

# IEICE Global Plaza no.53

— Monthly community plaza in English for students, faculties and engineers —

## Essay

### Toward A Truly International Organization



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Hello, all of general readers of IEICE Global Plaza. I have been devoted to activating and managing the international activities of both IEICE Societies and Overseas Sections (OS) through discussion in frequent meetings or Internet based communication of IEICE International Affairs Committee (IAC) and annual meeting of IEICE Overseas Section Representatives (OSR) where all of OSR join face to face, further improving the quality of overseas member services and reforming the current systems related to the international activities, as the Chairman of IAC. It will surely provide an opportunity for you to think better of the overseas member services of IEICE if my article is focused on the scheme and current relevant issues of OS.

IEICE has tried to go forward to a truly international academic institution. It will accelerate the internationalization process of IEICE to refer to the background, strategy and steps by taking account of the current OS situations, which we would like to discuss with all of you.

First of all, the mission of IEICE is defined as follows. "The Institute is an international organization concerned with electronics, information, communications and related fields with the aim of promotion of scholarly growth, industrial advancement and cultivation of human resources." Moreover, as many of you are aware, it is a worldwide trend that the activities of academic institutions are getting rapidly global. Actually the number of IEICE overseas members outside Japan is showing a sizable growth. Their percentage in IEICE population was less than 1% when the organization of OS was established, it is growing year by year to reach around 10% of the overall IEICE members at the moment. However, we have to admit that we are behind in speed and scale for the globalization.

With the background mentioned above, I would like to present a strategy as follows for discussions. First we may ask some volunteer Sections to take the initiative in establishing management organization to extend the activities. Section Chair, Section Chair-Elect, Treasurer, Event Officer, Publishing Officer, Secretary, and other officers if necessary, will be selected. They should make annual activity plan as well as budget plan. Technical conferences and lectures may be held more often to attract people in the region. When the Sections develop to be able to hold some technical committees in the specific fields, they may make their own annual activity plan and budget plan. The technical committee may be called "chapter" if we follow the wording of other institutions. Submission of technical papers to I-Scover, which may be in English or in local language, is strongly encouraged.

On March 21, 2013 the OSR Meeting was held on the occasion of General Conference at Gifu University. I explained there the above-mentioned background, strategy, and steps for kicking off the discussion. My impression about the response from the OSR is rather hesitation against going straight forward as explained. Such

perception is understood when I consider the current situation of OS, i.e., the number of members is not large enough and the management people are too busy with their own businesses. I understand that it is difficult to apply the steps right away to all OS. It will take time, I'm sure. That's why I ask whether any Section could be a volunteer.

We think that the meeting was meaningful in the sense that we understand that there is a certain discrepancy between what IAC aims at and what OS management people think they can do. We would like to have further discussions to make things work. It may be a way for improvement to hold at OS sites some technical meetings and conferences organized by Technical Committees belonging to Societies. We will see through such activities whether it is appropriate or not to set up technical committees in OS.

Some people point out that the wording "OS" would be misleading when we consider that IEICE is an international organization as stated in the mission. We will change it to Regional Section or something else.

The meeting with OSR has been held once a year. Considering the importance of going forward to really international organization, we may hold the meeting more than once a year in order to promote the discussions further and to reach consensus. I would like to ask cooperation of all OS representatives and management people.

We are looking forward to your constructive opinions to promote the internationalization process of IEICE. The contact address is [global@ieice.org](mailto:global@ieice.org).

## Hot Topics

### IEICE Overseas Section Representatives Gave Speeches on "International R&D Trends in ICT" in 2013 IEICE General Conference

*IEICE International Affairs Committee*

The special session TK-5 organized by IEICE International Affairs Committee, in the 2013 IEICE General Conference was reported in the preceding issue of IEICE Global Plaza published in IEICE Journal vol.96, no.5. In the session, invited speeches were given by the IEICE Overseas Section Representatives (OSR) or Deputy OSR. Their speeches are introduced here for the general readers to easily understand how they are managing their Sections and what they are expecting.

#### IEICE Bangkok Section



Dr. Tuptim Angkaew, Asst. Professor of Chulalongkorn University (CU), OSR of Bangkok Section introduced the Committee of the Section organized by 4 members, Honorary Advisor/Prof. Prasit P., Chair/Dr. Tuptim, Vice Chair/Assoc. Prof. Dr. Wati t Benjapolakul, Treasurer/Asst. Prof. Supavadee Aramvith, and gave an overview of their technical activities. The Section organized a joint workshop called "Thailand Japan Microwave Workshop TJMW 2012" on August 7-10, 2012. The Workshop was held in Faculty of Engineering, Chulalongkorn University. The Chairman was Prof. Kiyomichi Araki, Chairman of IEICE Electronics Society, and Dr. Tuptim managed the Workshop as the Co-Chairman with 30 Committee members. (See the details at [http://www.ieice.org/eng/global\\_plaza/2013/46.html](http://www.ieice.org/eng/global_plaza/2013/46.html)). The total number of participants was 201, including 133 Thai participants

and 63 Japanese participants. To make the workshop benefited to researchers in Asian countries, two papers from Laos and Vietnam were invited with the grant by IEICE Microwave group. All the lunch and banquet were sponsored by Faculty of Engineering, Chulalongkorn University and ECTI Association. She also referred to the plan of activities in 2013 which would cover TJMW 2013 at Kasetsart University in December 2013.

### IEICE Beijing Section



Assoc. Prof. Yongmei Sun of Beijing University of Posts and Telecommunications (BUPT), Vice OSR of Beijing Section presented her speech on behalf of OSR, Prof. Tao Zhang of Tsinghua University (TU). She summarized the trend of R&D activities in both BUPT and TU and referred to the current activities and the future plan of the Section.

Prof. Xiaohong Jiang of Future University Hakodate was invited by BUPT in Beijing on March 8, 2013, and he gave a lecture to IEICE members and young students from BUPT, TU and some other universities in China. It attracted more than 30 attendants all together. Assoc. Prof. Yongmei Sun chaired the meeting. At first, Prof. Tao Zhang introduced IEICE organization and encouraged the attendants to apply for the membership of IEICE. Then, the guest speaker, Prof. Jiang gave a speech entitled "Forwarding Games in Mobile Ad Hoc Networks", which covered his recent research experience and achievement on Mobile Ad Hoc Networks. Before and after the lecture meeting, Prof. Jiang visited State Key Laboratory of Information Photonics and Optical Communications in BUPT and Tsinghua National Laboratory for Information Science and Technology. He discussed current issues with teachers and students there. IEICE Beijing Section also co-sponsored "The 2nd International Symposium on the History of Indigenous Knowledge (ISHIK 2012)", which was held in Saga, on October 25-28, 2012. The number of participants in the Symposium reached 50 and they joined it from Japan and China. The participants were interested in the activities of the Section and IEICE through member services.



Fig.1 Participants with the Guest, Prof. Jiang, at Lecture Meeting on Mobile Networks



Fig.2 Participants in ISHIK2012 co-sponsored by IEICE Beijing Section

### IEICE Europe Section



Dr. Haris Gacanin of Alcatel-Lucent Bell NV, OSR of Europe Section presented his speech on the background and fundamental idea of establishing IEICE Europe Section and gave an overview of their activities. At first, he referred to the reason why the Section is required in Europe, the role of the Section, academic activities preceding to the establishment as well. His speech is summarized as follows.

At present the main goal of IEICE Europe Section is to develop a good organizational structure that will provide adequate services to its members. One of the first initiatives that is currently underway is to establish a yearly IEICE Europe event that would help further promotion of IEICE activities. The goal is to strengthen the networking among its members and with the rest of IEICE community and identify the dominant topics of interests for the Section members. With this in mind, the preparations have already started for the second meeting of the Section in May 2013, during 2013 IEICE Information and Communication Technology Forum (ICTF). The forum will serve as a convenient 'research introduction' of the Section towards the rest of the IEICE and will foster network and mutual collaboration among different sections of IEICE.

Some of the past activities are summarized as follows. Several

meetings of the Section were held in 2012 as well as the general meeting during "STF2012" in Sarajevo, Bosnia and Herzegovina. Topics discussed at the event are "Organizational structure of IEICE European Section", "IEICE European Section members", "Promotion of IEICE activities in Europe which cover conferences and transactions", and "Support and assistance of IEICE H.Q. available for the IEICE Europe Section". A number of technical and invited papers were presented from Europe and Japan. The Section also co-organized the European Wireless Conference EW2012 which was technically sponsored by IEICE-CS at Poznan University of Technology (PUT) in Poznan, Poland on April 18-20, 2012. Seventeen regular technical sessions were arranged as the main part of the conference in three parallel tracks. It provided three panel sessions covering the issues of the future mobile communications beyond 2020, trends of wireless technologies, and cognitive radio issues. The Section co-organized the International Symposium on Communication Systems, Networks and Digital Signal Processing, "CSNDSP 2012" at PUT on July 18-20, 2012 as well. It received 241 paper submissions from 41 countries and 174 papers were accepted so that more than 21% of the authors were from Asia-Pacific Region. During CSNDSP 2012, a plenary panel session entitled "Theoretical and practical aspects of research and development activities" was provided to many PhD students and research workers of PUT.

### IEICE Indonesia Section



Assoc. Prof. Jaka Sembiring of Institut Teknologi Bandung (ITB), OSR of Indonesia Section introduced the trend of ICT development in Indonesia and referred to the expectations of collaboration between IEICE

and regional academic activities. His speech is as follows.

#### <Trend of Information and Communication>

The academic activities of IEICE members in Indonesia cover quite many areas ranging from theoretical to applied engineering and different fields of interest. This short speech is focused on a very specific area of ICT. The Section reported in the Session by OSRs last year, the national development program on "Smart City". The dream of a smart society is set forward to be supported heavily by ICT where people can live in harmony with the environment. The research group in ITB where the speaker has been concerned started the work in this area where M2M, Information Security as well as IT Governance were discussed by many undergraduate and graduate students. The Section also promoted their research results to be published in journals and conferences. The work was decided to be filed out of necessity in Indonesia, particularly in Bandung where traffic jam, energy crisis, health and environment problem have been serious year by year. become more and more apparent. The Smart City concept gives the alternative solutions to overcome this problem.

#### <Collaborations and Expectations to the Role of IEICE >

Since the subject of experiment program for Smart City is Bandung itself, the research group actively collaborates with many international parties. The early stage of research was "Smart Card" integration. The research group has collaborated with Blackberry, Indonesia Telco Indosat, KOICA(Korea) and JICA(Japan), to set up either research facilities or research program. It is an on-going project with some good results.

The key persons who can initiate or manage those activities are IEICE members. But most of them have worked as an individual not as an IEICE member. What we need to do is how to connect those activities with IEICE activities. The activities have just started, any firm institutional collaboration is expected between IEICE and others like ITB where most of the members belong to.

### IEICE Korea, Communication Section



Prof. Choong-Seon Hong of Kyung Hee University, OSR of Korea, Communication Section introduced himself and gave an overview of hot issues on the network neutrality, the long year national development



plan “Giga Korea Project”, the future perspectives on Three-Tier Architecture and Cloud Network based data transfer of SDN, Mobile Cloud Computing, TV Whitespace Communication using Wibro connecting islands, and referred to the opinions and current activities of the Section summarized below.

First, the Korea, Communication Section hopes that IEICE will continue its prosperity from the academic point of view in the information and communications fields. Most of the Section members are trying to empower the exchange of their knowledge through joint activities in the international conferences such as APNOMS, APCC, ICOIN, etc. In the fiscal year 2012, the Section organized APNOMS 2012 which was sponsored by IEICE ICM, APCC which was technically sponsored by IEICE, and ICOIN 2013 which was sponsored by IEICE. In addition, the Section organized the IEICE Korea Communications Workshop 2012 at Kyung Hee University, Korea on July 4, 2012. Dr. Makoto Takano, Director, NTT-WEST Research and Development Center was invited as an IEICE lecturer who provided a speech “Current Broadband Service in Japan”. As an opinion, the Section members hope to join the editorial board as the associate editors for further internationalization of the Journal such as IEICE Transactions on Communications, with increasing membership of the Section.



Fig.3 Participants in IEICE Korea Communication Workshop 2012 with the invited IEICE Lecturer, Dr. Makoto Takano.

#### IEICE Korea, Electronics Section



Prof. Jang-Kyoo Shin of Kyungpook National University, Daegu, Korea, OSR of Korea, Electronics Section provided the overview of activities by the Section where they joined the meetings for international conference 2012 ITC-CSCC and organized frequent Seminars, meetings by Section members and IEICE sponsored lecture. His speech is summarized as follows.

In 2012, the Section organized a special joint seminar on “Integration of Optical and Electronic Devices”, which was sponsored by IEICE and held at Kyungpook National University (KNU) in Daegu, Korea, on December 17, 2012. Prof. Akihiro Wakahara, Toyohashi University of Technology, Japan, was invited to give a lecture at the seminar. More than 50 people including professors and graduate students attended the joint seminar. Just after the seminar, Prof. Jang-Kyoo Shin, Representative of the Section introduced both IEICE and the Section to the seminar participants. His speech covered the organization, activities and membership benefits. He also encouraged the participants to visit the homepage of IEICE and know the details of IEICE.



Fig.4 IEICE Sponsored Lecture by Prof. A. Wakahara



Fig.5 Prof. JK Shin introducing IEICE to the participants

On the other hand, the 2012 ITC-CSCC (International Technical Conference on Circuits/Systems, Computers and Communications) was co-sponsored by IEICE in Japan, IEEK in Korea and ECTI in Thailand and held in Sapporo from July 15 to 18 in 2012. Over 100 Korean members of IEEK attended the conference and it was a good opportunity for them to know about IEICE. The Section members encouraged them to join IEICE during the conference.

Prof. JK Shin also referred to the activity plan of the Section covering IEICE seminars and conference in 2013.

#### IEICE Korea, Information Section



Prof. Young Bok Choi of Tongmyong University, the new OSR of Korea, Information Section has just taken the role of OSR over from the former OSR, Prof. Dong-Whee Kim, Kyungpook National University. He attended the OSR Meeting and introduced himself at first and referred to the technological trend of Internet TV and Social Network Services in Korea, and the activities of the Section.

In Korea, all TV broadcasting services were digitalized in 2012 and Internet TV services have evolved to be popular everywhere. The number of smart phone subscribers reached more than 30,000,000 and it is still increasing. The number of Facebook users in Korea are over 10 million people at the end of 2012. Regarding a free mobile messenger application for smartphones with free text and free call features “KakaoStory” released in Korea in March 2010, the number of the users reached 28 million people. Most of politicians represented their public policy for the presidential election through Twitter in 2012. Many people exchanged their opinions through SNS at that time. IEICE Korea, Information Section is trying to strengthen the cooperation with these industries. The Section also supported International Conference on Convergence and Hybrid Information Technology 2012 which was held with more than 300 participants in Daejeon, Korea on August 23-25, 2012. Many co-works between Japanese and Korean IEICE members were presented in the conference.

#### IEICE Shanghai Section



Prof. Wen Chen of Shanghai Jiao Tong University, OSR of Shanghai Section could not join the 2013 OSR Meeting due to his urgent matters just before the Meeting. Here, his speech materials are summarized for the convenience of the general readers of IEICE Global Plaza.

The total length of railway in China will reach 120,000km by 2020, in which high speed one will reach 18,000km. Thus, cooperative communications, network coding, cognitive radio, heterogeneous networks and high mobility wireless communications have been extensively investigated in China, toward the national railway network in 2020. The National Ministry of Sciences and Technologies has launched three big projects (973 project with \$5 million for each) on cognitive networks, heterogeneous networks and high mobility networks. They are focused on boosting the fundamental research as well as wireless application in the wireless communication networks.

The spectral efficiency and energy efficiency of a high mobility wireless network required for the express railway are seriously degraded due to the fast fading. In order to ensure a reliable communication with high information rate, the physical layer techniques such as coding, modulation, resource allocation and interference management should be further investigated to adapt the high mobility environment. For this project, it will be required to use advanced new technologies, such as rateless code, network coding, non-binary LDPC, cooperative communications, multicell coordination and cognitive radio, to combat the fast fading.

The Shanghai Section organized the Workshop on High Mobility Wireless Communications “HMWC2012” for this research project. Prof. Fumiyuki Adachi of Tohoku University was invited as the Keynote Speaker. The Section will organize the Workshop on High Mobility Wireless Communication (HMWC2013) and motivate more people to join IEICE and submit relevant papers.

#### IEICE Singapore Section



Prof. Arokiaswami Alphones of Nanyang Technological University, OSR of Singapore Section provided an overview of microwave research activities in Singapore where academic institutions have been concerned. His speech is summarized as follows.

The concerted development of science and technology in Singapore dates back to 1991 when the first five-year S&T plan was developed and the (NSTB) National Science and Technology Board (renamed Agency for Science, Technology and Research in 2001) was established. Besides this agency, two high ranked Universities Nanyang Technological University (NTU) and National University of Singapore (NUS) are promoting research in various disciplines. A newly established technical University, Singapore University of Technology and Design (SUDT) is exploring in the technological design perspectives. Singapore is now transforming its economy into an innovation-driven, knowledge-based economy in which R&D in S&T will be a key driver for economic growth. This followed the recommendations of a ministerial committee formed in 2004 to review the R&D strategies and directions for Singapore. The ministerial committee for R&D also recommended five strategic thrusts for the national R&D agenda and the setting up of a high level Research, Innovation and Enterprise Council (RIEC) chaired by the Prime Minister to lead the national drive to promote research, innovation and enterprise.

This year the Singapore Section focused on the research and development (R&D) activities in microwave, millimeter wave (mmW) including microwave photonics in the academic and research institutions in Singapore. Prof. Kensuke Okubo, Okayama Prefectural University visited Singapore to deliver the talks on "Left Handed propagation in ferrite waveguide" and also shared the research experiences.



Fig.6 Participants in the IEICE sponsored lecture by Prof. K. Okubo of Okayama Prefectural University, in Singapore.

#### IEICE Taipei Section



Prof. Liang-Hung Lu of National Taiwan University (NTU), OSR of Taipei Section introduced the OSR office members, gave an overview of ICT areas of interest and activities in academia and industry of Taiwan and

referred to national development programs of intelligent electronics and networked communications on the Web. His speech is summarized as follows.

ICT has been one of the most active fields in Taiwan. The related areas include Electronics, Communications, Networking, Multimedia, Computer Science and Optoelectronics. In order to assist the ICT development, national programs are supported by the Government, coordinating resources from Ministry of Education, National Science Council, Ministry of Economic Affairs and National Health Research Institute. The goal is to identify the future trend in ICT such that Taiwan can lead in the fast-growing market for the next decades.

The IEICE Taipei Section has co-sponsored a short-course which is related to bio-medical electronics, this year. The event was held at National Chiao-Tung University, Hsinchu, in Taiwan on June 1, 2012. The topics are Development of Brain-Computer Interface and Analysis and Applications of EEG Signals. In addition, the Taipei Section also co-sponsored the NTU/Shizuoka University mini-workshop on January 18, 2013. The area of interest includes Signal/Power Integrity and EMC.



Fig.7 Short Course organized by the Taipei Section

#### IEICE Vietnam Section



Prof. Xuan-Tu Tran of VNU University of Engineering and Technology, Deputy OSR of Vietnam Section introduced the background, objectives, organization and current activities of the newly established Vietnam Section, on

behalf of Prof. Ngoc-Binh Nguyen, Rector of the university, OSR of the Section. His speech is summarized as follows.

As a result of the rapid evolution of the Information and Communication Technologies (ICT) in Vietnam over the past ten years, the high social demand for intelligent human resource education and training has come up. The success of the higher education depends on how to fill the gap between the need of the ICT development and the current capacity for the education. In this situation, Vietnamese Government has made several potential strategies for developing the ICT industry. Meanwhile, it lacks for the contributions from the professional societies. To response this issue, the IEICE Vietnam Section was established with cooperation between Vietnamese IEICE members and IEICE H.Q. in 2012 as a result of recent collaborations at both industry and academic sectors in Vietnam. Prof. Tran also referred to the future plan and perspectives of the IEICE Vietnam Section. They expect that their activities will contribute to the IEICE activities, further strengthen the tie between both communities.

#### Multiple Publications Search Engine "I-Discover" Has Just Come Off on the Web !

##### IEICE I-Discover Project

The IEICE Knowledge Discovery (I-Discover) is a database service to search multiple publications of the IEICE on the Web. It was officially released by IEICE to the public on April 3, 2013.

I-Discover handles not only articles but also authors and keywords as stored metadata. You can use it when you want the information through an author and a technological word in addition to the information on an article. Further, linking metadata to each other, in other words constructing linked data, enables various types of search. I-Discover also enables the search across multiple languages. For example, when you search a paper with an English keyword through the current version of I-Discover, the relevant paper written in Japanese will be found. This across-language search function is installed using a DB structure where each metadata has multiple values, each of which corresponds to a language. The information obtained from external sites can be displayed together with that derived from I-Discover itself to meet users' needs. The details of I-Discover will be successively introduced in coming issues of IEICE Global Plaza.

#### Upcoming International Conferences

**APSAR 2013**-IEICE Electronics Soc., IEEE, in Tsukuba, Japan, on September 23-27, 2013, <http://www.apsar2013.org/sponsors.html>

**MWP 2013** - IEICE Electronics Soc., IEEE, in Virginia, USA, on October 28-31, 2013, <http://www.mwp2013.org/>

**ICDV 2013** - IEICE Vietnam Section, IEICE Electronics Soc., in Ho Chi Minh City, Vietnam, on November 15-16, 2013, <http://www.uet.vnu.edu.vn/ieicevn/?q=node/6>.

**IWSEC2013**- IEICE Engineering Soc., in Okinawa, Japan, on November 18-20, 2013, <http://www.iwsec.org/2013/>

#### Message from TFIPP Secretariat

This issue is delivered also by a free mail magazine "IEICE Global Plaza on Line" with updated news of interest for you. Please contact Prof. Takahashi, TFIPP (Task Force for International Policy and Planning) at [global@ieice.org](mailto:global@ieice.org), if you need. Back numbers are available in archives at:

[http://www.ieice.org/eng/global\\_plaza/index.html](http://www.ieice.org/eng/global_plaza/index.html)

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