GLOBAL Communications NEWSLETTER

January 2013

IEEE ComSoc Distinguished Lecturer Tour of K. K. Ramakrishnan in Indonesia (October 2012)

By Satriyo Dharmanto, Indonesia ComSoc Chapter

The IEEE Communications Society Chapter of Indonesia has hosted a Distinguished Lecturer Tour (DLT) of Kadangode K. Ramakrishnan, AT & T Fellow, on 11-13 October 2012. The program was held in three different universities in Jakarta (DKI), Yogyakarta (Central Java) and Bandung (West Java). All of the seminars was attended by both student, lecturer and public participants from ICT related Industries, in Indonesia.

The first day was held in Universitas Pelita Harapan (UPH), Jakarta, Indonesia. In this university, seminar was divided into three different topics. The seminar was held on Thursday, 11 October 2012, 13.00 – 16.00 local time, at MYC Building, Universitas Pelita Harapan, Karawaci Campus, Tangerang, Indonesia.

The first topic was Networking the Cloud: Enabling Enterprise Computing and Storage, that has been conducted by Dr. Kadangode K. Ramakrishnan, IEEE Distinguished Lecturer, AT & T Fellow, AT & T Laboratories; Moderator Ir. Herman Y. Kanalebe, M.Sc., Ph.D.

The second topic was Cloud Computing: Technical, Regulations, and Business Perspective that has been conducted by Satriyo Dharmanto, IEEE ComSoc Indonesia Chapter Chair, with Moderator Dr. Henri Uranus, lecture of UPH

The third topic was Small-world Phenomenon and Its applications, that has been conducted by Dr.-Ing. IhanMartoyo, Dept. Electrical Engineering, UPH, with moderator Ms. Agnes Irwanti, IEEE Indonesia section Secretary.

The total attendances was about 178, consist of IEEE members 13, non-member 165, with academic sector about 80 percent and Industry about 20 percent. In this seminar, the audience response was very active response and interactive, where there are several questions related to the topic asked to all of the speakers.

The second day was held in Universitas Gadjah Mada (UGM), Yogyakarta, Indonesia. In this university, seminar was also divided into three different topics, similar to UPH. The seminar was held on Friday, 12 October 2012, from 09.00 to 16.30, local time. Seminar venue at University Center, Universitas Gadjah Mada, Yogyakarta, Indonesia

The first topic is conducted by Dr. Kadangode K. Ramakrishnan, the second is conducted by Satriyo Dharmanto, but the third topic was Cloud Computing From Academic Perspective, conducted by Ir. DaniAdhipta, MSc, Lecturer of Dept. Electrical Engineering and Information Technology, GadjahMada University.

The total attendances was about 175, consist of about 15 IEEE members (including Student member), 160 non-member, from Academic sector about 75 percent and Industry about 25 percent. In this seminar, audienceresponses are very active response, interactive and so many questions to be asked to the speakers.

Seminar at Universitas Pelita Harapan (UPH), Jakarta, Indonesia.

The third day was held in Institut Teknologi Telkom (ITT), Bandung, Indonesia.

In this university, seminar was also divided into three different topics. The seminar was held on Saturday, 13 October 2012, 09.00 – 17.00 local time, with venue at Auditorium Gedung K, Kampus IT Telkom Bandung, Indonesia.

The first topic was conducted by Arief Hamdani Gunawan, with the topic Introduction to Cloud Computing, he is past IEEE ComSoc Indonesia Chapter Chair, Board member of IEEE Indonesia Section, and the second is conducted by Dr. Kadangode K. Ramakrishnan, with the topic, Networking the Cloud: Enabling Enterprise Computing and Storage. The third topic was Talk Show, with the theme Cloud Computing Phenomenon in Indonesia with speaker from Telkom Sigma Data Center &Mr. KurniaWahyudi, from IBM.

The total attendances in this seminar was about 200, consist of IEEE members about 25 (including Student member) and non-member about 175, with participant from academic sector about 70 percent and Industry about 30 percent. In this seminar and talk show, audiences response are very active response and very interactive.

In all three different venues, the opportunity of member recruitment and retention to this program was quite high. We suggest to continuing this DLT programs in the near future, with combination of Academic and Industrial lectures.

The New ComSoc chapter of IRAQ Has Been Founded

By Dr. Eng. Sattar B. Sadkhan Al Maliky, Founder Chair of IEEE ComSoc Iraq Chapter

As a chairman of IEEE IRAQ Section, I have urged my colleagues in IEEE IRAQ Section to work for the establishment of new ComSoc chapter in IRAQ. Members signed a petition and submitted it to the IEEE to get the confirmation. And on 22 Sept. 2011, the confirmation for the establishment of this new section was received. Many activities have been planned to diffuse awareness about the importance of this new chapter, mainly in Iraqi Universities, and many ministries and private communication companies, and throughout the complete Iraqi scientific community. The chapter has set up the activities detailed in the following.

Scientific workshop “The Status of the Communication and Information Security in IRAQ” in cooperation with “AL Najef Technical College”, The Ministry of Communication ,the Institute of Media and Communication, and “Omnia Communication company”. In his opening speech, the Chair of the chapter talked about:’ Status of the security of the communication system inside Iraq, especially after 2003”.

The Second Iraqi Communication Conference was held in cooperation with the Ministry of Communications. The ComSoc Chapter members sat on the scientific committee and reviewing board of this conference. And they organized a workshop on the “Status of the security of communication system in IRAQ”.

Another scientific workshop was held in cooperation with Engineering College in Kirkuk City and “Kilmat Private Company” on “ The Current Status of Infrastructure of Communication Systems and Their Securities in IRAQ. It was held on15 March 2012 in Kirkuk City.

Babylon University hosted the “Second International Scientific Conference. The main topic the conference covered was the new communication systems and their applications. Most of the ComSoc Chapter members participated in this conference.as reviewers of the submitted papers in the conference.

Moreover, another workshop was held in Al Muthana University on “E-Government and Its Future in Iraq” in cooperation with Science College on 4 Jan. 2012. The Iraqi Chapter Chair was the main speaker in this workshop. He spoke about the “Applicability of the E-Government and its Relation to the Existing Communication Infrastructure inside Iraq after 2003.

Al Nahrain University hosted the First International Conference on the Future Wireless Communication Networks (ICFCN2012) in Baghdad between 10-13 April 2012.

The Third Scientific Conference on the “Trends of the IT” was held in Anbar University between 5-6 April 2012

In cooperation with University of Technology, a workshop on “Multidisciplinary Cooperation in Science and Technology” was held on 4 April 2012.

The first International Conference on Future Communication Networks (ICFCN 2012) (first from left: Sattar B. Sadkhan Al Maliky, ComSoc Iraq Chapter Chair).

Scientific workshop about “Recent Advances in Wireless Communication” in Kirkuk City (Sept. 2012).

The Chapter Chair participated in the NSF workshop at KOC University in Istanbul between 13-15 June 2012. The workshop topic is related to the: “Cyber Security Aspects in the Middle East Countries”. The Chapter Chair talked on the status of the security in Iraq during the last three decades, and suggested 5 different projects to enhance the re-establishment of the communication infrastructures and the required security roadmaps.

A scientific workshop about “Recent Advances in Wireless Communications” was delivered to a group of engineers from Iraqi Telecommunications and Post Company (ITPC) - a public sector foundation- to keep them up with the latest innovations in wireless communications field. The workshop covered important topics of cellular technologies, starting from a quick glance at 1st generation of mobile communications (Analogue technologies like AMPS) and then the evolu-

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First Iraqi National conference of the Engineering Colleges of 6 – Iraqi Universities hold at (7-8 Nov. 2012) at Baghdad- Al Nahrain University.

RATEL is Preparing Serbian Telecommunications for the EU Accession

By Dr. Milan Jankovic, Dr. Jovan Radunovic

A number of documents that are significant for the development of telecommunications in the Republic of Serbia were adopted in the last couple of years. Owing to these documents, the conditions have been created for an unhindered development of the telecommunications sector in line with the development trend of the EU countries. According to the RATEL (Serbia's Republic Agency for Electronic Communications) annual report the annual telecommunications sector revenues amounted to approximately 1.6 billion euros in 2011, representing around 6% of the GDP. The sector investments in the last six years have reached 2.4 billion euros. Pursuant to the Law on Electronic Communications, all retail markets are liberalized and, furthermore, the Internet wholesale market is regulated. Broadband Internet is provided by a number of fixed and mobile operators and several CATV distributors.

According to the 2011 data on high-speed Internet usage issued by the International Telecommunication Union, listing 173 member countries, the Republic of Serbia was ranked 30th in terms of mobile broadband penetration, with 34.5 subscribers per 100 inhabitants, and 57th in terms of fixed broadband penetration, with 10.8 subscribers per 100 inhabitants.

Pursuant to the Law on Electronic Communications (Official Gazette of the RS no. 44/2010) and the Strategy for the Development of Electronic Communications in the Republic of Serbia from 2010 until 2020, RATEL has been given the following tasks:

* ensure the conditions for the further development of electronic communications and a balanced development all over the territory of the Republic of Serbia, by deploying modern ICSs

* create conditions for a level playing field both in terms of network neutrality and market economy

* ensure further market development by applying the mechanisms that promote competition (ex-ante) and market regulation where necessary (ex-post)

* overall protection of the interests of all stakeholders, in particular of the end-users, aiming at new services of a higher quality at affordable prices

* optimal and rational usage of all national scarce resources: frequencies, numbering (and even Internet domains)

with the objective of ensuring optimal and feasible conditions for the further development and application of electronic communications (information-communications systems and services - ICSs), thus delivering the benefits and advantages provided by the modern information society, in line with the Digital Agenda of the Republic of Serbia and the EU recommendations.

In accordance with the stated tasks and objectives, RATEL set out the following strategic activities in the Plan of Activities:

1. Providing conditions for the implementation of the National Broadband Network – Serbia (NBN-S), by establishing a public enterprise - Serbian State Telecom Networks. This public enterprise would encompass all state telecom capacities (Electric Power Industry of Serbia, Electric Network of Serbia, PTT, Serbian Railways, Serbian Armed Forces, Ministry of Interior, a part of Telekom Srbija's capacity, ETS Public Enterprise and other smaller state-owned capacities), thus ensuring the rational usage of these capacities and the optimal further development of NBN-S. This would provide a rational and reliable operation of all electronic systems: in particular of those allocated to the special services (army, police, security and intelligence agency, army security agency, 112), electronic management systems at all levels – national, regional and local (justice, health, education) and other state institutions and companies. In addition to a direct benefit in terms of savings provided by such structure, our estimates show that NBN-S provides an increase in productivity, as a result of an Internet-based administration system, leading to a 0.2 percent annual increase in tax income. The direct benefit of such application of the Internet would bring EUR50-60 million a year to the government, while new business activities would provide an annual increase in GDP of 0.3 percent. It is estimated that such application of the Internet would create around 90 000 new jobs a year. Indeed, NBN-S would contribute to an overall development of the society. In addition to telephone, Internet and TV, many multimedia services would be made available, in particular those

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History of Telecommunications at theIEEE HISTELCON Conferences

By Dr Jacob Baal-Schem, Israel

Since 2008, the IEEE Region 8 organizes a series of HISTory of ELectrotechnology CONferences (HISTELCON). The first conference was held in Paris. The second was held in 2010 in Madrid and was dedicated to "A century of Broadcasting". The third was held recently at Pavia University, Italy, and included two sessions on the History of Telecommunications.

Papers presented at HISTELCON 2012 in Pavia included the following:

- "180 years of Telecommunication in Russia" by Oleg Valentinovich Makhrovskiy of Saint-Petersburg State University of Telecommunications. This paper dealt mainly with the biography of Pavel Shilling, who presented on October 21, 1832, the first Electromagnetic telegraph, that he invented. This date is considered in Russia as the birthday of Russian telecommunications.
- "Optical Telegraphy in Russia: 1794-1854" by Shilov, Kirov and Nazarov from Russian State Technological University, Moscow, described some main projects of Russian inventors.
- Ahmet Oral, from Ankara, Turkey, summarized the transfer of electric telegraph technology to the Ottoman Empire and its implementation by watchmakers in a small workshop.
- "The world's first commercial facsimile service" by Jonathan Coopersmith of the Department of History at Texas A&M University, USA, dealt with a communication service between Paris and Lyon in 1865, using the Pantelegraph. This machine was invented by Abb Caselli and is mentioned by Jules Verne in his 1863 novel about the 20th century.
- Takayuki Nagata, Osama Kamei and Taru Ishii of the National Museum of Nature and Science, Japan. described the creation of the NE picture transmission device in 1928. This device was the precursor of modern day facsimile machines.

History of Telecommunications is a major subject in all HISTELCON Conferences and encompasses many countries. It will also be a major item in the next HISTELCON, which will be held in Israel in 2015, in cooperation with IEEE History Center and with ICOHTEC, the International Committee on History of Technology.

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related to e-Commerce, management, business, banking, education, medical care and other services provided via Internet.

2. In line with the modern scientific and technical achievements enabling the introduction of new technologies in the spectrum management and having in mind RATEL's tasks, appropriate activities are envisaged in order to optimize the usage of this resource. This means exploiting the digital dividend in a way that would enable the usage of new technologies for multimedia service provision, making sure that general public interest is satisfied. The activities necessary for introducing DTV and obtaining new portions of the spectrum are envisaged. According to the strategic documents adopted by the Government of the Republic of Serbia, after the switchover (ASO is scheduled for 16 June 2015) the digital dividend will be intended for mobile broadband services. This task will be fulfilled with the adopted of the new Allocation Plan and further enhancement thereof. (Official Gazette of RS, no. 99/12).

3. NBN-S is a network connecting all government bodies and institutions with several big (private) operators. The development of NBN-S will be phased depending on funding availability. RATEL's role is to ensure feasible conditions through regulation, in order to enable the functioning and operation of NBN-S. The regulation concerns interconnection and, in particular, financial and technical issues. Consequently, necessary activities for the implementation of general enactments providing fair business conditions to all operators, both economically and in terms of net neutrality. The regulation needs to set out the technical requirements concerning both the issues of connecting the operators to the network and adequate quality of services provided to the users.

4. NBN-S needs to enable broadband access (BBA) to all users and make available a variety of advanced services. Availability, high-quality service and high-speed of BBA all over the territory of Serbia at affordable price is among top priorities on RATEL's regulatory agenda.

Serbia is looking to become an EU member, while RATEL is preparing its telecommunications sector for the accession.

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tion to 2nd generation of mobile communications in the beginnings of 1990s (GSM and IS95). Then the main topics of 3G technologies (WCDMA UMTS & CDMA2000) and 4G technologies (WiMax and LTE) were illustrated in detail. Three communication engineers (members of IEEE ComSoc Iraq Chapter) organized the class and delivered the lectures

Arrangements are currently being made to hold the "Iraqi National Conference of the Engineering Colleges of 6 Iraqi Universities: Al-Nahrain, Babylon, Kirkuk, Diyala, Almustansirya and University of Technology", that will be held between 7-8 Nov. 2012 at Al-Nahrain University.

The first training course on the Design and Implementation of the Robot is planned to be held in Sulimanyia City in Kurdistan Region. The course will last for 5 days, covering the most important aspects of the hardware and software infrastructure needed for the design and implementation of robot. And concentrating will be on the Wireless sensor networks that can be used by robot for different purpose, such as medical applications.

The IEEE ComSoc IRAQ Chapter sent letters to most of Iraqi Ministries, Governmental Institutes, and Universities, asking for the participation of interested staff and the final year students at the undergraduate study in Communication Engineering Departments and the departments interesting in Cryptology and Information Security like: Computer Science, Applied Mathematics, Computer Engineering, Information Technology Departments. He also called to concentrate in the final year projects on a practical project for solving problems related to the existing infrastructure problems inside Iraq.

At the end of the academic year (July 2013), there will a workshop to select the best (10) projects , which will actually solve some of the existing infrastructure problems, or have practical applications.

The Chapter has signed "MoU" with the IEEE Iraq Section for scientific cooperation with one of the Chinese universities to ho;d their conference on IT applications on 4 March , 2013.

Other seminars and workshops are also planned to be held in other public sector foundations and universities in the coming days which will give great help to those institutions and introduce and show IEEE and ComSoc and their great contribution to science for the good of humanity.