

IEICE Communications Society GLOBAL NEWSLETTER Vol. 35, No.1 **Contents**

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Internationalization of the IEICE Communications Society

Seizo ONOE

Vice President, Chair of International Affairs Committee, IEICE-CS



1. Introduction

Among the four societies and one group of the IEICE, the Communications Society (IEICE-CS) is currently the largest society with more than 13,000 members, including more than 1,600 overseas members. Our society is very active to improve the quality of various services to society members, and many efforts have been paid to provide the overseas members with the same quality of services as for the domestic members. Our activities are then recognized worldwide, and the number of the IEICE-CS overseas members is now increasing steadily. In this article, current status on internationalization of the IEICE-CS is introduced.

2. Overseas Members of IEICE-CS

The IEICE-CS was born in 1995, i.e. more than 15 years ago. The IEICE overseas membership system was introduced in 2000 and the number of overseas members was 190 in the first year. The number increased to around 3,000 in 2010, i.e. over 15 times number of the first year.

The IEICE-CS overseas members equal half of the IEICE members and exceeded 10% of the entire IEICE-CS members. The IEICE-CS overseas member spread worldwide and the number of the overseas member's country of residence reached 52 in this year, it is including 14 countries in Asia, 23 countries in Europe, 6 countries in Middle East, 3 countries in South America, 2 countries in North America, Oceania and Africa respectively (see List in the next page). The proportion of our overseas members divided to areas is also shown in Figure 1.

3. A New Steering Framework

At the end of the last year, as a new part of the IEICE-CS steering structure, our Society Board of Directors established "The planning and member activities committee" addition to the existing "The Editorial Board" and "The Council of Technical Committee Representatives". This new committee is intended to reinforce planning and member activities in our society, and to provide high quality services for the members in a flexible and timely manner as well.

As one of an important task team, an international affairs sub committee is allocated within the planning and member activities committee. The scope of this sub committee is as follows:

- To manage processing for the deliberation of the society's sponsorship of the international conference and to maintain its process rule.

- To promote cooperation with sister societies and to maintain its agreement.

- To quarterly publish an English newsletter "IEICE-CS GLOBAL NEWSLETTER"

- To assist the international activities of the members through the operation management of "The international exchange utilization fund"

4. History and Current Status on International Affairs Committee Activities

International Conferences

Our sponsorship/cooperation for international conferences started since 1995, and every year, it is doing the sponsorship/cooperation of about 10 international conferences. The total number of the international conferences sponsored or co-sponsored or technically sponsored by the IEICE-CS reached over 130 in 2010. The conferences were held in all over the world, especially, many conferences were recently held in Asia.

We believe that those Society contributions through the sponsorship/cooperation of international conferences in various technical fields were very beneficial for not only the technologies development but also our Society development.

Sister Societies

The first cooperation agreement of the sister society was concluded with the IEEE Communications Society (ComSoc) in 1995. The more sister societies KICS, MCU, VDE/ITG, KIEES and CIC were started in 1999, 2003, 2005, 2006 and 2008, respectively. To promote the cooperation among sister societies and to reinforce getting new society members, we recently introduced the discount rates of the membership annual fee to the SS agreement with IEEE ComSoc and KICS.

English Society Newsletter

When we reinforced our services for the overseas members, one important issue was providing foreign language information to them. The newsletter written in English, i.e. "The GLOBAL NEWSLETTER" was introduced in 2002 as the service for overseas members as well as domestic members and is published four times a year. We hope that the IEICE-CS will be more

attractive and closer for overseas members by sharing information via this English newsletter. We continue to improve it with more useful and beneficial information for the members.

Fund for International Activity

We have a fund system to promote the international activities by the Society members, i.e. “The international exchange utilization fund.” This fund is very useful to plan various actions on the international affairs and to do it. We now discuss the reinforcement of this kind of the fund to realize the effective and timely utilizing it by the Society members.

5. Conclusion

We have some plans to reinforce our international or global services and related activities. I however believe that such activities in the IEICE-CS should be supported by not only the committee members but also all Society members. To improve our services and to activate our activities to the future, your comments and suggestions would be highly appreciated. We will do our best to serve all Society members by considering the feedback.

Here in the next article of this issue, some recent international activities provided by the IEICE-CS are introduced.

The IEICE-CS overseas member’s countries of residence in January, 2011 (Total 52 countries):

- AUSTRALIA
- AUSTRIA
- BANGLADESH
- BELGIUM
- BOSNIA AND HERZEGOVINA
- BRAZIL
- CANADA
- CHINA
- CHILE
- CROATIA
- CZECH
- ERITREA
- FINLAND
- FRANCE
- GERMANY
- GREECE
- HONG KONG
- INDIA
- INDONESIA
- IRAN
- IRELAND
- ITALY
- KOREA
- MALAYSIA
- MEXICO
- MONGOLIA
- MONTENEGRO
- NETHERLANDS
- NEW ZEALAND
- NORWAY
- OMAN
- PAKISTAN
- PHILIPPINE
- POLAND
- PORTUGAL
- ROMANIA
- SAUDI ARABIA
- SERBIA
- SINGAPORE
- SLOVENIA
- SOUTH AFRICA
- SPAIN
- SWEDEN
- SWITZERLAND
- SYRIA
- TAIWAN
- THAILAND
- TURKEY
- U.K.
- U.S.A.
- UNITWD ARAB EMIRATES
- VIETNAM

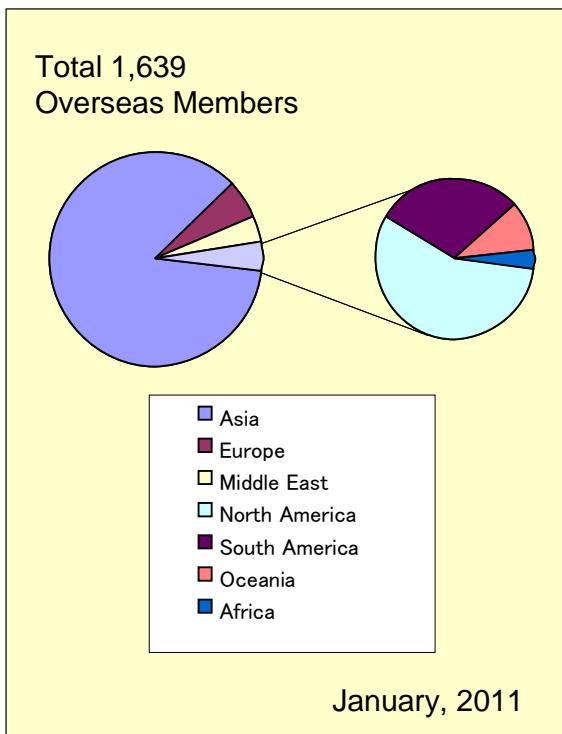


Figure 1: Overseas members of the IEICE-CS

International Activities in the IEICE Communications Society

Yukihiko OKUMURA and Takao NAITO
Directors, Planning and Member Activities, IEICE-CS



1. Introduction

This article reports three topics related to the latest international activities in the IEICE Communications Society (IEICE-CS). First topic is international conferences which were recently held or supported by the IEICE-CS. Second topic is recent status on sister society agreements which have been made as cooperation agreements between the IEICE-CS and foreign societies. Third topic is GLOBAL NEWSLETTER which is quarterly published by IEICE-CS.

2. International Conferences

The IEICE-CS held or supported 61 international conferences from 2007 to 2010 in various technical fields [1]. In this section, the latest updates about international conferences to which the IEICE-CS was related are reported.

First, the types of sponsorship in which the IEICE-CS participates in international conferences can be classified into the following four categories;

(a) Promoter (“Sponsor,” etc.): The IEICE-CS assumes full responsibility for holding the conference, and is the sole promoter when the sponsoring parent body is the IEICE-CS alone. Responsibility for the practicalities of the event lies with the coordinating organization.

(b) Joint promoter (“Cosponsor,” etc.): The IEICE-CS assumes a level of responsibility proportional to the extent of its joint support for the conference, and is a joint promoter when there are joint sponsoring parent bodies. Responsibility for the practicalities of the event lies with the coordinating organization.

(c) Participating promoter (“Technically cosponsor,” “Participate,” etc.): The IEICE-CS does not assume responsibility for all the practicalities of the event, but takes on part of the burden of work relating to papers and dispatches from committee members to the coordinating organization or the like.

(d) Supporting or backing roles (“Cooperation,” etc.): The IEICE-CS does not assume responsibility for all the practicalities of the event, but cooperates on matters such as informing its members of the event proposals.

We investigated the latest number about the IEICE-CS related conferences by updating it in the last year. Table 1 is the number of each category about the 61 international conferences from 2007 to 2010. The half

of international conferences to which the IEICE-CS was related is belonging to the category (d). On the other hand, in our web site [2], you can find that many international conferences related to communications systems and technologies which were held in Japan were sponsored or cosponsored by the IEICE-CS.

Table 1: Updated number of international conferences classified to categories, in 2007 - 2010

Categories	Number of conferences
(a) Promoter	8
(b) Joint promoter	9
(c) Participating promoter	13
(d) Supporting or backing roles	31

Next, we investigated the 61 international conferences from 2007 to 2010 based on the location. Table 2 is the number of each region. From this Table, you can read that about 2/3 of international conferences was held in overseas of Japan and the IEICE-CS is still related to worldwide especially in Asia, Europe and North America.

Table 2: Updated number of international conferences classified to regions, in 2007 - 2010

Regions	Number of conferences
Asia	38 (include 21 in Japan)
Europe	16
North America	6
South America	0
Africa	0
Oceania	1

3. Sister Societies

To further friendly relations with foreign societies and improve international membership services, IEICE-CS is now concluding sister society agreements with five foreign societies [2]. Those societies are as follows:

- IEEE Communications Society (ComSoc)
- Korean Information and Communications Society (KICS)
- Korean Institute of Electromagnetic Engineering & Science (KIEES)

- Informationstechnische Gesellschaft within The Verband der Elektrotechnik Elektronik Informationstechnik (VDE/ITG)
- China Institute of Communications (CIC)

Each sister society agreement includes stipulations related to privileges on registration/paper submissions to their held or supported international meetings/conferences, promotion of their publications, and cooperation with each other for mutual prosperity.

In 2009, four sister society agreements, i.e. agreements with IEEE ComSoc, KICS, KIEES, and VDE/ITG were renewed. A new IEEE ComSoc/IEICE-CS membership side agreement was then concluded in the end of the last year. This new agreement introduced the discount rates which are applied to the membership annual fees of both societies. This side agreement was concluded as an accompaniment to the existing main agreement and is valid for the same duration with the main agreement, i.e. three years, 2011 - 2013.

The new IEEE ComSoc/IEICE-CS membership side agreement signing ceremony was held on 9 December, 2010, during GLOBECOM 2010 conference in Miami and its photos are shown in Fig. 1. The new agreement was signed by the IEEE ComSoc president, Dr. Byeong Gi Lee and the past IEICE-CS president, Prof. Susumu Yoshida. The signing ceremony was held in a friendly atmosphere.

As a part of international activities, IEICE-CS will continue to construct a close and mutually beneficial relationship between all sister societies in the future. The IEICE-CS hopes that many overseas members of “Sister Societies” would join in the IEICE-CS as a member and also participate in the IEICE-CS related international conferences/meetings.

4. Global Newsletter

IEICE-CS GLOBAL NEWSLETTER has been established since 2002. We quarterly publish an English newsletter every March, June, September, and December. This newsletter includes many articles such

as messages from IEICE-CS President/VP, members activity reports on the Society, IEICE-CS sponsored conference reports, essays, Laboratory activity reports, the latest technology reports, messages from oversea/foreign members, and etc [3].

Our goal is to share information between overseas/foreign members and other members in IEICE-CS as a global activity, and to show IEICE presence internationally.

This GLOBAL NEWSLETTER is the 35th issue and minor renewals have been introduced in this issue (see “From Editor’s Desk”).

5. Conclusion

This article reported recent topics related to the international activities of the IEICE Communications Society. By supporting international conferences, providing sister society privileges and publishing GLOBAL NEWSLETTER, the IEICE-CS continues to support all Society member’s international activities in the field of communications technology.

References

- [1] IEICE-CS international conferences information web page: <http://www.ieice.org/cs/conf/calendar.html>
- [2] IEICE-CS Sister Society information web page: http://www.ieice.org/cs/member/sister_society.html
- [3] IEICE-CS GLOBAL NEWSLETTER information web page: http://www.ieice.org/cs/pub/global_news.html



Figure 1: Signing ceremony of IEEE ComSoc/IEICE-CS sister society agreement
(From the left of the right photo, IEICE-CS Director, Dr. Yukihiro Okumura, IEICE-CS President-past, Prof. Susumu Yoshida/IEEE ComSoc President, Dr. Byeong Gi Lee, IEEE ComSoc Sister Societies Chair, Dr. Roberto Saracco)

ICSANE 2010 Joint Conference Held in Jeju, South Korea

Toneo Kawanishi
Chair of IEICE SANE, JAROS



1. Introduction

The International Conference on Space, Aeronautical and Navigational Electronics 2010 (ICSANE 2010) was held at the Ramada Plaza Jeju Hotel (Fig. 1) in Jeju, South Korea on October 27-29, 2010, as a joint conference of the International Symposium on Remote Sensing (ISRS) organized by the Korean Society of Remote Sensing (KSRS). ICSANE 2010 was the sixth international symposium organized by the Technical Committee on Space, Aeronautical and Navigational Electronics (SANE) of the IEICE Communications Society and co-organized by KSRS and the Standing Committee of Environmental Monitoring from Space of East Asia (EMSEA; South Korea). ICSANE 2010 was co-sponsored by the Chinese Academy of Sciences (CAS), Chinese Academy of Space Technology (CAST), Commonwealth Scientific and Industrial Research Organization (CSIRO; Australia), Electronic Navigation Research Institute (ENRI; Japan), Electronics and Telecommunications Research Institute (ETRI; South Korea), Fudan University of China, IEEE Aerospace and Electronic Systems Society (AEES) Japan Chapter, Japan Aerospace Exploration Agency (JAXA), Korea Aerospace Research Institute (KARI), Korea Ocean Research & Development Institute (KORDI), National Institute of Information and Communications Technology (NICT; Japan), National Natural Science Foundation of China (NSFC), Ocean University of China (OUC), Xidian University (China), and the University of Western Australia (UWA). The AIAA Japan Forum on Satellite Communications (JFSC) also assisted with the conference.



Fig. 1 Conference venue (Ramada Plaza Jeju Hotel)

About 400 participants from South Korea, Japan, Taiwan, the United States, Canada, and China registered for both ISRS and ICSANE, with a total of 267 presentations for both symposiums. ICSANE 2010 hosted 54 presentations. A total of 111 participants from Japan, Korea, China,

and Taiwan took part in ICSANE 2010 over the three days. Figure 2 shows a group photo.



Fig. 2 Group photo

2. Opening ceremony

The opening ceremony was held on October 28, the second day. Prof. Young-Seup Kim, ICSANE general co-chair in Fig. 3, delivered the welcoming message and was followed by Mr. Shigeru Ozeki, co-chair of the ICSANE steering committee in the opening session in Fig. 4, who gave a welcoming address and overview of IEICE-SANE activities. Congratulatory messages were also given by EMSEA co-chairs Mr. Hong Joon-Seok, Vice-Minister, Ministry of Environment (South Korea), Prof. Hajime Fukushima (Japan), Prof. Yuei-An Liou (Taiwan), and Prof. Choen Kim (South Korea).



Fig. 3 Welcome message by Prof. Young-Seup Kim



Fig. 4 Welcome address by Mr. Shigeru Ozeki

3. Technical sessions

System-oriented broad scope is a feature of ICSANE. This covers satellite and space-station systems, remote sensing and observation technologies, radar, navigation, and communication systems. From such varied fields, 54 presentations were given during ICSANE's technical sessions, covering topics such as satellite systems, small sat-

ellites, remote sensing, synthetic aperture radar (SAR), radar, navigation, communications, UWB radar technologies, and GPS systems. ISRS featured 213 presentations on remote sensing for ocean, land, atmosphere, and the environment, and technologies and systems for microwave, LIDAR, COMS, KOMPSAT, STSAT-3, GIS, and data processing. The common plenary session featured three lectures:

- Status and Prospects of Remote Sensing in Taiwan, L. C. Chen (National Central University)
- HypsIRI Science and Applications, Simon J. Hook (California Institute of Technology)
- World's First Mission of Solar-powered Sail by IKAROS, Osamu Mori (JAXA)

In the ISRS sessions, the main topic was data processing for remote sensing and the ICSANE sessions dealt mainly with their sensor systems. This became a great opportunity to exchange information during fruitful discussions in the oral (Fig. 5) and poster sessions (Fig. 6).



Fig. 5 Oral session

Fig. 6 Poster session



Fig. 7 Best paper awards

4. Award ceremony

The ICSANE 2010 award ceremony was held on the final day of the symposium (Fig. 7). The ICSANE Technical Program Committee conducted a review to determine the recipients and gave the following awards:

- Best Student Paper: Mr. Eun Sung Won (National Defense Academy; Japan)
- Best Presenter: Dr. Toshifumi Moriyama (Nagasaki University; Japan)
- Best Paper: Prof. Yoshio Kosuge (Nagasaki University; Japan)

The Best Contribution Award was given to Dr. Chan-Su Yang (KORDI), and Dr. Kwang-Eun Kim (KSRS) received the Best Support Award. The Best Achievement Award was sent to the ISRS Support Team in recognition

of the top achievement in ICSANE 2010.

5. Venue, reception, and tour

The venue was the Ramada Plaza Jeju Hotel on Jeju Island, located near both beautiful sea and mountains. Ice-breaking and reception sessions (Fig. 8) were held at the hotel on the first two days. Awards were distributed during the closing ceremony. The final day featured a tour of the Korean VLBI Network (KVN) facility, conducted and organized by the Korea Astronomy and Space Science Institute (KASI). The 21-meter diameter VLBI antenna at KASI was a source of great interest for the participants (see Fig. 9).



Fig. 8 Reception



Fig. 9 KVN facility tour

6. Toward the future

The joint conference of ISRS and ICSANE proved a great success. Productive cooperation took place and holding of the conference every few years is being considered. The faithful cooperation of the local organizing committee of KSRS and EMSEA is greatly appreciated. The next conference, ICSANE 2011, will be held at Udayana University in Bali, Indonesia. It is tentatively scheduled for mid-October 2011, at which time we can enjoy that beautiful island.

Japan-Korea Joint Conference on Satellite Communications (JC-SAT 2010) Report

Mitsuo Nohara
Secretary of Technical Committee on Satellite Communications

1. Introduction

The Joint Conference on Satellite Communications 2010 (JC-SAT 2010) was held on 28 and 29 October, 2010 at TEMF Hotel of Gyeongje, Korea Republic, a beautiful ancient capitol of Shilla dynasty. The conference has been jointly held by Technical Committee on Satellite Telecommunications of IEICE and Korea Society of Space Technology (KOSST) every year since 2000, resulted this one as its 11th, aiming at having information exchange and mutual understanding between satellite communication researchers and engineers of both Japan and Korea.

There we had presentations of 2 keynote speeches, 1 special and 31 technical papers, associated with related discussions, questions and answers over two conference days, with about 60 participants each day, all contributed to the good success of the conference.

This year, as we had a successful launch of Korea's multi-purposed satellite "COMS: Communications, Ocean and Meteorological Satellite, also named as Chunriang" in the last June, 2010, several related papers were presented with a variety of topics such as the Ka-band communication payload system technology, on-board antenna design, etc., which is one of the main topics this time. Also this time, the paper award of JC-SAT 2010 was introduced and provided to two distinguished papers.

2. Program

The session started with opening speeches by the organizing committee chairs, Prof. Jae MOUNG Kim from KOSST and Prof. Nei Kato from IEICE.



Fig. 1 Opening Speech by Prof. Jae MOUNG Kim.



Fig. 2 Opening Speech by Prof. Nei Kato.

Those were followed by a pair of key note speeches. The 1st one was presented by Dr. Do Seob Ahn of ETRI, entitled "Satellite Technology Development Status and Plan in Korea," introducing the satellite communication status of Korea, highlighting the "COMS" satellite launched last June and its applications. The 2nd was presented by Prof. Takashi Iida of Tokyo Metropolitan Univ., entitled "Broadband Satellite Communications: Past and Future," and provided the status of satellite communications in Japan, especially on the broadband communications.



Fig. 3 Keynote Speech by Prof. Takashi Iida.

A special talk was provided by Dr. Hiroyo Ogawa of ARIB, entitled as "Standardization Activities on Satellite Communication Systems within ITU-R."

There were 9 sessions organized and 31 technical papers presented through the sessions. The session titles are as follows:

- Satellite Programs: Current Status and Future Plans,
- Satellite Communication Systems and Applications,
- Satellite Transponder and Communication Equipment #1 and 2,
- Satellite Communication Network and Equipment, #1 and 2,
- Standardization and Frequency Assignment Technology, #1 and 2, and
- Satellite Operation.

As mentioned, there we found several papers on Korean COMS Satellite such as its Ka-band on-board communication payload and L-band Antenna designs, ground control system, etc. As the satellite was still at some preparatory stage at the time of this conference, it is expected that some more papers to come later, following up with field trial and evaluation results.

3. Best Paper Awards

This time the best paper awards of JC-SAT was planned for the first time and provided to the distinguished papers selected from both Japan and Korea. The one is “Frequency Utilization Enhancement using Spectrum Editing Type Bandwidth Decomposition applicable to Existing Satellite Modem,” by Mr. Jun-ichi Abe, et. al., of NTT, and the other is “Ka band Communication Payload System Technology of COMS,” by Dr. Seong Pal Lee, et al., of ETRI. A set of certificate and gift was handed to each representative of the authors during the reception held on the 1st night. It is expected that the award can motivate the researchers to provide their papers more, with full of good contents and qualities.



Fig. 4 Best Paper Award Handed by Prof. Jae Mounng Kim to Mr. Jun-ichi Abe at the Reception.

4. Conclusions

A closing session was held in the end of day-2 with presentations of Dr. Naoto Kadowaki of IEICE and Dr. Jong Won Eun of KOSST, having remarks of great

success of the conference and notes on the next session in 2011.

The next conference will be held in Japan, on 20 and 21 October, 2011 in Sendai, Japan. The detailed information of JC-SAT 2011 will be provided on the web page of the committee, once defined. Your paper submissions as well as participations will be much welcomed. Please join the conference and meet together in Sendai!



Fig. 5 JC-SAT 2010 Participants Gathering at the Reception.

Report on Symposium for Memorizing 20th Anniversary of Networking Architecture Workshop

Hiroshi Ishii
Tokai University



1. Introduction

The Symposium for memorizing 20th anniversary of Networking Architecture (NA) Workshop took place at Fukuoka Institute of Technology in Fukuoka, Japan on November 19, 2010. The symposium was sponsored by the technical committee on Information Networks (IN). The NA workshop was founded in 1990 as Information and Telecommunication Networking Architecture Workshop, renamed NA workshop in 1992, and lasted until 2000. NA workshop played an important role as a place for discussion on distributed networking environment for domestic researchers in cooperation with international standardization and discussion body, Telecommunication Information Networking Architecture Consortium (TINA-C). The distributed networking environment tackled by both NA workshop and TINA-C consolidated the innovative concept of the separation of application and middleware from network transport layer, disclosure of the interfaces between them, their basic architecture, and necessary specifications. The concept has become reality in the internet that is creating new values by harmonizing both telecommunication and information. It also became the springboard of NGN concept. Celebrating the 20th anniversary and looking back/forward the influence of the workshop, the symposium was held. The main theme of the symposium was “The role of the Information Communication: to be unchanged and evolved.” The symposium featured invited talks and a panel discussion.



Fig.1 Symposium overview

2. Special session

The chair of the NA workshop and the convener of this symposium, Dr. Yuji Inoue, Chairman of the board

of Toyota InfoTechnology Center Co., Ltd., organized the special session and invited four speakers, who addressed networking architecture related issues from various viewpoints as follows.

- (1) History of TINA research and developments
by Professor Hiroshi Ishii (Tokai University)
- (2) Networking Architecture 20 Years ago & today
by Dr. Hendrik Berndt (DOCOMO
Communications Laboratories Europe GmbH)
- (3) ICT Applications in Research and Industry:
Astronomy and Mining
by Professor Eduardo Vera (University of Chile)
- (4) New generation Network Architecture
By Dr. Hiroaki Harai (NICT)



Prof. H. Ishii



Dr. H. Berndt



Prof. E. Vera



Dr. H. Harai

Fig. 2 Special session speakers

3. Panel discussion

Following the special session was the panel discussion. Dr. Inoue also organized the panel session as the moderator. He firstly gave the theme of the panel discussion, “NA: Roles and Impacts, Achievements & its Future” and opened the discussion by asking each panelist, “Now, what R&D are essential in NW area after NA?” In response to this question, each panelist gave brief talk on cutting-edge network related issue.

Panelists and their topics were as follows:

- Dr. Nozomu Nishinaga (NICT), “NeW Generation Network (NWGN)”

- Mr. Wataru Takita (NTT docomo), “Architecture and Implementation – solution and issue –”
- Prof. Hiroaki Nishikawa (University of Tsukuba), “Ultra-Low-Power Data-Driven Networking System”
- Prof. Keiichi Koyanagi (Waseda University), “What are basic issues in networking problem domain?”
- Dr. Kazuo Asakawa (Fujitsu Laboratories), “Network Services in Smart Energy Activities”
- Prof. Choong Seon HONG (Kyung Hee University), “Networking Architecture Designs for Future Internet”

After each brief talk, each panelist answered various questions from the floor.



Fig. 3 Dr. Yuji Inoue (Toyota IT Center): Convener of the symposium and moderator of the panel discussion



Fig. 4 Panel discussion

4. Conclusion

The talks of the special session and discussion of the panel showed that there is yet now increasing interest in the networking architecture issues. NA has been influencing for twenty years and will continue to give impacts on the R&D of the networking architecture issues.

Report on Workshop of Internet Architecture in Bangkok, Thailand

Keisuke Ishibashi*, Watit Benjapolakul**, Takahiro Kono***,
Masahiro Hiji****, and Katsuyuki Yamazaki*****

Technical Program Committee of the Workshop

*NTT, **Chulalongkorn Univ., ***MICT Thailand,

****Hitachi East Japan Solutions, and *****Nagaoka Univ. of Technology

1. Introduction

The Technical Committee on Internet Architecture (TCIA) has held workshops abroad since previous year, aiming at further internationalization of IEICE. The first international workshop was held at Tsinghua University in Beijing, China during Oct. 30–31, 2009.

With the dedicated support of the IEICE Bangkok section and IPv6 Forum Thailand, TCIA held the second international workshop at Chulalongkorn University in Bangkok, Thailand on Oct. 28 and 29, 2010.

2. Workshop Overview

The opening address was provided by Assoc. Prof. Dr. Boonsom Lerthirunwong, Dean of the Faculty of Engineering, Chulalongkorn University. A two-day technical program including three keynote speeches, one panel session, and presentation of nine technical papers followed.

The keynote speeches were as follows.

- “Internet Policy in Thailand,” Prof. Dr. Prasit Prapinmongkolkarn, Chairman of Thailand’s National Telecommunication Commission (NTC)
- “TV “White Space” in Japan,” Prof. Isao Sugino, Kyushu Institute of Technology
- “Spectrum Management for Broadband Wireless Access in Thailand,” Asst. Prof. Dr. Tuptim Angkaew, Chulalongkorn University

We also had a panel on Internet status in Thailand chaired by Prof. Prabhas Chongstitvattana with special talks from the following panelists.

- “ICT Status and Future Internet in Thailand –



Fig. 1 Workshop participants

Academic, Research, and Government in the Internet,” Prof. Sinchai Kamolphiwong, Prince of Songkla University

- “Internet Development and Growth in Thailand,” Dr. Chalermopol Charnsripinyo (NECTEC)

There were three sessions for technical paper presentations: Network Protocol, System Design, and Network Analysis and Wireless Systems. It should be mentioned here that half of the technical presentations were provided by Thailand students. The student research awards for the presentations were presented by the Chair of TCIA, Prof. Yuji Oie, at the end of the workshop.

In total, there were 33 attendees: 14 from Thailand and 19 from Japan. Attendees had fruitful discussions during the technical program. In addition, on the evening of Oct. 28, a banquet was held at Montien Hotel, where delicious Thai cuisine was enjoyed.

3. Acknowledgments

The technical committee expresses its gratitude to the members of the Faculty of Engineering, Chulalongkorn University for their thoughtful local arrangements.

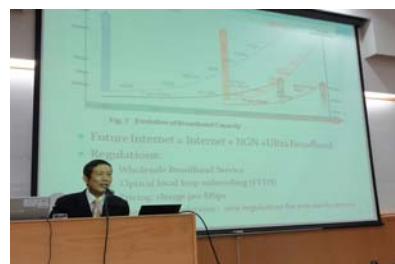


Fig. 2 Keynote speech by Prof. Dr. Prasit Prapinmongkolkarn



Fig. 3 Student research award being presented

Report on the 8th QoS Workshop

Yasuhiro YAMASAKI (Tohoku University)
Secretary of the 8th QoS Workshop



1. Workshop and venue

The 8th QoS Workshop was held on November 24, 2010 at Ono Azusa Memorial Hall in Waseda University, Shinjuku, Tokyo, Japan (Fig. 1). The workshop was organized by IEICE Technical Committee on Communication Quality (CQ), which covers the broad ranges of research topics on communication quality. This workshop focused on the hot topics on QoS/QoE for mobile communication including SmartPhone (iPhone, Android and so on).

2. Technical and poster sessions

59 people participated in this workshop. The workshop consisted of a technical session (3 talks), a poster session (12 posters), and a demonstration session (2 demos).

In the technical session, we had 3 invited speakers presenting “Studies of QoS control according to environmental transformation for mobile hosts” by Prof. Susumu Ishihara (Shizuoka University), “Transition of workflow of mobile computing by spread of SmartPhone” by Mr. Ryuichirou Yamamoto (Trust Technology), and “Possibility of Android product and UI evolution” by Mr. Yoshikazu Shima (Japan Android Group). Prof. Ishihara showed rate control methods for handover and communication system for distributed multimedia data transmission on multiple links for group of mobile hosts. Mr. Yamamoto introduced the history of mobile platform and discussed the difference between iPhone and Android. Finally, Mr. Shima discussed mobile platform (Android) and mobile cloud computing. He emphasized on needs for low delay and broadband on mobile network for mobile cloud computing.

In the poster session, one-minute presentation was done by all poster presenters at the beginning of the session. In the poster room, all the attendees had active discussions in a friendly atmosphere (Fig.2). The best poster award was sent to Mr. Keiya Ijiri with his poster “An Improvement of QoE for Video Stream over Wireless LAN Using the Cross Layer Control” (Fig.3).

3. Conclusion

QoS and QoE related issues will attract more attentions in the research areas of Future Internet and future communications. The issues are growing into interdisciplinary areas of network and human activities. The next QoS workshop will be held in autumn, 2011.



Fig.1 Workshop Room



Fig.2 Poster Session



Fig.3 Award winner

Report of the 1st Conference of the Technical Committee on ICT in the Smart Grid (ICT-SG)

Takuro Sato[†], Noriyoshi Sonetaka^{††}
Waseda University[†], NEC Corporation^{††}
Chair[†], Symposium Chair^{††}

1. Introduction

The first Information and Communication Technologies (ICT) Smart Grid Technical Symposium organized by the ICT-SG Committee [1] launched in October 1st of 2010 was held on November 18, 2010 at Waseda University. The symposium was supported by IEICE, and the Mobility Technical Committee and the EV-ICT Technical Committee were organized by Technical Committee on ICT Smart Grid Executive Staff,

Chair	Dr. Takuro Sato
Vice Chair	Dr. Kenichi Mase
Vice Chair	Dr. Yasuhiro Daisho
Symposium Chair	Dr. Noriyoshi Sonetaka



Fig.1 ICT-SG Executive Staff: Chair Dr. Takuro Sato, Vice Chairs Dr. Yasuhiro Daisho and Dr. Kenichi Mase, Symposium Chair(Secretariat) Dr. Noriyoshi Sonetaka.(from left to right)



Fig.2 1st Conference at Waseda University.

- 1st Conference General Information is
- ✓ Date : November 18, 2010
 - ✓ Number of presentations : 7 (5 invited and special presentations)
 - ✓ Number of participants : 235

The topics of the ICT Smart Grid Technical Symposium were environmental issues that remain to be resolved, including global energy issues and CO₂ emissions from electric vehicles, railways, transportation systems and smart houses/buildings integrated with ICT technology, the creation of new related industries, and how to achieve safe and secure societies. The symposium invited the leaders of companies worldwide with a record of excellence to clarify future industrial societies.



Fig.3 The ICT-SG Symposium Place full Attendees

2. Discussion

There were 235 attendees at the symposium, including representatives from domestic industries, universities and foreign companies. The attending companies included electrical manufacturers, telecommunications operators, car companies, and electrical power operators. The leaders of the symposium introduced future plans concerning environments issues and

presented recommendations on the reduction of CO₂ emissions.

The symposium consisted of the following presentations: Coordination by Dr. Noriyoshi Sonetaka.

Chair Presentation: (Opening)

Global industrial structure innovations are required to solve environment issues. Presented by Dr. Takuro Sato.

Vice Chair Presentation:

EV as a key product to solve the problem of CO₂ emissions will hold a 50% share within the car market and huge investments will be made throughout the world. Public transportation vehicles such as buses and trucks will be targeted initially for transformation. Presented by Dr. Yasuhiro Daisho.

Invited and Special Presentation



Fig.4 Guest Presenter, Mr. Masaki Ogata, Dr. Boutarou Hirotsuki. (from left to right)

(1st Special Presentation)

The train is the ultimate ecosystem. Visibility efforts have been made for the vehicle, regenerative braking, and batteries. We build total ecosystems with feedback, including stations and shops, in addition to working with various technologies. Presented by JR East Vice President Masaki Ogata.



Fig.5 New Generation Hybrid train (in Japanese), presented by Mr. Masaki Ogata.

(2nd Special Presentation)

Smart communities create a sustainable society for industries and economies. The cooperation of academics, industry and government will play an important role in creating smart communities. “The crisis should not be used as an excuse to postpone crucial decisions for the future of our planet.” Presented by NEC Executive Advisor Dr. Boutarou Hirotsuki.

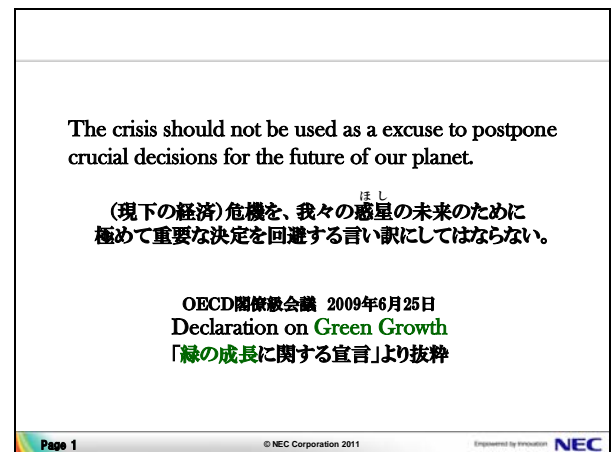
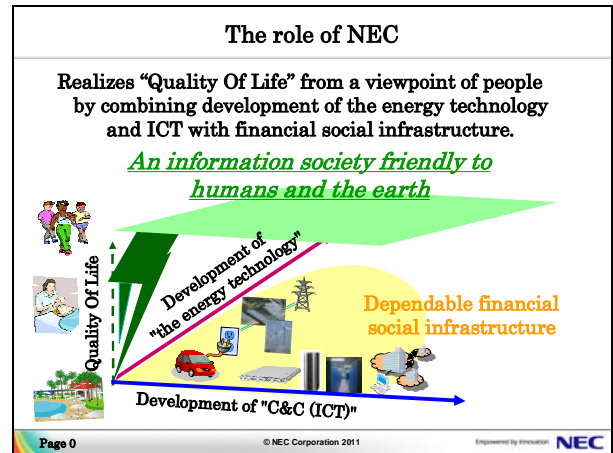


Fig.6 The concept of Next Generation C&C(3.0) & Declaration on Green Growth, presented by Dr. Boutarou Hirotsuki.

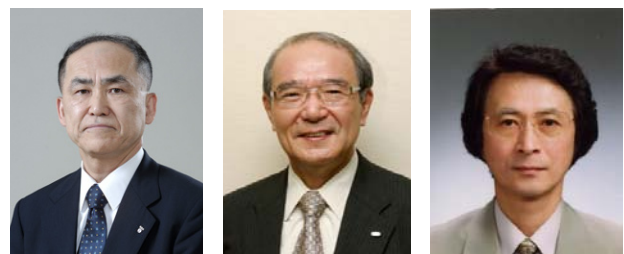


Fig.7 Guest Presenter, Mr. Hiroshi Yamaguchi, Dr. Yuji Inoue, Dr. Ruichi Yokoyama. (from left to right)

(3rd Special Presentation)

High efficiency and low carbon power generation × smart electricity creates a smart grid. The power supply network of renewable energy, energy-saving system

support for the efficiency of power distribution, and higher reliability are issues that must be resolved in order to create a smart grid. Presented by Senior Managing Director Hiroshi Yamaguchi (Represented by Director Iio).

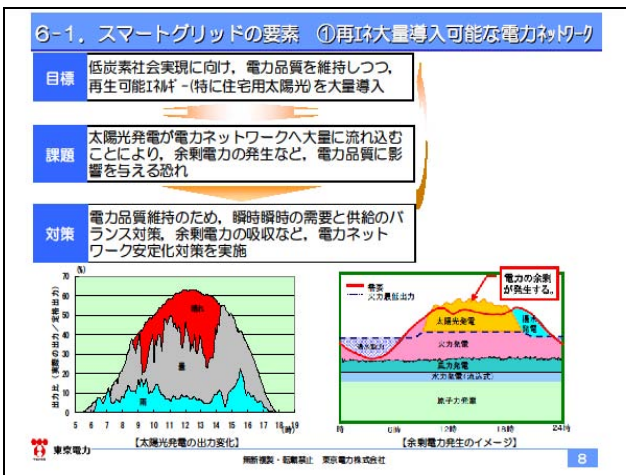


Fig.8 Grid Network in JAPAN (in Japanese), presented by Mr. Hiroshi Yamaguchi.

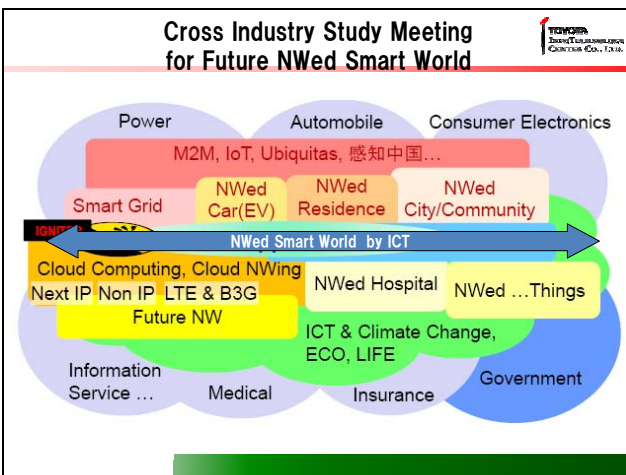
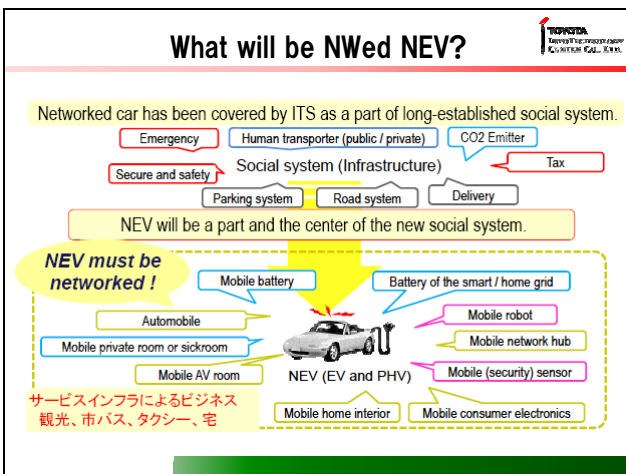


Fig.9 The concept of NWed NUV & Cross Industry Study Meeting for Future NWed Smart World, presented by Dr. Yuji Inoue.

(4th Special Presentation)

In accomplishing IP EV, there will be extensive competition for hardware design and it will be necessary to shift from hardware to software and system design to obtain discrimination in design capability. ICT as a tool solves the social challenges of the environment, poverty and health. Presented by Toyota ICT Center Chairman Dr. Yuji Inoue.

(5th Special Presentation)

Proposing an extended smart grid cluster instead of a next-generation smart grid, renewable energy instead of controlled energy, and an autonomous power system instead of a standard energy system. Presented by Professor Dr. Ryuichi Yokoyama, Waseda University.



Fig.10 Development of Japanese type Smart Grid (in Japanese), presented by Dr. Ryuichi Yokoyama.

3. Conclusion

The ICT-smart grid will require cooperation among different companies and industrial areas, and changing industrial structures are required at a scale never before experienced by mankind. In order to serve members of all different cultures and all different societies, a new concept of the world must be created. The second ICT Smart Grid Technical Symposium will be held on February 15, 2011. It will examine the viewpoints of industry and the university, and about the future prospects of ICT-SG will also be discussed.

[1] ICT-SG HP URL: <http://www.ieice.org/cs/ict-sg/>

Report on the 24th Optical Communication Systems Symposium - Innovation in Optical Communication Networks and Global Strategy of ICT -



Technical Committee on Optical Communication Systems

1. Overview

The 24th Optical Communication Systems (OCS) Symposium, sponsored by the IEICE Technical Committee on OCS, and in cooperation with the IEEE Photonics Society Japan Chapter, the Photonic Internet Forum, and the IEICE Technical Committees on Extremely Advanced Optical Transmission Technologies (EXAT) and Photonic Network (PN), was held from Dec. 16–17, 2010 at the Toray Human Resources Development Center in Mishima City. The subject of the symposium was “Innovation in optical communication networks and global strategy of ICT”. The symposium agenda is shown in Table 1. There were 174 participants. This symposium included poster presentations introducing three national projects related to optical communications and an exhibition displaying the products of 12 companies in the lobby adjacent to the conference room.

Table 1. Symposium agenda.

Date	Program
12/16	1. Opening Remarks 2. Keynote Speech 3. OCS Award Ceremony 4. Workshop I 5. Reception 6. Rump Session
12/17	7. Invited Lectures 8. IEEE Photonics Society Commemorative Lecture 9. Workshop II 10. Closing Remarks

2. First day – Dec. 16

At the opening session of the symposium, Mr. Yutaka Miyamoto, the IEICE OCS committee chair gave the opening address. He reported the activities of the OCS technical committee in 2010. As regards IEICE general/society meetings, in 2010 we hosted seven normal technical meetings and two special sessions.

The technical sessions began with a keynote speech entitled “Globalization and strategy of international standardization in the ICT field –towards building a new winning pattern in Japan–” given by Prof. Koichi Ogawa of Univ. of Tokyo (Fig.1). He talked about the effects of international standardization on national and corporate competitiveness, described a business model and intellectual property management in the international division of labor, and compared the industrial policy and business system related ICT of the USA and Japan. Then a scheme for increasing the

global competitiveness of Japanese industry was discussed.



Fig. 1 Keynote speech by Prof. Koichi Ogawa.

The OCS award ceremony was held after the keynote speech (Fig.2). The OCS technical committee presented two awards: the “IEICE Communication Society OCS Best Paper Award” and the “IEICE Communication Society OCS Young Researchers Award” for excellent presentations at OCS technical committee meetings throughout the year. One paper was selected for the Best Paper Award.

- “Semi-blind multi-Stage dual-polarization nonlinear compensation in 112 Gb/s DP-QPSK coherent receiver” by Mr. Takahito Tanimura¹, Mr. Takeshi Hoshida², Mr. Shoichiro Oda¹, Mr. Toshiaki Tanaka¹, Mr. Hisao Nakashima², Mr. Lei Li³, Mr. Zhenning Tao³, and Mr. Jens C. Rasmussen², of ¹Fujitsu Labs, ²Fujitsu, ³Fujitsu R&D Center.

Three researchers received the Young Researchers Award.

- Ms. Yoko Arakawa (Fujikura): “Reduction of crosstalk by quasi-homogeneous solid multi-core fiber”,
- Mr. Takayuki Kobayashi (NTT Corp.): “160Gb/s 16-QAM long-haul transmission for future optical transport network”,
- Mr. Yosuke Mizuno (Tokyo Inst. of Tech.) “Brillouin scattering in polymer optical fiber”.

The OCS chair presented a testimonial, a glass trophy, and a book token to each award recipient.



Fig. 2 OCS award-winners: from the left, Mr. H. Nakashima, Mr. T. Tanimura, Mr. Y. Miyamoto (Presenter), Ms. Y. Arakawa, Mr. T. Kobayashi, and Mr. Y. Mizuno.

After the award ceremony, Workshop I “From Japan to the world –global expansion of optical communication technologies–” was chaired by Mr. Takashi Mizuochi of Mitsubishi Electric Corp. The workshop included four invited talks (Fig. 3). The invited talks described (1) efforts in optical communication business and its global expansion, (2) people expected to be active on the global stage –from a corporate standpoint–, (3) let’s go Japan! –being active in the world–, and (4) the factor that will win the global competition –from the viewpoint of standardization–.



Fig. 3 Panel discussion of Workshop I: from the left, Mr. K. Kumatani, Mr. M. Shigematsu, Prof. K. Hamamoto, and Mr. H. Okamura.

The rump session began after the reception. The title was “Optical communication technologies forever!”. Prof. Naoki Kondo of Teikyo Univ., Mr. Soichiro Araki of NEC, and Mr. Shu Namiki of AIST were invited as panelists, and they discussed the future of optical communication technologies related to 3D imaging applications, optical networks, and optical signal processing, respectively. The session began with their speeches and continued in a debate format. The able chairmanship of Prof. Joji Maeda of Tokyo Univ. of Science produced a friendly atmosphere for this session, which was filled with fruitful discussion.

3. Second day – Dec. 17

The second day began with a technical session consisting of four invited lectures designed to enhance the participants’ knowledge of the future of optical communications (Fig. 4). The first invited lecture was entitled “Recent progress and future development of inter-satellite optical communication technologies” and the speaker was Mr. Shiro Yamakawa of JAXA. He introduced experimental results of optical inter-orbit communication tests undertaken using the OICETS launched in 2005 and described recent progress on the development of the next generation inter-satellite optical communication terminal. The second lecture was entitled “Remote robotic surgery systems” and the speaker was Prof. Kenji Kawashima of Tokyo Institute of Technology. He introduced some remote robotic surgery systems controlled by using UDP/IP. The third lecture was entitled “Trends for global FTTH adoption based on FTTH Council Asia-Pacific and a consideration for overseas expansion of Japanese optical industry” and this was given by Mr. Shoichi Hanatani of Hitachi. He considered the overseas expansion of the Japanese optical industry based on his experience obtained as President of the FTTH Council Asia-Pacific. The last lecture was sponsored by the

IEEE Photonics Society Japan Chapter as a commemorative lecture. The lecture was given by Prof. Yuzo Yoshikuni of Kitasato Univ., and was entitled “OCT with tunable semiconductor lasers –application of semiconductor lasers for optical communication to medical field–”. He introduced the application of semiconductor lasers developed for optical communication to frequency domain OCT.



Fig. 4 Presenters at the invited lecture session: from the left, Mr. S. Yamakawa, Prof. K. Kawashima, Mr. S. Hanatani, and Prof. Y. Yoshikuni.

The final session was Workshop II, which was entitled “Technological innovations for dramatic improvement in optical communication network”, chaired by Mr. Masatoshi Suzuki of KDDI R&D Labs. and Mr. Toshio Morioka of NTT Corp. The workshop included six invited talks and a panel discussion (Fig. 5). The invited speakers presented (1) research on innovative optical fiber technology, (2) research trends in relation to multi-core fiber for optical communication, (3) input/output technologies for multi-core fiber, (4) optical amplification technologies of multi-core fiber, (5) optical transmission technologies for multi-core/multi-mode fiber network, and (6) a consideration of Exa-bit/s next generation photonic networks.



Fig. 5 Presenters of Workshop II: from the left, Top: Mr. K. Nakajima, Prof. M. Koshiba, and Mr. S. Matsuo. Bottom: Prof. M. Yamada, Mr. K. Fukuchi, and Prof. M. Koga.

4. Conclusion

We believe that all the participants were satisfied with the presentations and discussions on innovation in optical communication networks and global ICT strategy that constituted this symposium. Finally, the OCS technical committee would like to thank all the speakers and participants for their efforts.

Presence of IEICE in a Foreign Country: Personal Feelings

Hidenori Taga
National Sun Yat-Sen University, Taiwan



1. Introduction

It has been five years since I started staying in Taiwan. These five years are quite a short period for me, and I am not still so sure whether I understand differences in Japan and foreign countries in detail. Still, I would like to write something based on my personal feelings, and I think the presence of IEICE in a foreign country might be interesting for IEICE members. As following content is based on my limited experience, if they might not be so informative, please accept my apologies.

2. IEEE, OSA, and IEICE

As my current affiliation is “Department of Photonics”, important technical institutes and societies are related to opto-electronics and photonics. There is a regional technical society named “Taiwan Photonics Society” [1], and it hosts several technical events in Taiwan each year. Even though the activity of this society is relatively vigorous, American societies are deeply penetrating into Taiwan. They are IEEE and OSA. Various technical conferences held in Taiwan are technically co-sponsored by IEEE and OSA through their local chapters. Therefore, it seems for me that the presence of IEEE and OSA is quite significant in Taiwan.

On the other hand, it is rare to find any technical event co-sponsored by IEICE in Taiwan. One reason that IEICE does not support events in Taiwan might be there is no request for the support, but I think another reason is small presence of IEICE in foreign countries. IEEE and OSA are always recruiting new members in the world. Sometimes, they recruit new members during the conference they support. As a result, IEEE

and OSA have the largest presence in the field of opto-electronics and photonics. Not only they have the presence, but also they are prestigious. Background of their prestige is, of course, high quality publications they provide. For example, OSA has Optics Letters and Optics Express, and publishing papers in these journals is regarded as a proof of quality of ones research. In addition, IEEE and OSA provide prominence to their members by their membership grade. “Fellow” members are regarded as renowned researchers, and sometimes, universities in Taiwan compete with each other by how many Fellow members they have gotten each year.

One might point out that large presence of American societies is mainly due to “English”, and I agree to this point. Still, they are struggling to enhance their presence by considerable efforts, and I think IEICE need to follow their efforts if it would like to improve its presence in foreign countries.

3. Conference sponsored by IEICE in Taiwan

Now, I would like to advertise a conference in Taiwan co-sponsored by IEICE. 16th Opto-Electronics and Communication Conference (OECC) will be held in Kaohsiung, Taiwan in July 4 to 8 [2]. OECC is held once every year in Asia-Pacific region, and it focuses on the field of opto-electronics and optical communications. It covers both devices and systems, and hundreds of people join the conference every year. This year, Taiwan hosts the conference, and Korea will host next year. As my university is one of the hosting organizations, I would like to encourage members of IEICE to submit papers and attend this conference. Fig. 1 shows the front page of the website of the conference. This conference is technically co-sponsored by IEICE communication society and electronics society. I would like to thank peoples who helped me to request technical co-sponsorship from IEICE. I hope IEICE can improve its presence in Taiwan through this conference.

4. Conclusion

I have described my personal feelings about the presence of IEICE in a foreign country. As the activities of IEICE become more and more global, to consider improving the presence in the world might be important.

5. References

- [1] <http://www.tps.com.tw/>
- [2] <http://www.oecc2011.org/#>



Fig. 1 OECC 2011 website (front page)

Report on 3rd International Workshop on Wireless Distributed Networks (IWDN 2010)

Osamu Takyu
Tokyo University of Science



1. Introduction

International Workshop on Wireless Distributed Networks (WDN 2010) was held in conjunction with IEEE International Symposium on Personal, Indoor, and Mobile Radio Communications (PIMRC 2010), 26 September, 2010, in Istanbul Lutfi Kirdar Convention and Exhibition Center, Istanbul, Turkey. It cooperated with IEICE Communications Society.

2. Scope and Brief History of International and Domestic Workshop in WDN

2.1 History and Scope

WDN workshop was constructed by four pioneers, (Prof. K.Sakaguchi in Tokyo Institute of Technology, Prof. T.Fujii in The University of Electro-Communications, Prof. F.Ono in Yokohama National University, and Prof. K.Umeybayashi in Tokyo University of Agriculture and Technology). The purpose of this workshop is exchanging of opinions and free discussion about wireless distributed network. 14 domestic workshops including the collaboration with AN, RCS, SR and USN in research groups of IEICE Communication Society and 3 international workshops in conjunction with IEEE PIMRC have been held from June 2007. Table 1 shows the history of national workshop. The detail of our scope is as follows.

With diversification of wireless access technologies and their application fields, the role of wireless access is no longer the last hop terminal access, but also for repeating functionality such as mesh/multi-hop/adhoc/sensor networking. Thereby more complicated wireless networking, especially radio

resource management is required to well organize whole the networks. In such cases, it is almost impossible to optimally conduct wireless resource management based on a centralized control policy. Rather, distributed and/or cooperative control techniques should be introduced in necessary parts in any layer, such as distributed antenna, cognitive radio, distributed MAC, and dynamic heterogeneous networking. Even in a cellular system, a distributed control strategy becomes a key technology for realizing cooperative MIMO, BS cooperation and multi-hop cellular networks. The main purpose of this workshop is to systematize an academic basis over the various topics in wireless distributed networks as listed below, and to discuss the adaptability of these new technologies to enhance the performance of wireless distributed networks.

2.2 Publishing of Lecture Book

We have a lot of instructive and effective knowledge due to workshop activity. For systematizing the technical theory of WDN, we will publish Japanese lecture book from IEICE. For spreading it to out of state, this lecture book is being enriched and translated into English.

3. Overview of IWDN 2010

IWDN 2010 attracted 20 papers and after careful review, 12 papers have been selected. There are three sections and 15 oral presentations including 3 invited talks.

First, in opening, Prof. T. Fujii, General Co-Chair in workshop, explains the scope of IWDN 2010 (Figures 1 and 2).

Table 1: History of Domestic Workshop (Only Solo-Workshop)

Round	Place
1	Tokyo Institute of Technology (15 June 2007)
2	Kyoto University (7 Dec. 2007)
3	Yokohama National University (28 March 2008)
4	Nagoya University (27 June 2008)
5	Shizuoka University (19 Dec. 2008)
6	Osaka University (27-28 March 2009)
7	Tokyo University of Science (3 July 2009)
8	Kagawa University (25 Dec. 2009)
9	Hakodate National College of Technology (29 March 2010)
10	Naha City, Okinawa (2 July 2011)
11	Kochi City, Kochi (3 Dec. 2011)

In first invited talk, Prof. Patrick Marsch (Technische Universität Dresden, Germany) talked about the recent research result and implementation of “Multipoint to point” for LTE-Advance.

In second one, Dr. Ömer İleri (Multimedia Technologies Assessment, Research and Development Laboratory TUBITAK-UEKAE, Turkey) talked about the principle of game theory and the application for wireless system.

In third one, Prof. Markku Juntti (Centre for Wireless Communications, University of Oulu, Finland) talked about co-channel interference control by distributed antenna and censer networks.

The titles of general talk are follows.

- Field Trials using Coordinated Multi-Point Transmission in the Downlink (Fraunhofer Heinrich-Hertz-Institute, DE),
- Joint Power Control, Receiver Beamforming and Adaptive Multi Base Station Coordination for Uplink Wireless Communications (Nokia Siemens Networks, FI)
- Management of Dominant Interference in Cognitive Radio Networks (Kyoto Univ., JP)
- Network Throughput of TDD/TDMA Two-way Multihop Relay Network with MIMO Network Coding in Indoor Environment (Tokyo Institute of Technology, JP)
- A CSI Reduction Method of Block Cooperative Decoding System in OFDM Wireless Communication Scheme (Tokyo University of Science, JP)
- Cooperative ARQ using Distributed Relay Selection and Inter-relay Opportunistic Listening (Keio University)
- FORTEL: Forecasting Routing Technique using Location information for Mobile Ad hoc Networks (Brunel University, UK)
- Delay Properties of Opportunistic Back-Pressure Routing in CSMA-based Wireless Mesh Networks Humboldt University Berlin, DE)
- A Study on Joint Channel Decoding Using Spatial Correlation of Sensor Observations According to ADC Bit levels (Nagoya University, JP)
- On using the message digest for error correction in wireless communication networks (University of Siegen, DE)
- Packet-Level Forward Erasure Correction with User Fairness in Lossy Wireless Networks (Kyushu Institute of Technology, JP)
- Performance Evaluation of Coding-Based Cognitive Radio for Various Packet Sizes (The University of Electro-Communications, JP)

Finally, Prof. K. Umebayashi, TPC Chair, introduce the comment from Prof. Antti Tölli, General Co-Chair. After that, workshop is closed. (Fig. 3)

4. Future Plans of IWDN

We have the plan for 4th international workshop

wireless distributed network (IWDN 2011) in conjunction with IEEE PIMRC 2011 in Toronto Canada. We would like to encourage you to show your research result in IWDN 2011.

Information URL

International Workshop

<http://icwdn.org/wdn2010/index.html>

Domestic Workshop (in Japanese)

<https://sites.google.com/site/wdnorg/>

Contact Point: wdn-sec@mobile.ee.titech.ac.jp



Fig. 1 Opening Speech



Fig. 2 Prof. T. Fujii of General Co-Chair in IWDN2010



Fig.3 Prof. K. Umebayashi of TPC Chair in IWDN 2010

Report on ISAP2010 and ISAP International Steering Committee Meeting

Kunio Sawaya (Tohoku University), ISAP ISC Co-Chair
 Hiroyuki Arai (Yokohama National University), ISAP ISC Secretariat



1. ISAP2010

2010 International Symposium on Antennas and Propagation (ISAP2010) was held at Venetian Resort Hotel Macau, Macao, China from November 23 to 26. This was the fifth ISAP outside Japan since the symposium started to be held in Asia-Pacific region every year. The organizer was University of Macau and State Key Laboratory of Millimeter Waves at City University of Hong Kong. In addition, Bureau of Telecommunications Regulation of Macao Government was co-organizer. Macao Science and Technology Development Fund of Macao Government was supporter and Rohde & Schwarz and Agilent Technologies were sponsors. Four academic organizations including IEICE supported as technical co-sponsors.

As General Chairs, Prof. Kam Weng Tam, University of Macau and Prof. Chi Hou Chan, City University of Hong Kong, as TPC (Technical Program Committee) Chair, Prof. Kwai Man Luk, City University of Hong Kong, and as General Secretary, Dr. Wai Wa Choi, University of Macau, served.

The size of the symposium reached the level of usual ISAP symposia as shown in Table 1. Papers were submitted from 29 countries /regions not only in Asia-Pacific but all over the worlds. Table 2 shows the ranking of the number of submission exceeding ten. In Table 2, it should be noted that submission from China increased rapidly this year comparing with a few papers in the last year. 126 reviewers nominated by international review system contributed energetically multiple-review work in a limited time and supported TPC.

After six half-day short courses and welcome reception “Rohde & Schwarz Night” at Four Season Hotel Macao on November 23, opening ceremony as shown in Fig. 1, three keynote speeches, 46 technical oral sessions and a poster session for the student paper competition were presented in three days from November 24 to 26.

The key note speeches were “Probing The Mysteries of The Universe with The Square Kilometer Array (SKA)” by Prof. Raj Mittra (Pennsylvania State University, USA) shown in Fig. 2, “A Path for Wealth Creation and Its Challenges” by Prof. Weng Cho Chew (The University of Hong Kong, Hong Kong SAR, China) and “Small Antennas for Body-Centric Communications” by Koichi Ito (Chiba University, Japan).

A best paper competition committee was chaired by Prof. Tapan Sarker (Syracuse University, USA). Three best paper awards and three best student paper awards were announced at the conference banquet sponsored by Macao Science and Technology Development Fund of Macao Government. The banquet was held at the Venetian Macao Resort Hotel on November 25.

Unique features in ISAP2010 were the introduction of open system for web-based paper review system “OpenConf” and on-site free internet service “MyISAP” activated by RFID badge.

Table 1 Major statistics

Papers submitted	Papers accepted	Registered participants
300	249	310

Table 2 Number of paper submission

Japan	111
Korea	34
Malaysia	26
China	25
Taiwan	25
Thailand	21
Hong Kong	10
India	10



Fig. 1 Opening ceremony

2. ISAP ISC meeting

ISC (International Steering Committee) also set up ISAP Archives recording all papers presented at the previous ISAP. At this moment all papers from the first ISAP in 1971 to ISAP2009 have been digitized and online, as a result every body in the world AP community can access ISAP papers free of charge. This service will respond to expectations of AP specialists in the world and enhance motivations for Asian people to submit papers. The URL of the ISAP Archives is <http://ap-s.ei.tuat.ac.jp/isapx/> and the top page is shown in Fig. 3.

After the first ISAP in Sendai, nine symposia were held only in Japan. However, since beginning of 21st century, R&D into AP technologies is making great progress and more people are joining AP community, especially in Asia-Pacific region. Reflecting these trends, discussions arose to hold ISAP more frequently and to open them to Asia-Pacific region. In 2001, ISAP JSC (Japan Standing Committee) was organized in Communications Society of IEICE. JSC started to sound possibilities of holding ISAP outside Japan and negotiate with several foreign leaders in potential countries. Consequently we decide the venue to be Seoul, Korea for ISAP2005, and Singapore for ISAP2006.

In order to hold ISAP continuously and smoothly, we established ISAP ISC during ISAP2006 with 9 countries/regions. Now the number has reached 11, Australia, China, India, Hong Kong, Japan, Korea, Macao, Malaysia, Singapore, Taiwan, and Thailand. The mission of the committee is planning future ISAP and establishing operation rules to steer the symposia smoothly using international cooperation.

In the period of ISAP2010, ISC regular meeting was held. Members are shown in Fig. 4. The ISC meeting was chaired by Prof. Kam Weng Tam, Prof. Chi Hou Chan and Prof. Kunio Sawaya. After the report presentation of the last ISAP in Bangkok and ISAP2010 in Macao, Korea presented the ISAP2011 in Jeju and Japan introduced the outline of ISAP2012 in Nagoya.

Next, we officially decided ISAP2013 to be held at convention and exhibition center at Nanjing Communication Laboratory (NCL) from October 27 to 30 in 2013. The General Chair will be Prof. Wei Hong, Southeast University, China. For following symposia, Kaohsiung (Taiwan) and Bangalore (India) submitted their proposals for ISAP2014, Pattaya (Thailand) and Kuala Lumpur (Malaysia) proposed to invite ISAP2015.

3. Summary

ISAP2010 provided to contributors and participants an academic and friendship atmosphere for exchanging advances in AP research and strengthening relationship. Many young students also had a chance to discuss with the experts in their fields. The upcoming ISAP2011 will be held in Jeju, Korea.

(<http://www.isap2011.org/index.php>).



Fig. 2 Keynote speech



Fig. 3 ISAP Archives



Fig. 4 ISAP ISC meeting

Internet of Things 2010 Conference and Workshops Report

Jin Mitsugi
Keio University, Auto-ID Laboratories
Program Co-chair, Internet of Things 2010



1. Introduction

Auto-ID Laboratories are a league of world universities that pursue research, development and standardization under a common research theme “Architecting the Internet of Things”. Currently Auto-ID laboratories involves Keio(Japan), MIT(USA), ETH/St.Gallen(Switzerland), Cambridge(UK), Fudan(China), KAIST (Korea) and Adelaide(Australia). Auto-ID Laboratories, with a technical co-sponsorship from IEICE communications society, organized the second Internet of Things conference and workshops from November 29th to December 1st 2010 in Tokyo. The three day events attracted 350 participants from 27 countries worldwide. This is a clear evidence of high expectation toward this new research and industrial area. This report provides highlights of Internet of Things 2010 (IoT2010). IoT2010 was closed on December 1st with the announcement of the next IoT in Shanghai China in 2012.

2. What is Internet of Things?

During the preparation work of IoT2010, I was asked a same question by many people “What is Internet of Things?”. Two keynote speakers of IoT2010, Dr. Norishige Morimoto, director IBM research Tokyo and Mr. Patrick Wetterwald, president IPSO alliance nicely gave an answer to the question.



Figure 1 Keynote speaker Dr. Norishige Morimoto

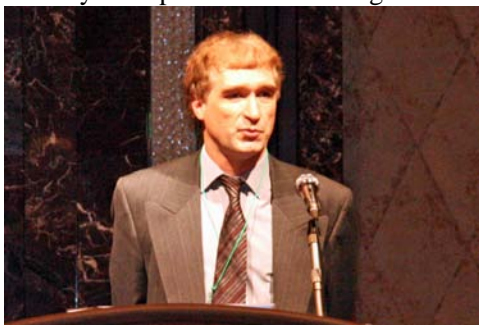


Figure 2 Keynote speaker Mr. Patrick Wetterwald

According to Mr. Wetterwald, as ICT evolves, the number of connected-devices will increase. Currently we typically have five connected-devices, such as a computer, a cellular phone, a wired phone, a game machine and a car. In 2013 it is expected to be 140 connected-devices per person. The connected devices include automatically identified physical objects as well as micro-computer embedded electronic devices. With myriad of such connected-devices we can re-engineer industrial systems. Dr. Morimoto pointed out that we are currently experiencing a convergence of pervasive digital technology and networks, world-level environment consciousness, economic downturn and emerging problems in developing countries for the first time. The convergence of those four factors leads us to establish new industrial or even social systems using connected-devices; i.e. Internet of Things.

As I listened to presentations and discussions in IoT2010, typical applications of IoT are global supply chain management, manufacturing control, intelligent food safety, water asset management, intelligent transport system and, needless to say, smart energy among others. Of course, as some of the readers noticed, those applications are not new. We may refer them to ubiquitous computing. But it was quite convincing for me that we can establish real IoT industrial systems with sustainable business models with ICT for the first time in the history.

3. Program of IoT2010

IoT2010 is composed of workshops and conference. In November 29th, we had workshops. Workshops comprise six invited workshops, six open workshops and one special workshop. Invited workshops are organized by leading researchers so as to be in line with the conference theme “IoT for a Green Planet”. The special workshop was jointly organized by Keio University and Berkman center for Internet and society at Harvard University. The theme of the special workshop was “IoT: New Challenges for Technology and Society?”. Participants of the special workshop discusses social acceptance of IoT. This is very unique and matches the comprehension of IoT as an industrial system innovation.

November 30th and December 1st were for conference which includes 27 technical presentations, 15 poster sessions, 13 demos and 6 video presentations. We also had 5 industrial exhibitions. Special session on RFID activities in APEC Logistics Working Group organized

by NYK Line supported by GS1 EPCglobal and METI introduced their pilot program on international logistics using network RFID.

Technical presentations were selected from 104 submissions with at least four reviewers per a submission. Technical presentations are classified into 6 sessions; Green IoT, Mobile IoT, Business and Applications, RFID technology, IoT development and Web of Things. Results of the selection turned out to be industrial and business oriented while preserving some cutting-edge technology papers. I believe this selection trend should be good to differentiate IoT from other existing technical conferences.

4. Highlights of IoT2010

Workshops relating urban computing attract participants and media interests [1]. In Interactive architecture workshop, organizers Professor Scott Fischer and Dr. Jennifer Stein presented “Million Story Building” where we can interactively communicate with a building which is equipped with RFID tags, QR codes and sensors. Walking through the building with a smart phone, we can retrieve and learn stories about specific location in the building. In Urban IoT workshop organized by Dr.Vlad Trifa, researches on applying IoT to city infrastructure were presented. Participants were entertained by advances such as a novel idea for traffic control in intersection by ad-hoc communications among running cars and an acoustic data recognition and collecting system coined “Tender Voice/Tender Noise” established by a group of urban planners and engineers currently working in San Francisco.

In technical conference, I observed an interesting trend of research on the utilization of barcode to identify industrial products by cellular phone. There were a number of submissions on this topic mainly from Europe and as a result IoT2010 established a session “mobile IoT”. From Japanese point of view, such service is not quite appealing because it has been in the market for quite a long time. As I listened to some of the presentations, however, I begin to think that the penetration of smart phone, the emergence of cloud computing and the establishment of global standard of ID related network system may result in a rapid increase of consumer usage of barcode system.

There was an interesting discussion on the usage of IPv6 in IoT. There was a group of researchers who claims IP shall be extended until the very end of “Things”. Other group of researchers advocated such that the networking layer could be flexible because we use the unified presentation layer – Web system. Despite such philosophical discrepancy, a unanimous consensus is to adopt IPv6 as an urgent matter and the importance of web system in IoT era.

In the opening plenary, IoT2010 had “One minute madness” where poster, demo and video presenters advocated their achievements within one minute. Presenters played a drama, wore a costume to attract audience. It was fun to see.



Figure 3 Scenes in One Minute Madness

5. Best paper Award

Best paper award goes to a research team in University of Stuttgart [2]. The paper proposes a system with which we can assure production process is properly executed with an RFID system which generates imperfect identification data sequence. The proposal features the consistency repository backed up with virtual readers (see Figure 4). This paper is a typical example of IoT -- applying an advanced information system to improve an industrial system. This also fits the conference theme, “IoT for a Green Planet”.

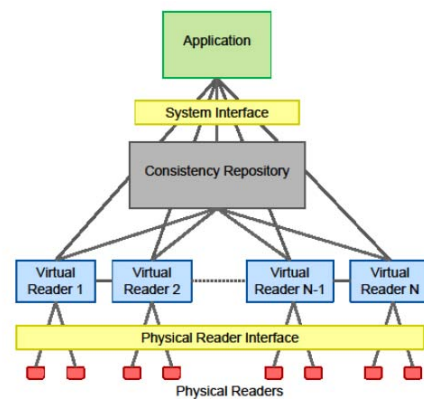


Figure 4 System Architecture for Consistency Management Framework[2]

6. Acknowledgement

On behalf of IoT2010 organizing committee, I very much appreciate the support of our sponsors and exhibitors IBM, CISCO, TOPPAN, NTT, along with the generous support from SAP, NTT docomo, United Communication Services, Inc. and SOUM Corporation. Wireless network access for workshops was provided courtesy of NTT Broad Platform, Inc. IoT 2010 was also technically supported by METI, WIDE project and T-Engine Forum/ Ubiquitous ID center. I also thank EU for their support and active participations.

7. Reference

[1] Verena Dauerer, “A relationship with the city”, The Japan Times On-Line, <http://search.japantimes.co.jp/cgi-bin/nc20101208a1.html>
 [2] Bilal Hameed, Imran Kahn, Frank Durr and Kurt Rothermel, “An RFID Based Consistency Management Framework for Production Monitoring In a Smart Real-Time Factory”, Internet of Things 2010, available in IEEE Xplore.

Report on 16th Asia-Pacific Conference on Communications (APCC2010)

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**Member of APCC Steering Committee, NTT DOCOMO



1. Introduction

The 16th Asia-Pacific Conference on Communications (APCC2010) was held from October 31 to November 3, 2010 in Auckland, New Zealand. APCC2010 was sponsored by Auckland University of Technology (AUT), Tait radio communications and was technically co-sponsored by Korea Information and Communications Society (KICS), IEICE Communications Society (IEICE-CS), China Institute of Communications (CIC) and IEEE Communications Society, IEEE Communications Society Asia/Pacific Region.

The conference consists of 10 keynote addresses, 31 technical sessions, three tutorials and one panel session. It was attended by 144 researchers and engineers from 21 countries and regions.



Figure 1, Opening remarks by Prof. Al-Anbuky

2. Invited Talks

10 qualified speakers were invited from Germany, Japan, Italy, Korea, Australia and New Zealand. Those leading speakers addressed the topics such as experimental facilities for wireless sensor networks, future Internet research and emerging technologies such as elastic optical path networks and millimeter wireless systems.

3. Technical Program

The Technical program includes 110 papers covering the advanced information and communication technologies and services. Those papers reviewed and accepted from 184 submissions. 10 chairs with 144 TPC members and 344 reviewers are involved in the review process. Sessions were organized in three

parallel. Each session was well-attended and active discussions were facilitated.



Figure 2, Invited Talk by Dr. Stephan Fischer



Figure 3, Technical Sessions

4. Best Paper Award

Each year, Best Paper Awards were selected by the Award Committee in APCC Steering Committee. In APCC 2010, the following three papers were selected.

1) "Dirty Paper Coding Based Optimal MIMO Relay Communications,"

Muhammad R. A. Khandaker (Curtin University, Australia)

Yue Rong (Curtin University, Australia)

2) "Channel Feedback Reduction Schemes for Opportunistic Scheduling in Multicast OFDMA Systems,"

Soomin Ko (Seoul National University, Korea),



Figure 4, Recipients of the Best Paper Award

Yung-Jun Yoo (Korea Telecom, Korea) and
Byeong Gi Lee (Seoul National University, Korea)

3) “MIMO Capacity Estimation Based on Single and
Dual-Polarization MIMO Channel Measurements,”
Shinobu Nanba (KDDI R&D Laboratories, Japan)
Noriaki Miyazaki (KDDI R&D Laboratories, Japan),
Yuuki Hirota (KDDI R&D Laboratories, Japan) and
Yoji Kishi (KDDI R&D Laboratories, Japan)

The certificate of the award was given to the authors
in the conference dinner on November 2.
Supplementary prize will be given to the authors
afterwards. This award was sponsored by CIC, KICS,
IEICE-CS and IEEE Comsoc Asia-Pacific Board.

5. Conclusion

Since 1993, APCC has been the forum for
researchers and engineers in the Asia-Pacific region to
present and discuss topics related to advanced
information and communication technologies and
services, while at the same time, opening the door to
the world. APCC2010 successfully provided an
excellent venue and facilitated the research
collaboration in Asia-Pacific regions.

Next year, APCC2011 will be held in Kota Kinabalu,
Malaysia.

Report on 14th ICIN (ICIN2010)

Osamu Mizuno^{*1} and Masami Iio^{*2}

^{*1}Vice chairman of Technical Program Committee, Kogakuin University

^{*2}Member of Technical Program Committee, NTT Corporation



1. Introduction

In 1989, “The International Conference on Intelligent Networks (ICIN)” was launched to discuss not only technical aspects of intelligent networks but also business aspects among telecoms, vendors, and academics from mainly Europe, America, and Asia/Oceania.

Since intelligent networks has commercialized, the main topics of ICIN are shifting to “intelligence” of Information Communication Technologies (ICT) including IP-telecom convergence, and Next Generation Networks. Therefore, “ICIN” is not an appropriate acronym today.

2. Conference Overview

ICIN has been held 13 times almost every year or every 18 months in European cities. The 14th ICIN (ICIN 2010) was held from October 11 to 13, 2010 in Berlin, Germany.

ICIN 2010 was organized by the non-profit organization, ICIN Event Inc. and supported by IEEE COMSOC and major standardization organizations including ITU-T, ETSI, and 3GPP. The IEICE Communication Society cooperated with ICIN and major technical societies in Europe. The conference locations were Deutsche Telekom’s historical building and the Park-inn hotel in Potsdam. Over 150 people from Germany, France, Sweden, U.K., Norway, U.S., China, Korea, Japan and other countries attend the conference.

3. Topics of ICIN2010

Keynote Speeches

ICIN 2010 reserved one day for keynote speeches (Fig. 1).

The following are the seven keynote speeches on topics such as standardisation, information industry, and vendor and telecom’s viewpoint.

- Malcolm Johnson (ITU-T) offered a global overview of where the telecom industry stands now and its likely future: NGN, IPTV, LTE, etc.
- Philip Kelley (Alcatel-Lucent) discussed the new relationship among telecoms, developers, and markets using a fruit garden metaphor.
- Bengt Nordström (Northstream) focused on the mobile sector of telecom.
- Thomas Michael Rohnert (SAP research) discussed some new trends in Internet technologies.

- Thomes Aidan Curran (Deutsche Telekom) introduced research and development in Germany and at Deutsche Telekom.
- Sigurd Schuster (Nokia Siemens Network) talked about the identity management overview of Web 2.0.
- Felix Zhang (Huawei) explained the network industry’s challenge for applications in the digital information era.

Technical Session

There were 14 technical sessions, and 48 papers were presented. Two sessions ran simultaneously, one concerning technical aspects the other concerning business/service aspects.

Five papers were from Japan: two from NTT and the others from KDDI labs, Fujitsu, and Shibaura Institute of Technology. As TPC members, we’d like to express our gratitude to these authors.

Many papers discussed telecom-based technologies/services such as NGN/IMS-based service systems, IP and telecom service convergence, so called “Telco 2.0”, and content delivery. Information technologies/services, such as context management, service compositions for the cloud, or XaaS, QoE, and security were also discussed.

An impressive trend at ICIN 2010 was home networking including IPTV. It seems that digital TV sets and high-speed networks are spreading to residential areas, and new value creation is expected through them.

Many participants wished to break down the border between telecom and the Internet, and they felt that these ecosystems might be more complex. The above technologies are keys to success for business.

Poster Session

Eight papers were presented during the poster sessions. During poster session, the committee required a demonstration (Fig. 2).

Service creation, social services, simulation and test environments, identity management, and terminal/network integration were demonstrated.

Tutorials and Workshops

The tutorial sessions, “Service enablement options in NGNs and the emerging future internet” and “I developing new services from the building blocks” were held.

“Workshop on business models for mobile platforms” and “Workshop on Telecom Transformation” were held on the last day. These workshops focused on the causes and effects of the current explosion in platforms in the mobile ICT industry.

Social Events

The welcome reception was hosted by Deutsche Telekom Laboratories and the Berlin Partner. Participants enjoyed either an historical Berlin tour or a beautiful organ recital. They also enjoyed a gala dinner with delicious selection of wine and beer (Fig. 3).

Awards

The following are the best papers and the best presentations awards;

● Best Papers

“New UPnP Service for Multimedia Remote Sharing with IMS Framework” by Mohamed Mahdi (France Telecom R&D, France) et al.

“Word of Mouth Mobile Marketing for Real World Recommendations” by Matthias Will (T-Systems International, Germany) et al.

● Best Presentations

“Can You Predict Human Behavior?” by Jose Simoes (Fraunhofer FOKUS, Germany)

“How Can Recommendations Be Presented to TV Viewers? Concept Testing with Potential Users” by Sue Hessey (BT Innovate and Design, UK)

“Blending the Telecommunication Domain with Web 2.0 Services Demonstration” by Konstantinos Vandikas (Ericsson)

4. Conclusion

Programs and presentation materials can be downloaded from the ICIN site [1].

The ICIN committees would like to thank the paper authors and participants from Japan, and the IEICE Communication society for supporting ICIN conferences.

The next conference, ICIN 2011, will be held 4-7 October 2011 in Berlin. CFP can be downloaded from the ICIN site. We welcome your participation.

References

[1] ICIN, <http://www.icin.biz/>



Fig. 1 Keynote Speech



Fig. 2 Poster Session



Fig. 3 Gala Dinner

IEICE-CS Conferences Calendar

Date	Conference Name	Location	Note
29 Oct. - 02 Nov. 2012	2012 International Symposium on Antennas and Propagation (ISAP2012)	Nagoya, Japan	To be held
05 Mar. - 06 Mar. 2012	World Telecommunications Congress 2012 (WTC2012)	Miyazaki, Japan	To be held
25 Oct. - 28 Oct. 2011	2011 International Symposium on Antennas and Propagation (ISAP2011)	Jeju, Korea	Submission deadline: May 15 2011
31 July – 05 Aug. 2011	International Geoscience and Remote Sensing Symposium 2011 (ISAP2011)	Sendai, Japan	Submission deadline: closed
04 Jul. - 08 Jul. 2011	16th Opto-Electronics and Communications Conference (OECC2011)	Kaohsiung, Taiwan	Submission deadline: Mar. 18 2011
05 June - 09 June 2011	4th International Workshop on the Network of the Future (FutureNet IV)	Kyoto, Japan	To be held soon
05 Jun.- 09 Jun. 2011	International Conference on Communications 2011 (ICC2011)	Kyoto, Japan	To be held soon
31 May. - 03 Jun. 2011	Cognitive Radio Oriented Wireless Networks and Communications (CrownCom2011)	Yokohama, Japan	To be held soon
15 May. - 19 May. 2011	21st International Conference on Optical Fiber Sensors (OFS-21)	Ottawa, Canada	To be held soon
27 Mar - 30 Mar. 2011	The 5th International Symposium on Medical Information and Communication Technology (ISMICT 2011)	Montreux, Switzerland	To be held soon
23 Mar. - 25 Mar. 2011	The 10th International Symposium on Autonomous Decentralized Systems (ISADS2011)	Tokyo, Japan	To be held soon
10 Dec. 2010	3rd International Workshop on the Network of the Future (FutureNet III)	Miami, USA	Done
29 Nov. - 01 Dec. 2010	Internet of Things2010 (IoT2010)	Tokyo, Japan	Reported on this issue
23 Nov. - 26 Nov. 2010	2010 International Symposium on Antennas and Propagation (ISAP2010)	Macau, Macau	Reported on this issue
31 Oct. - 03 Nov. 2010	The 16th Asia-Pacific Conference on Communication (APCC2010)	Auckland, New Zealand	Reported on this issue
11 Oct. - 14 Oct. 2010	14th International Conference on Convergence in Services, Media and Networks (ICIN2010)	Berlin, Germany	Reported on this issue
26 Sep. 2010	The third work shop on Wireless Distributed Network 2010 (WDN2010)	Istanbul, Turkey	Reported on this issue

*: Please confirm with [the following IEICE-CS web site](http://www.ieice.org/cs/conf/calendar.html) for the latest information.

<http://www.ieice.org/cs/conf/calendar.html>



Membership for Overseas Candidates: Overseas Members may opt to join **one IEICE Society of their choice** and may request to receive the **IEICE Transactions of online version** of that Society. Furthermore, Overseas Members may request to receive the IEICE Journal (written in Japanese) and Transactions (published in paper) at an additional cost. Similar services are available to **Overseas Student Members**. Voting privileges in the IEICE election do not apply to Overseas Members. Note that the Overseas Membership applies only to candidates who reside outside of Japan and who have citizenship in countries other than Japan.

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B (Communications)	EB (English) B (Japanese)	Fundamental Theories for Communications, Devices/Circuits for Communications, Transmission Systems and Transmission Equipment for Communications, Optical Fiber for Communications, Fiber-Optic Transmission for Communications, Switching for Communications, Switching for Mobile Communications, Network, Network Management/Operation, Internet, Wireless Communication Technologies, Terrestrial Radio Communications, Satellite Communications, Optical Wireless Communications, Antennas and Propagation, Electromagnetic Compatibility (EMC), Sensing, Navigation, Guidance and Control Systems, Energy in Electronics Communications, Terminals for Communications, Multimedia Systems for Communications, Broadcast Systems, Integrated Systems for Communications, Space Utilization Systems for Communications
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D (Information and Systems)	ED (English) D (Japanese)	Computation and Computational Models, Automata and Formal Language Theory, Algorithm Theory, Complexity Theory, Computer Components, VLSI Systems, Computer Systems, Fundamentals of Software and Theory of Programs, System Programs, Software Engineering, Database, Contents Technology and Web Information Systems, Data Mining, Networks, Dependable Computing, Application Information Security, Distributed Cooperation and Agents, Artificial Intelligence and Cognitive Science, Human-computer Interaction, Office Information Systems, e-Business Modeling, Educational Technology, Rehabilitation Engineering and Assistive Technology, Pattern Recognition, Speech and Hearing, Image Processing and Video Processing, Image Recognition, Computer Vision, Computer Graphics, Multimedia Pattern Processing, Natural Language Processing, Biocybernetics, Neurocomputing, Biological Engineering, Music Information Processing, Kansei Information Processing, Affective Information Processing
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From Editor's Desk

● Minor renewals of this newsletter

Institute of Electronics, Information and Communication Engineers Communications Society (IEICE-CS) GLOBAL NEWSLETTER has been established since August, 2002. We quarterly publish a newsletter in English every March, June, September, and December. The last one was published as 34th newsletter in December, 2010.

We would like to have some minor renewals of our newsletter format. 1) We would like to use a word “IEICE-CS GLOBAL NEWSLETTER” as a title, although in the past we used a word “Global News Letter” on the front cover. 2) We would also like to change numbering from only Vol. to a combination of Vol. and No. For example, the number of this newsletter is Vol.35, No. 1, and that of the next one will be Vol. 35, No. 2. 3) We add English information of issued month, March 2011, on the front cover of this newsletter. 4) We also add a table of conference calendar related with IEICE-CS activity in the newsletter. We hope that these renewals will be very useful for overseas/foreign members.

Our goal is to share information between overseas/foreign members and other members in IEICE-CS as a global activity, and to show IEICE presence internationally. We are preparing a newsletter submission guidelines in English for IEICE-CS overseas/foreign members to directly contribute articles to IEICE-CS GLOBAL NEWSLETTER .

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ISAP2011

October 25~28, 2011 / Lotte Hotel Jeju, Jeju, Korea

The 2011 International Symposium on Antennas and Propagation (ISAP2011) will be held at the Lotte Hotel Jeju, Korea, during October 25~28, 2011. The Jeju island is famous for several scenic masterpieces, three of which have been designated as World Heritages by UNESCO. This symposium is sponsored and organized by The Korean Institute of Electromagnetic Engineering and Science (KIEES) and cosponsored by the Communications Society of the Institute of Electronics, Information and Communication Engineers (IEICE). This symposium is held under the technical co-sponsorship of the Antennas and Propagation Society of the Institute of Electrical and Electronics Engineers (IEEE/AP-S) and is held in cooperation with the Antennas Society of CIE (CIE-AS) and the International Union of Radio Science (URSI).

OBJECTIVE

ISAP2011 is intended to provide an international symposium for exchanging information on the progress of research and development in antennas, propagation, electromagnetic wave theory, and related fields, as shown in the scope. An important objective of this meeting is to promote mutual interaction among participants. In particular, a variety of sessions for cutting-edge/emerging technologies is included in the category E, which offers participants valuable opportunities to look around the trend of the future research in IT industry.

SCOPE

This symposium will cover a wide range of topics on antennas, propagation, electromagnetic wave theory, and wireless application systems, as suggested below. Papers concerned with other related topics will also be considered.

A. Antennas and Related Topics

- (A1) Microstrip and Printed Antennas (A2) Active and Integrated Antennas
- (A3) Array Antennas, Phased Arrays and Feeding Circuits (A4) Small Antennas
- (A5) Adaptive and Smart Antennas (A6) Multiband / Wideband Antennas
- (A7) Slot Antennas (A8) Millimeter Wave and Sub-Millimeter Wave Antennas
- (A9) Reflector/Lens Antennas and Feeds (A10) Optical Technology in Antennas
- (A11) Mobile and Base Station Antennas (A12) MIMO Antennas (A13) UWB Antennas
- (A14) RFID (A15) Others

B. Propagation and Related Topics

- (B1) Mobile and Indoor Propagation (B2) Mobile Channel Characterization and Modeling
- (B3) Millimeter and Optical Wave Propagation (B4) Earth-Space and Terrestrial Propagation
- (B5) Radio Astronomy (B6) Remote Sensing
- (B7) SAR Polarimetry and Interferometry (B8) Ionospheric Propagation (B9) Others

C. Electromagnetic Wave Theory

- (C1) Complex Media and Artificial Media (C2) Computational Electromagnetics
- (C3) Theoretical Electromagnetics and Analytical Methods (C4) High-Frequency Techniques
- (C5) Inverse Problems (C6) Random Media and Rough Surfaces (C7) Scattering and Diffraction
- (C8) Waveguiding Structures (C9) Periodic and Band-Gap Structures
- (C10) Time Domain Numerical Methods (C11) Others

D. Systems and Other Related Topics

- (D1) High Power Microwave Applications (D2) Advanced Materials for EM Applications
- (D3) UWB and Impulse Radio (D4) Ubiquitous Network Systems (D5) Satellite Communication Systems
- (D6) Radio Technologies for Intelligent Transport Systems (D7) Subsurface Sensing
- (D8) EMC/EMI Simulations and Measurements (D9) Others

E. Emerging/Special Topics

- (E1) Wireless Energy Transmission (E2) EMI/EMC of Wireless Power (Energy) Transmission
- (E3) Terahertz Devices (E4) Terahertz Applications
- (E5) Subwavelength Optics (E6) Nanoantenna (E7) MIMO System (E8) Metamaterial and Application
- (E9) Biological Effects and Medical Application of EM Wave (E10) Antenna Measurements
- (E11) Basic Measurement Technology in RF and Microwaves
- (E12) Electromagnetic and RF Engineering Education

PAPER SUBMISSION

Authors are requested to send their papers in PDF file through the conference web site no later than May 15, 2011. Paper should be typed in the on-line system including paper title, list of authors, affiliations, and corresponding e-mail. Fit all the text, figures, and references within the limit of 4 pages. Sample template and more detailed information can be found on the web site (<http://www.isap2011.org>).

Young Scientist Award

Young scientist award is to encourage outstanding young scientists to submit their excellent papers. Outstanding young scientist papers presented at ISAP 2011 will be selected and granted the Young Scientist paper Awards.

Call for Special Sessions

Proposals are due March 15, 2011 and should be submitted via the ISAP Web Site (<http://www.isap2011.org>). Proposals will be evaluated based on the timeliness of topic as well as the qualifications of organizers and paper authors. Notification of acceptance will be sent to the organizers by March 22, 2011. Manuscripts should conform to the formatting and electronic submission guidelines of regular papers.

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16th Opto -Electronics and Communications Conference Date: July 4-8, 2011



**Paper Submission Deadline:
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- Core/Access Networks
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Second Call for Papers

16th Opto

-Electronics and Communications Conference

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Call for Papers

--- Special Section on Cooperative Communications for Cellular Networks ---

The IEICE Transactions on Communications announces that it will publish a special section entitled "Special Section on Cooperative Communications for Cellular Networks" in **December 2011**.

The area on cooperative technologies for multiple base stations and/or multiple users, such as cooperative beam/resource control, cooperative transmission, relaying, and cooperative MIMO, is drawing attention as a solution to achieve high user throughput at the cell edge (and system throughput) in cellular systems. As discussed in standardizing groups of IMT-advanced, these technologies are expected to be essential in the next generation cellular networks. Therefore, a special section is being planned (scheduled to appear in the December 2011 issue) to further promote research and development of this area.

1. Scope

This special section aims at timely dissemination of research in these areas. Possible topics include, but are not limited to:

- Application issues:
base station cooperation, user cooperation, relaying, cooperative resource control and scheduling, related standardization issues
- Fundamental and/or elemental technologies:
precoding design, cooperative and virtual MIMO, relay techniques, channel estimation and synchronization, calibration, backhaul design and side information feedback, propagation measurement and modeling

2. Submission Instructions

The standard number of pages is 8 for a PAPER and 2 for a LETTER. The maximum number of pages for the initial submission of a LETTER is 4. The page charges are considerably higher for extra pages. Manuscripts should be prepared according to the guideline in the "Information for Authors". The latest version is available at the web site, http://www.ieice.org/eng/shiori/mokuji_cs.html. The term for revising the manuscript after acknowledgement of conditional acceptance for this special section could be shorter than that for regular issues (60 days) because of the tight review schedule.

This special section will accept papers only by electronic submission. Prospective authors are requested to follow carefully the submission process described below.

1. Submit a manuscript and electronic source files (TeX/Word files, figures, authors' photos and biographies) via the IEICE Web site: https://review.ieice.org/regist_e.aspx by **April 15, 2011**. Authors should choose the [**Special-EB**] **Cooperative Communications for Cellular Networks** as a "Type of Issue (Section)/Category of Transactions" on the online screen. **Do not choose [Regular-EB]**.
2. Send "Copyright Transfer and Page Charge Agreement" and "Confirmation Sheet of Manuscript Registration" by E-mail, FAX or postal mail to the following address (guest editor of the special section) by the above due date. We may withdraw the submission if these documents have not been received by the due date, even if the manuscript has been received by electronic submission. For additional guidelines on manuscript preparation, please visit: http://www.ieice.org/eng/shiori/mokuji_cs.html.

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