encouraged me to deliver them as planned, which actually turned out to be well perceived by colleagues and students in these institutions.

After my Nanjing trip, I arrived in Shanghai on 4 May and gave a lecture at Fudan University on the morning of 5 May. After lunch I visited Shanghai Jiao Tong University (SJTU), one of the top engineering universities in China, for the first time, and gave my first DLT lecture on the design, implementation, and evaluation of scalable microblogging systems. There were over 30 attendees, some faculty members, and many graduate and undergraduate students from SEIEE, including all students from a seminar course usually planed for that slot. The audience showed a great interest in the topic, and I enjoyed the interactions during the talk and in the Q&A period after the presentation. In particular, I received emails from some students after the seminar. Some of them wanted to study in Göttingen and work on related topics. My hosts Prof. Xinwan Li (IEEE ComSoc Shanghai Chapter Chair, and Vice Dean of SJTU-Michigan University Joint Institute), Prof. Xinbing Wang (IEEE ComSoc Shanghai Chapter Chair), and Dr. Xiaohua Tian were very thoughtful, and warmly invited to visit their labs in SEIEE as well as the Michigan University-SJTU Joint Institute. From my personal feeling, SJTU is certainly China’s most modern university, owing to their broad visions, maximal elimination of bureaucracy, and efficient adoption of a western educational culture. SJTU also has an open mind to attract world-class experts and scientists to work there or collaborate with them. It’s amazing that many faculty members hold U.S., Canadian, Japanese, or European Ph.D. degrees, and they are implementing the tenure-track system with competitive salary and expectations. SJTU’s Minhang campus is huge, beautiful, and elegant. I did not have the time to visit it except for the office buildings of Prof. Li, Prof. Wang, and an in-campus coffee bar, but I definitely want to see the entire campus on a future trip.

My next DLT lecture took place at Beijing University of Posts and Telecommunications (BUPT) on 7 May 2014. In the classroom I was delighted to meet another DLT lecturer, Dr. Tarik Taleb, a colleague from NEC Europe Networking Lab, Heidelberg, Germany, who gave a lecture just before mine. We have known each other for quite some time and we are both located in Germany. His lecture focused on cloud computing architecture perspectives, while mine was more focused on the Internet service and systems point of view. There were roughly 40 attendees, mostly faculty members and graduate students from the Communications Engineering department, from which I saw there was a keen interest in learning about the social networks domain and other emerging Internet services. After the lecture I also had the pleasure of meeting our current EU project partners (Prof. Lin (Continued on Newsletter page 4)
Looking Back at the Development of our Technologies

Dr. Jacob Baal-Schem – SLM, Tel-Aviv University, Israel

Due to the pace of development of communications technologies, we hardly have time and interest to turn back and look at our achievements, and to guide our students accordingly.

Just think that:
- 100 years ago there were no official broadcasting stations in the world.
- 50 years ago you could hardly find a portable radio set and all receivers worked on vacuum tubes.
- 40 years ago a “walkie-talkie” was a huge and heavy piece of equipment.
- 20 years ago the fastest way of written communication was by facsimile.

Look around and you can still meet the people who have developed the technologies that are so common to all of us today. Look around and you can sense the social impacts of these technologies on our daily life. This gives us a special opportunity to learn and discuss with those “elders” how these technologies were developed and receive lessons “from the mouth of the horse.”

Actually, we seldom compare the long evolution of music recordings — 78rpm vinyl records to the MP3 and MP4 files of our children — and think how much effort was involved and how many scientists and technicians have spent their lives to achieve these changes. This is especially true for young students and even for young engineers. The past seems unimportant to many of them, while actually, “Who controls the past controls the future. Who controls the present controls the past” (George Orwell in “1984”).

The IEEE Israel Section (actually, members of the ComSoc Chapter) has initiated, and IEEE Region 8 has approved, organizing a series of HIStory of Electrotechnology CONferences – HISTELCON. The first HISTELCON was held in Paris, France, in 2008. The second was hosted by the Spain Section in Madrid, Spain, in 2010, and the third was hosted by the Italy Section and the local University in Pavia, Italy, in 2012. Approaching the 2012 event, the IEEE History Committee decided to cancel its bi-annual HISTELCON.

The technology who’s history is discussed incorporates state-of-the-art knowledge and is valued for its inventiveness and wide socio-cultural implications. As such, these are the focal points for research by historians of technology, scientists, and engineers exploring the emergence of their own field of expertise, as well as for economists, sociologists, and others.

The organizers aspire to a multifaceted picture of the developments of such technologies from various approaches, with talks discussing subjects that include (but are not restricted to) the origins, evolution, and demise of various techniques and methods, their employment, spread, and appropriation, the cultural, social, military, economic, scientific, natural, and technical factors that shaped these events, and the ways by which technologies influenced societies that adopted them.

The IEEE Israel Communications Chapter, the first Chapter of the first Section in Region 8, has enthusiastically participated in the organization and in the program of these Conferences, and all ComSoc members are heartily welcomed to participate in HISTELCON. For any questions, please contact: j.baal.schem@ieee.org

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Zhang and Prof. Jun Guo) and IEEE ComSoc Beijing Chapter Chair Prof. Xiaofeng Tao, and discussed some issues related to crowdsourcing and mobile cloud computing.

I delivered my third DLT lecture at the Institute of Computing Technology, Chinese Academy of Science (ICT-CAS), on 8 May 2014, with some 15 attendees, primarily the members and graduate students from Prof. Yiqing Zhou’s lab. In the beginning Dr. Xue Han presented the structure of ICT-CAS and research activities in their lab on behalf of Prof. Yiqing Zhou, who could not attend the lecture due to sickness. My understanding is that they have primarily focused physical layer, link layer, and network layer functions in the 4G/5G direction, complementing what we have primarily focused physical layer, link layer, and network layer functions in the 4G/5G direction, complementing what we have been pursuing in the network layer and above.

In summary, I had a pleasant and fruitful first DLT in China. I enjoyed it very much, thanks the generous support of IEEE ComSoc and also the hospitality of local chapters.

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co-organizers, the WCSP conference series has established itself as the premier forum for the presentation of new advances and research results in the fields of wireless communications and signal processing.

WCSP 2014, the next edition of WCSP, will take place in Hefei, China, 23-25 Oct., 2014. The conference will be hosted by the University of Science and Technology of China. For more information about WCSP 2013 and WCSP 2014, please visit http://www.ic-wcsp.org.