

# IEICE Global Plaza

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

## Message of Condolences

### To All in the Disaster Area of East-Japan Earthquake and Overseas People for Their Kind Support

*IEICE International Affairs Committee  
IEICE Task Force for International Policy and  
Planning*

We sincerely send our sympathies on the tragic loss of lives caused by the devastating M9.0 East-Japan Earthquake and unleashing huge Tsunami which hit the long East coast on March-11th and also offer our condolences to those who are still suffering from difficulties of life due to the dreadful disaster. Simultaneously, we sincerely appreciate the kind support and encouragement given by overseas people to Japanese society.

## Hot Topics

### Reports of ICT R & D Environments from IEICE Overseas Sections



*Nobuo Nakajima, Prof. Dr.,  
University of Electro-Communications  
Chairman, IEICE Int'l Affairs Committee  
Vice President, IEICE*

Session TK-5 "Updated Trend of Regional ICT Research and Development toward Next Decades" had been planned as a part of 2011 IECE General Conference program, but was unfortunately canceled due to the East Japan Earthquake, while five lectures prepared by IEICE Overseas Section Representatives covered the updated R & D trend of ICT in Asian region. Here, the summaries of their lectures are introduced for the convenience of readers.

IEICE also will take the initiative for the overseas members in a multilingual service where the members can easily communicate with IEICE through every mother language, additionally to the international services in English. Most of Western countries have used English, above all in industrial development, as the common language for long years, while in Asia, each of quite many different mother languages are still dominant over the country, even if English is recognized as a common language. The IEICE's initiative will promote mutual better understandings and collaborations between the overseas and domestic members toward the technological innovation.

### Studies of Advanced Mobile Multimedia Communication Systems and R & D Environment for National Policy ICT2020



*Watit Benjapolakul, Assc. Prof. Dr.,  
Chulalongkorn University, Representative  
of IEICE Bangkok Section*

A draft framework of National ICT Policy Framework 2011-2020 (ICT 2020) has been developed by the Ministry of Information and Communications Technology and the Nation-

al Electronic and Computer Technology Center (NECTEC). The framework aims at establishing the directions in which Information and Communications Technologies (ICT) will be developed in Thailand from 2011 to 2020. This draft framework consists of seven strategies that can be summarized as providing 95% of Thai people to be able to access broadband internet and promoting the development of low-cost ICT devices to encourage people to access knowledge online for life-long learning, enhancing and creating competitiveness for Thailand's ICT industry and developing ICT for smart government, lifting the productivity of manufacturing and agricultural industries and for a green economy and society. This lecture will summarize the overview of studies on Advanced Mobile Multimedia Communication Systems and R & D environment based on ICT2020 framework.

### Studies of Advanced Microwave Remote Sensing Technologies and ICT R & D Strategy toward Ubiquitous Society in China



*Jian Yang, Prof. Dr.,  
Tsinghua University  
Representative of IEICE Beijing Section*

With the development of China, microwave remote sensing technology has been playing an important role in many fields, such as the basal geology research, mineral resource survey, hydrology, agriculture, forestry, geology, engineering geology and environment survey, land resource survey and dynamic monitor, ecosystem environment survey and dynamic monitor, ocean and coast survey, city resource survey and digital city construction, disaster observation and management, etc. In the lecture, the author will summarize recent advanced development of microwave remote sensing in China and ICT R & D Strategy in the near future.

### Toward a Globalized Academic Society —R & D Policy and Scheme of Korean Green ICT—



*Chan-Hyun Youn, Prof. Dr.,  
Korea Advanced Institute of Science and  
Technology (KAIST), Representative of  
IEICE Korea, Information Section*

Nowadays, Information and Communication Technology (ICT) has become a core engine technology for the economic growth and leading a new power for the future society. Many of developed countries over the world have focused on ICT and related industrial developments, and now the results are shown in various patterns to us.

For the past few decades, the technology convergence has been rapidly progressed in various fields such as broadcast, communication, aviation, construction and vehicle, so that it became one of main streams of economics in Korea. This lecture covers the trend of ICT development in Korea. The fundamental axis of ICT development in Korea is also derived from government, national research institutions and industries. Generally speaking, for the development of ICT in a country, the government takes the role to present visions and

strategies for ICT industry in a long-term perspective and makes the investment in R & D of strategic technologies. On the other hand, industries, research institutes and universities are encouraged to work on the development of innovative technologies, contents and new business models. These cooperative works of different sectors, active investment of industries and government policy to create active demands, are the story of Korean successful establishment for a strong ICT country. In particular, the foundation for technology growth in technology-intensive industries such as semi-conductors, displays, mobile phones has been settled by outstanding workforces based on the active investment by industries and Government strategy. In addition, our skilled man power, and social consensus of digitalization have affected leading global ICT.

This lecture also refers to "Green IT Service Promotion Project" that includes IDC (Internet Data Center), cloud service platforms, broadcasting and communication infrastructure with low power consumption. Especially, the national strategy of Green IT is to derive the competitiveness from green transformation to lead the world as one of advanced countries. For this purpose, 9 core projects have been proposed for the new scheme, Green of IT and Green by IT which would be applied on the economy and society using IT. The core project of Green of IT is "World Best Green IT Product Development and Export Strategies". Industries with the most electricity consumption are main targets, such as Green PC, Green TV/Display, and Green Server, and it is expected to reduce massive CO<sub>2</sub> production in public sectors and hopefully lead Green IT markets. Moreover, the Green by IT looks for the infrastructure of real life environment including from office works to house works, to reduce CO<sub>2</sub> emissions and conversion to smart green traffic-distribution systems, and construction of intelligent power line infrastructure.

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### Recent Research Activities in the Field of Ultra Wideband (UWB) Bandpass Filters and R & D in Singapore's Infocomm Technology



**Lei Zhu, Prof. Dr.,**  
**Nanyang Technological University,**  
**Representative of IEICE Singapore Section**

As the FCC in USA authorized the unlicensed use of ultra-wideband (UWB) in 2002, tremendously increasing research activities have been aroused on exploration of various microwave components and subsystems. This lecture will mainly cover the proposal, design and development of a novel class of ultra-wideband filters with the UWB passband (3.1 to 10.6 GHz or fractional bandband of 110%) based on the multiple-mode resonator (MMR). The concept of multiple-mode resonator is at first described in making up various types of UWB bandpass filters in the format of microstrip line, coplanar waveguide, hybrid structure and so on. The simulated and measured results are then reported to demonstrate and verify their attractive UWB passband performances. At last, a brief introduction will be given on the current status and future masterplan in Singapore's information technology.

### Microwave Technology R & D and Industrial Collaboration Strategy in NTU



**Tzong-Lin Wu, Prof. Dr.,**  
**National Taiwan University,**  
**Representative of IEICE Taipei Section**

Taiwan has been playing an important role in the world on the innovation, fabrication, and design for computer, consumer, and communication technologies. Statistics shows Taiwan ranks no. 1 in IC foundry, packaging, PCB, and EMS industries. Among them, microwave and EM wave technologies are one of the core technologies to keep high competence in next decade of IT development. National Taiwan University is a leading University in Taiwan and is a frontier in this area research and dedicated on the industry collaboration. This lecture will give you an overview for the status and future of the microwave engineering.

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### Upcoming International Conferences

- CrownCom2011**—ICST/ IEICE Communications Soc./ others, 6<sup>th</sup> International ICST Conference on Cognitive Radio Oriented Wireless Networks, in Yokohama, Japan, on May 31–June 3, 2011, <http://www.crowncom.org/2011>.
- ICC 2011**—IEEE/IEEE-Communications Soc./IEICE Communications Soc./Science Council of Japan. IEEE International Conference on Communications, in Kyoto, Japan on June 5–9, 2011. <http://www.ieee-icc.org/index.php>.
- TJMW2011**—IEICE Electronics Soc., Thailand–Japan Microwave 2011, at King Mongkut's Institute of Technology Ladkrabang, Thailand, on August 3–5, 2011.
- ICDV2011**—IEICE Electronics Soc., Integrated Circuits and Devices in Vietnam 2011, in Hanoi, Vietnam, on August 8–10, 2011, <http://www.uet.vnu.edu.vn/icdv2011>.
- TWHM 2011**—IEICE Electronics Soc./Technical Committee on Electron Device, 2011 Topical Workshop on Heterostructure Microelectronics, in Gifu, Japan on August 28–31, 2011, <http://www.twhm.net/>.
- NOLTA2011**—IEICE Engineering Sciences Soc., in Kobe, Japan, on September 4–7, 2011, <http://nolta2011.org/>.
- SISA2011**—IEICE Engineering Sciences Soc., in Nagasaki, Japan, on October 31–November 2, 2011, <http://www.gcoe.ist.hokudai.ac.jp/sisa2011/>.
- KJMW2011**—IEICE Electronics Soc., in Fukuoka, Japan, on November 10–11, 2011, <http://www.ieee-jp.org/japancouncil/chapter/MTT-17/kjmw2011/>.
- WTC2012**—IEICE Communications Soc., in Miyazaki, Japan, on March 5–6, 2012, <http://www.ieice.org/~wtc2012/>.
- ISAP2012**—IEICE Communications Soc., in Nagoya, Japan, on October 29–November 2, 2012, <http://www.isap12.org/>.

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### 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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