

## ***IEICE Communications Society GLOBAL NEWSLETTER Vol. 12***

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# New Start for Communications Society: More Autonomous Operation for better Services

Yukou Mochida  
President, Communications Society



## 1. This year is the special year

I feel much honored to be elected to serve as President of Communications Society of the IEICE.

This year is a special year for us IEICE-CS members. In April, the Board of Directors of IEICE approved our proposal to start the trial of “autonomous decision system by self-supporting accounting” in our society. We will become the first IEICE society to commence such a trial and we will also be the first to introduce this new system into full operation 2006.

## 2. For better services

IEICE-CS is organized within the IEICE and acts on the basis of IEICE Articles and under the guidance of the IEICE Board of Directors. However, to provide better services and to improve the health of the financial operations within our society, we need quicker decision processes based on autonomous management. These are the objectives of the new system, which we have been discussing over the past 10 years.

Last year IEICE-CS set up a task force for the detailed planning of this new strategy. This task force worked very hard and produced new Regulations of IEICE-CS, which includes a leaner and more efficient managing structure that incorporates the flexibility necessary to enable better services to be developed for our members. I myself have been involved in this task force and now deeply appreciate the dedicated works of its members. I feel confident that our society will grow stronger as this work is adopted.

## 3. New management structure of IEICE-CS

The IEICE-CS new Board of Directors consists of President, President-Elect, VP for “Technical Groups and Conferences”, VP for “Membership Service and Finance”, Editor-in-Chief and several Directors who have clearly defined responsibilities.

This Board of Directors is smaller in size and hence many of the “rights and duties” are delegated to the Board of Technical Groups and Editorial Board. This allows the Board of Directors to concentrate on strategic issues such as the creation of more attractive services and the development of

international membership. They are also responsible for determining the overall optimum balance amongst the various activities of the IEICE-CS.

The IEICE-CS Editorial Board, headed by Prof. Tomonori Aoyama, Editor-in-Chief, will prepare during this year for the full introduction of our Electronic Transactions for better service and finance.

The IEICE-CS Board of Technical Groups, headed by Prof. Iwao Sasase, VP, Technical Groups and Conferences, will develop new ideas for technical committee meetings to exchange more actively current and hot technical issues.

Prof. Yasushi Wakahara, VP, Membership Service and Finance, will promote together with the Directors, efficient management and the development of new services.

## 4. Our strengths

Our IEICE-CS activities are increasing every year through the dedicated works of volunteers, for example more papers in Transactions and more presentations in the technical committee meetings. This is one of our strengths and at the same time should improve our financial status, which is the responsibility of the Board of Directors.

Another strength of the IEICE-CS is our membership from industry. Although many of these members are interested in academic activities such as transaction papers, other members may require rather professional community services. I am confident our IEICE-CS activities such as conferences, technical committee meetings and journals provide the best platform for promoting industry-academia collaboration.

## 5. Let us work together

The strength of our IEICE-CS is in its volunteers and the variety of our membership as described above. Let us work together and enjoy communicating and collaborating with our colleagues around the globe who are contributing in a variety of communication fields.

# A Letter from Communications Society Committee of Research Activity Evaluation

Hiroshi SUNAGA ,  
Secretary, Committee of Research Activity Evaluation  
(NTT Network Service Systems Laboratories)  
and  
Shinji SUGAWARA,  
Secretary, Committee of Research Activity Evaluation  
(Nagoya Institute of Technology)



Hello, readers of the IEICE Global Newsletter! Some of you may not be familiar with the name "Committee of Research Activity Evaluation". This committee consists of ten members: Chairperson Okada, Vice Chairperson Oie, two secretaries, and six regular members. Its primary task is to check and evaluate the activities of 26 technical groups in an effort to activate the overall research activities of the Communications Society.

We discussed questionnaire items to be asked to identify measures for the activation of research activities and conducted a survey of each technical group based on the questionnaire up to the end of July 2004. We released the results widely at the Communications Society Conference held in Tokushima last September. For details of the results, please read the handout distributed in the conference. Here are just a few of the interesting points. The following data was collected from 22 out of the 26 technical groups that responded to the survey task force (TF) of the committee.

First, the TF asked each technical group for basic data concerning the tendency of their research fields. The results are shown in Figure 1.

practical-oriented	slightly practical	middle	basic-oriented
14	23	55	9
%	%	%	%

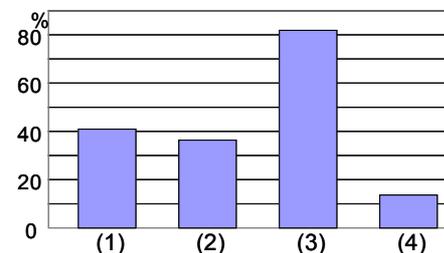
**Fig. 1 Tendency of research fields**

More than half responded 'half-way between practical-oriented and basic-oriented', but it is of note that quite a few tended toward 'practical-oriented'. In a different question, the TF asked what they thought about their research tendency or the balance between their contribution to practical application (chiefly in the industrial world) and their contribution to basic research (chiefly for academic purposes). Interestingly, most of the technical groups answered that their tendency was appropriate.

Secondly, let's take a look at the responses to the question: "How does your group gather opinions from the members of your group, workshop participants, and subscribers of technical reports, and provide feedback to research activities and to your

field?" More than 90% of the respondents said their group is taking some measures to gather opinions.

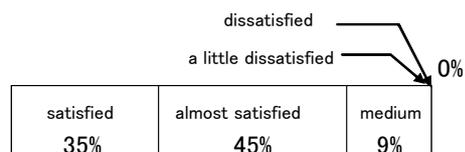
Figure 2 demonstrates the specific measures. Note that this percentage shows the number of responses divided by respondents. In addition to what is shown in Figure 2, some groups mentioned that they regularly hold biannual committee meetings, analyze the participants' opinions and the results of their survey obtained from their workshop, and hold discussions based on those analyses. Other measures included making good use of E-mail and holding a work camp to gather opinions from all the participants regarding desirable future research policy and workshop activities.



(1) hearing from participants, (2) questionnaire at the conference, (3) banquet, (4) mail, bulletin board

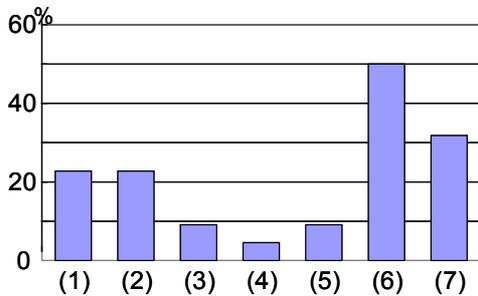
**Fig. 2 Specific measures for gathering opinions**

Figure 3 is based on a question regarding the congruity between the presentations at the technical conference and the expectation of the participants (evaluated by their degree of satisfaction). It is noteworthy that 80% of the technical groups consider that the participants are fairly satisfied, while almost no group considers that the participants are dissatisfied.



**Fig. 3 Congruity between technical presentations and participants' expectation**

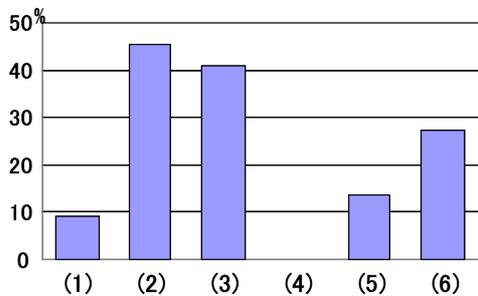
The results for whether or not groups are taking any measures for students are shown in Figure 4. Similarly, the results for measures for research organizations (universities included) and company members are shown in Figure 5. Quite a few technical groups are conducting tutorials and lectures for students and are giving discounts on participation fees. Some technical groups are doing nothing in particular.



(1) none, (2) tutorial session/lectures, (3) educational articles in a journal, (4) student-only session, (5) technical visit, (6) participation fee discount, (7) others

**Fig. 4 Measures for students**

As far as measures for research organization and company members are concerned, many responded that they are holding tutorial sessions and lectures by guest speakers such as famous researchers and experts. In a panel discussion held as a special program in Tokushima, there were opinions that called for more tours of companies and research laboratories as a measure for students.

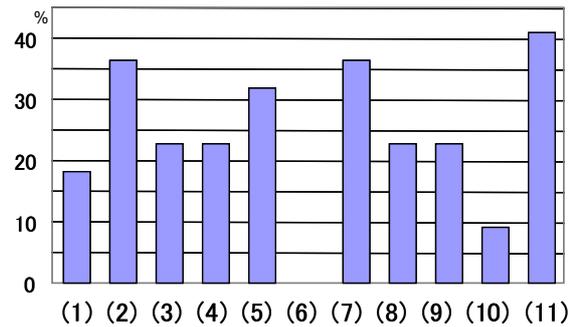


(1) none, (2) tutorial session/lectures, (3) guest speeches by famous researchers, (4) special articles in a journal, (5) event promoting business-academia collaboration, (6) others

**Fig. 5 Measures for research organization (universities included) and company members**

Let's now take up a question regarding measures for non-Japanese speakers. Figure 6 shows responses to a question regarding measures to strengthen the ability of domestic members to make presentations abroad, and expand the number of foreign members and of submissions and participation from abroad. Some respondents said that they are organizing and preparing international conferences and a special edition of English journals for those who submit papers for the conferences. Some said that their technical group accepts English papers and lectures and regularly submits papers to "Global Newsletter".

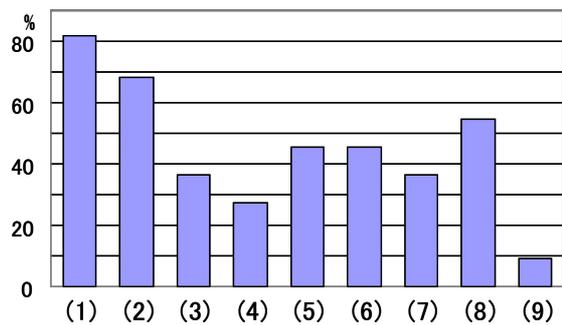
Finally, the results on the technical groups' views of what is expected of them by the participants and their members are shown in Figure 7.



(1) none, (2) workshops/symposia in English, (3) English sessions, (4) holding a conference abroad, (5) planning a special issue in the IEICE English transaction, (6) English articles, (7) interaction with foreign organizations, (8) invitation of foreign researchers, (9) English web pages, (10) distribution of English news letters, (11) others

**Fig. 6 Measures for foreigners**

According to the results, most technical groups do not necessarily consider that their research level is of primary importance. Rather, they recognize their groups as something that provides abundant opportunities for lively discussions. This is an interesting point. Furthermore, in the panel discussion in Tokushima, various ideas were exchanged as to what is and should be the roles of academic society and technical groups.



(1) abundant opportunities for lively discussions, (2) research level, (3) invitation of famous researchers who leads the study field, (4) opportunities to submit research papers, (5) activation of industrial fields, (6) development of young players, (7) obtaining hints for research and industrial solutions, (8) survey on technical trends, (9) others

**Fig. 7 What is expected of them by the participants and their members**

The life of the committee is two years, and half of members change each year. From the new fiscal year, new Chairperson Oie will lead the committee with four existing and five new members. The committee will continue the same measures with some additional items to further improve the activities of technical groups. We hope you will take notice of our efforts toward the goal.

## Technical Committee on Information Networks

Masayuki Murata<sup>†</sup>, Hiroyuki Ohsaki<sup>†</sup> and Shinji Motegi<sup>††</sup>

<sup>†</sup>Osaka University, <sup>††</sup>KDDI R&D Laboratories Inc.

### 1 Introduction

The IN (technical committee on Information Networks) is one of the technical committees of the Communications Society of the IEICE (Institute of Electronics, Information and Communication Engineers). The IN addresses a broad spectrum of issues associated with information networks and provides a forum for researchers and engineers to discuss research and development topics. Since May 2004, Prof. Masayuki Murata at Osaka University has assumed the position of chairman. The vice-chairman is Dr. Hiroshi Saito of NTT Corporation. The secretaries are Dr. Hiroyuki Ohsaki of Osaka University and Mr. Masato Matsuo of NTT Corporation. The assistant secretaries are Dr. Shingo Ata of Osaka City University and Mr. Shinji Motegi of KDDI R&D Laboratories Inc.

### 2 IN Activities

The IN holds one- or two-day technical meetings ten times a year. At the meetings, many domestic researchers participate and report the latest results of their research. The number of reports and participants are the largest of all IEICE technical committees. Some meetings are co-organized with other technical committees. Figure 1 shows the sites and main topics of the meetings. Symbol \* shows the number of reports, and \*\* shows the number of participants. Each report is summarized in a paper consisting of several pages and published as the Technical Report of the IEICE. Authors of selected papers have received Information Networks Research Awards, which are held in March every year. This year, the following three excellent papers were chosen from 203 papers. Figure 2 shows the award recipients and the chairman.



Fig. 2 Award recipients and chairman.

- Kiyohito Yoshihara et al., “Proposal on Server Support Approach to Zero Configuration In-Home Networking.”
- Yuichi Ohsita, Shingo Ata and Masayuki Murata. “Deployable Overlay Network for Defense against Distributed SYN Flood Attacks.”
- Takeru Inoue and Ryosuke Kurebayashi, “On Evaluation of Tunneling Impact on Multicast Efficiency.”

Furthermore, the IN conducts an Asia-Pacific symposium and an annual workshop, which are co-sponsored by the NS (technical committee on Network Systems). The symposium called APSITT (Asia-Pacific Symposium on Information and Telecommunication Technologies) is held once every two years. APSITT2005 will take place from 9 to 11 November 2005 in Yangon, Myanmar. For additional information, please refer to the following site.

<http://www.ieice.org/cs/in/APSITT/2005/>

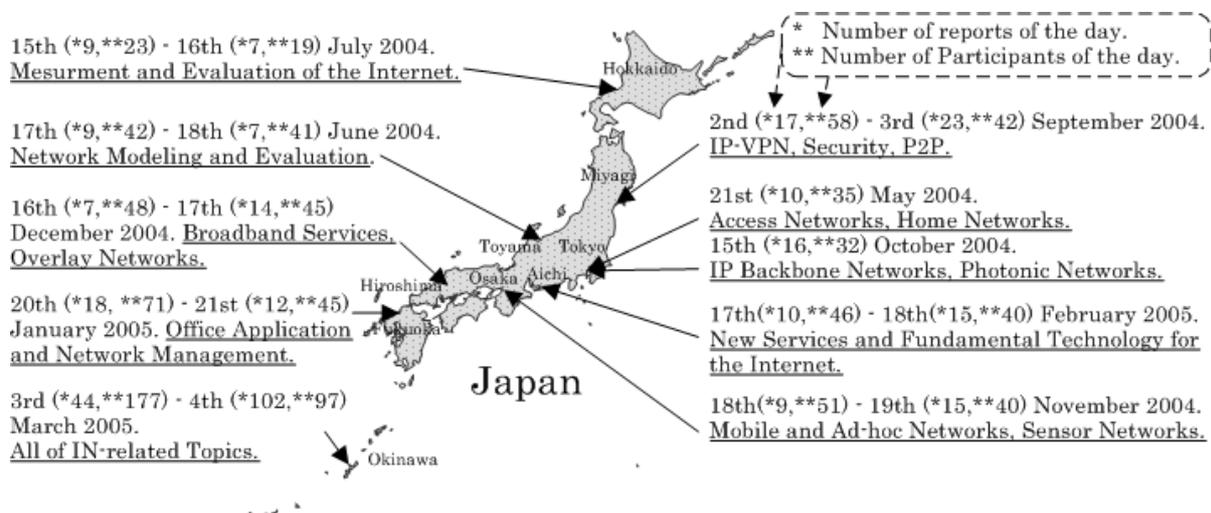


Fig. 1 Sites and main topics of technical meetings.

## Summary report of International Conferences / Workshops sponsored by Communications Society

Kohei Shiomoto, NTT and Satoshi Yoshizawa, Hitachi  
Secretaries of International Relations



### 1. Sponsorship of the Communications Society of IEICE

The Communications Society of the IEICE sponsors international conferences/workshops, which are held in Japan and other countries. The international conference/workshop can be sponsored once the submitted prospectus is approved. Sponsorship is categorized according to the extent of involvement of the Communications Society of the IEICE: (1) sponsored by, (2) co-sponsored by, (3) in participation with/technically (co)sponsored by, and (4) in cooperation with.

Sponsorship by the Communications Society of the IEICE enhances the activity of the international conferences/workshops. Through the brand of the Communications Society of the IEICE, the higher number of paper submissions, high quality of submitted papers, and high number of registrations are expected.

Conversely, through the sponsorship, the Communications Society of the IEICE can promote its international brand value. For example, the Communications Society of the IEICE technically co-sponsored WTC 2004 organized by the executive committee in Korea. Based on the agreement between the Communication Society of the IEICE and the executive committee of WTC 2004, activities for the mutual promotion were conducted. The following activities were conducted between the Communications Society of the IEICE and the executive committee WTC 2004:

- IEICE-CS provided assistance to the WTC 2004 in promoting WTC 2004 by distributing the call for papers and the call for participants at its domestic conferences and meetings and by linking the WTC 2004 website to its website. IEICE-CS also encouraged its members to participate in the technical program of WTC 2004.
- WTC 2004 Executive Committee publicized the name and logo of the IEICE-CS as a technical co-sponsor at the conference publications and website.
- IEICE-CS promoted its activities at the WTC 2004 conference site with brochures and application forms. During the conference, the Communication Society of the IEICE (IEICE-

*Agreement on  
Technical Co-Sponsorship for ICC 2005  
between  
ICC 2005 Executive Committee  
and  
the COMMUNICATIONS SOCIETY (CS) of  
the INSTITUTE OF ELECTRONICS, INFORMATION AND  
COMMUNICATION ENGINEERS (IEICE)*

This Agreement is entered into and made effective as of 29th July 2004, by and between ICC 2005 Executive Committee and the Communications Society of the Institute of Electronics, Information and Communication Engineers (hereinafter referred to as "IEICE-CS").

In consideration of the premises and mutual covenants set forth herein, the parties hereto agree as follows:

**Article 1. Agreement**

- 1.1 ICC2005 Executive Committee and IEICE-CS hereby agree that IEICE-CS will offer technical co-sponsorship to ICC2005 without any financial obligation or involvement.
- 1.2 IEICE-CS shall provide assistance to the ICC2005 in promoting ICC2005 by distributing the call for papers and the call for participants at its domestic conferences and meetings and by linking its website (www.ieice.org) to the ICC2005 website (www.icc05.org). IEICE-CS shall also encourage its members to participate in the technical program of ICC2005.
- 1.3 ICC2005 Executive Committee shall publicize the name and logo of the IEICE-CS as a technical co-sponsor at the conference publications and website.
- 1.4 ICC 2005 Executive Committee shall allow the IEICE-CS to promote its activities at the conference site with brochures and application forms and provide IEICE-CS with the necessary assistance for that purpose during the conference.
- 1.5 IEICE-CS shall further seek and give other proper assistance to ICC2005 Executive Committee and cooperate with ICC2005 Executive Committee for the success of ICC2005.

IN WITNESS WHEREOF, ICC2005 Executive Committee and IEICE-CS have caused this Agreement to be executed by their duly authorized representatives as of the date first above written.  
July 29, 2004

For and on behalf of the ICC 2005 Executive Committee

Aug. 17, 2004 *Y. K. Lee*  
Date Yong Kyung Lee  
ICC 2005 General Chair

For and on behalf of the Communications Society (CS) of the Institute of Electronics, Information and Communication Engineers (IEICE), Tokyo, Japan

August 2, 2004 *Satoshi Yoshizawa*  
Date Satoshi Yoshizawa  
Yoshihiko Akaiwa, President  
Communications Society of IEICE

Fig. 1 Signed contract document between the Communications Society of the IEICE and the executive committee of ICC 2005

CS) booth was set up to introduce its activity and promote overseas membership campaign. Many researchers had an interest in the activity of IEICE. As a result, 27 new members joined the IEICE-CS (about 10 % of conference attendees).

The similar contract was also made between the Communication Society of the IEICE and the executive committee of ICC 2004. (See Fig. 1 for the signed contract document).

### 2. List of the international conferences/workshops sponsored by the Communications Society of the IEICE.

The list of the international conferences/workshops sponsored by the Communications Society of the IEICE during the period 2004-2005 is shown in Table 1.

Three conferences are sponsored, and four Conferences are co-sponsored. Also, twelve conferences are technically co-sponsored by or in participation with the Society.

Nine conferences were/are to be held in Japan, four in Korea and six in other countries: UK, France, Italy, China, Australia, and Myanmar.

Table. 1 List of the international conferences/workshops sponsored by the Communications Society of the IEICE during the period 2004-2005.

No.	Sponsorship	Conference Name	Date	Location
1	Tech. Spnsr.	The First IEEE VTS Asia Pacific Wireless Communications Symposium (APWCS 2004)	2004.01.08 ~01.09	Seoul, Korea
2	Tech. Spnsr.	Seventh International Symposium on Contemporary Photonic Technologies (CPT 2004)	2004.01.14 ~01.15	Tokyo, Japan
3	Tech. Spnsr.	The IEEE/IPSJ Symposium on Applications and the Internet 2004 (SAINT 2004)	2004.01.26 ~01.30	Tokyo, Japan
4	Tech. Spnsr.	International Symposium on Services and Local Access (ISSLS 2004)	2004.03.21 ~03.24	Edinburgh, UK
5	Sponsor	2004 International Symposium on Electromagnetic Compatibility (EMC '04)	2004.06.01 ~06.04	Miyagi, Japan
6	Co-Sponsor	Ninth Optoelectronics and Communications Conference (OECC 2004)	2004.07.12 ~07.16	Kanagawa, Japan
7	Sponsor	2004 International Symposium on Antennas and Propagation (ISAP '04)	2004.08.17 ~08.21	Miyagi, Japan
8	Tech. Spnsr.	19th World Telecommunications Congress (WTC/ISS 2004)	2004.09.12 ~09.15	Seoul, Korea
9	Tech. Spnsr.	9th International Conference on Intelligence in service delivery Networks (ICIN 2004)	2004.10.18 ~10.21	Bordeaux, France
10	Tech. Spnsr.	Eighth International Symposium on Contemporary Photonic Technologies (CPT 2005)	2005.01.12 ~01.14	Tokyo, Japan
11	Tech. Spnsr.	The 2005 Symposium on Applications & the Internet (SAINT 2005)	2005.01.30 ~02.04	Trento, Italy
12	Co-Sponsor	The 7th International Symposium on Autonomous Decentralized Systems (ISADS 2005)	2005.04.04 ~04.08	Chengdu, China
13	Tech. Spnsr.	40th annual IEEE International Conference on Communications (ICC 2005)	2005.05.16 ~05.20	Seoul, Korea
14	Co-Sponsor	International Conference on Quantum Electronics 2005 and the Pacific Rim Conference on Lasers and Electro-Optics 2005 (IQEC/CLEO-PR 2005)	2005.07.11 ~07.15	Tokyo, Japan
15	Co-Sponsor	2005 International Symposium on Antennas and Propagation (ISAP '05)	2005.08.03 ~08.05	Seoul, Korea
16	Tech. Spnsr.	2nd Asia Pacific Wireless Communications Symposium (APWCS)	2005.08.04 ~08.05	Hokkaido, Japan
17	Tech. Spnsr.	The 11th Asia-Pacific Conference on Communications (APCC2005)	2005.10.13 ~10.05	Perth, Australia
18	Sponsor	6th Asia-Pacific Symposium on Information and Telecommunication Technologies (APSITT2005)	2005.11.09 ~11.11	Yangon, Myanmar
19	Tech. Spnsr.	2005 International Workshop on Ultra Wide Band Technologies (IWUWBT2005)	2005.12.08 ~12.10	Kanagawa, Japan

### 3. Statistics of recent international conferences held in Japan sponsored by IEICE-CS

#### ● EMC '04/Sendai

The 2004 International Symposium on Electromagnetic Compatibility (EMC '04) was held at Sendai International Center in Sendai, Japan, June 1 through June 4, 2004. This Symposium, the fifth EMC, was sponsored and organized by IEICE-CS,

and was co-sponsored by Intelligent Cosmos Academic Foundation, Sendai, The Telecommunications Advancement Foundation, International Communications Foundation, and Support Center for Advanced Telecommunications Technology Research. Also, it was held in cooperation with The Institute of Electrical and Electronics Engineers, EMC Society (IEEE/EMC-S),

IEEE Sendai Section, IEEE EMC Society / Japan and Sendai Chapters, International Union of Radio Science (URSI), International Electrotechnical Commission / Technical Committee 77 (IEC/TC77), and International Special Committee on Radio Interference (CISPR). The EMC Symposium started in 1984, and held every five years in Japan.

The Symposium concluded successfully with 488 attendants from 20 countries, and 238 papers including those invited. Also, there were over 120 attendants at the Workshop / Tutorial sessions. A wide range of technologies related to EMC were discussed, while Printed Circuit Board (PCB) and Circuit Design for EMI Control, EMI/EMC Measurement Technology, and Biological Effect and Safety were among the sessions that gathered the highest number of papers.

● ISAP '04

The 2004 International Symposium on Antennas and Propagation (ISAP '04) was held at Sendai International Center in Sendai, Japan, Aug 17 through Aug 21, 2004. This Symposium, the ninth ISAP, was sponsored and organized by IEICE-CS, and was held in cooperation with the International Union of Radio Science (URSI), the Antennas and Propagation Society of the Institute of Electrical and Electronics Engineers (IEEE/AP-S), the Antennas and Propagation Professional Network of the Institute of Electrical Engineers (IEE), the Chinese Institute of Electronics (CIE), and the Korea Electromagnetic Engineering Society (KEES).

The Symposium concluded successfully with 557 attendants from 27 countries, and 347 accepted papers. There were 301 technical presentations, including invited and special presentations, and the latest results in the field of antennas and propagation were discussed. A wide range of technical sessions were held, from classical subjects such as antennas, propagation, electromagnetic wave theory, to recent technologies such as MIMO systems, UWB antennas, adaptive and smart antennas and array antennas.

Also during the symposium, discussion on how future international symposiums in this field should

be operated in the Asia-Pacific region was discussed. Furthermore, to strengthen the relationship between the European and Japanese Antenna research community, a special presentation on European Antenna Centre of Excellence (ACE), and a meeting to exchange opinions were held.

The next ISAP, ISAP 2005, sponsored by KEES, will be held in Seoul, Korea in August, 2005, and will be co-sponsored by IEICE-CS.

● OECC 2004

The Ninth Optoelectronics and Communications Conference (OECC 2004) was held at Yokohama, Japan from July 12 through July 16, 2005. This Conference was cosponsored by IEICE Electronics Society and IEICE-CS, and was technically co-sponsored by The Institute of Electrical and Electronics Engineers, Communications Society (IEEE/COMSOC), IEEE Lasers and Electro-Optics Society (IEEE/LEOS), The Optical Society of America (OSA), and the International Society for Optical Engineering (SPIE).

The Conference concluded successfully with 652 attendants from over 20 countries, and 464 accepted papers. A wide range of discussions was held from Network and Applications, Transmission Systems and Technologies, to Optical Fibers, Active and Passive Devices and Modules.

### Closing remarks

Through the brand value of the Communications Society of the IEICE, sponsorship by the Communications Society of the IEICE enhances is expected to enhance the activity of the international conferences/workshops. Conversely, through the sponsorship, the Communications Society of the IEICE can promote its international brand value.

The Communications Society continues to seek and promote the sponsorship of the international conferences/workshop to provide the value to the Society members of to contribute to the promotion of international activity in the communications research.

## Report on the 21st NS/IN Research Workshop

Shinji Motegi<sup>†</sup>, Hiroyuki Ohsaki<sup>††</sup>, Masayuki Murata<sup>††</sup>,  
 Hideki Kasahara<sup>†††</sup> and Iwao Sasase<sup>††††</sup>  
<sup>†</sup>KDDI R&D Laboratories Inc., <sup>††</sup>Osaka University,  
<sup>†††</sup>NTT Corporation and <sup>††††</sup>Keio University

### 1. Introduction

The 21st NS/IN Research Workshop took place in Okinawa, Japan, March 2-3, 2005. The workshop was sponsored by the technical committee on NS (Network Systems) and IN (Information Networks) of the IEICE Communication Society, and aimed to discuss the technical direction and the research topics of the future networks. A record showing of 160 participants underscored the success of this workshop. The overall theme of the workshop was “The future of broadband – Building a new network society using broadband.” The workshop featured invited talks, and a panel discussion. In this article, we present an overview of the invited talks and the panel discussion.

### 2. Invited talks

The general chair of the workshop, Prof. Iwao Sasase (Keio University), invited six key persons involved in broadband and the future networks. The following six invited speakers addressed new challenges of the future networks from political and industrial perspectives. Figure 1 shows photographs of the invited speakers.

- Mr. Hisazumi Shirae (The Ministry of Internal Affairs and Communications) offered the political perspective with his talk “u-Japan strategy for 2010.”
- Mr. Norio Murakami (Google Inc.) highlighted the information search technology in the Internet with his talk “Vision of Google services in network society.” (Photo at center of upper row in Fig. 1)
- Mr. Takanori Seki (IBM Japan, Ltd.) emphasized the importance of the on-demand computing technology for enterprise systems with his talk “Network computing seen from on-demand.”
- Mr. Takashi Yoshida (NTT Resonant Inc.) presented various communications and their technologies, including a multimedia communication with his talk “Resonant communications.”
- Mr. Okyo Ito (Fujitsu Ltd.) reported on recent development activities of ubiquitous systems using Radio Frequency tags and sensor nodes with his talk “New information society by IT reformation.”
- Mr. Yasunao Misawa (KDDI Corporation) addressed the spreading conditions of mobile broadband infrastructures in Japan, and illustrated the need for Fixed Mobile Convergence with his talk “Progress of broadband and FMC, Ubiquitous-life.”



Fig. 1 Invited speakers.

### 3. Panel discussion

As the chairperson, the general chair organized the panel discussion. The six invited speakers took their seats as panelists. The chairman asked the following three questions to the panelists at the beginning of the discussion: (1) What are the key functions and services expected of future networks? (2) What kind of progress of the future network is not desired? And (3) What is the technology to which you are paying attention and having expectation?

The panelists offered answers to the questions from each viewpoint. As the answer to question (1), the panelists proposed various functions and services; for example, the fusion of telecommunication and broadcast, and flexibility that can deal with the change in society. Then, they addressed why those functions and services would become important in the future. As answers to question (2), the panelists enumerated some networks, such as a high performance network not suitable for needs and a network where worthless information flows. The chairman and the panelists also actively discussed answers to question (3).

### 4. Conclusion

This year’s workshop invited key persons in each field to speak on broadband and the future networks. We believe that the invited talks and the panel discussion provided fruitful hints for research and development activities of the participants. The NS and IN plan to hold next year’s workshop in March 2006. Finally, we would like to express our gratitude to workshop committee members, especially K. Fujiwara (OKI), T. Kawakubo (NEC), H. Ibe (TOSHIBA), J. Maeda (Fujitsu), and K. Kusama (HITACHI) to accomplish this workshop.

## Workshop for Space, Aeronautical and Navigational Electronics 2005 of IEICE (WSANE2005) and Special Presentation of Observation and Communication system of Lunar, Planetary and other Space Explorations (BK-1)

Korehiro Maeda (JAXA)

Chair of the Space, Aeronautical and Navigational Electronics Technical Group



### (1) WSANE2005

Space, Aeronautical and Navigational Electronics (SANE) of IEICE prepared WSANE2005 since 2004 and this was hosted by Korea Aerospace Research Institute (KARI) during March 3-5, 2005 in Daejeon, Korea. This workshop is organized by SANE of IEICE, Japan and sponsored by Japan Aerospace Exploration Agency (JAXA), Korea Aerospace Research Institute (KARI), National Institute of Information and Communications Technology (NICT), and Electronics and Telecommunications Research Institute (ETRI) in cooperation with IEEE AES Society Japan Chapter, IEEE GRSS Japan Chapter and AIAA Japan.

This workshop was successfully held in KARI. Moreover, technical tour of KARI including operation center and KOMPSAT-2 was conducted. We are much impressed by good presentations, good satellite activities, good conference room, good hospitality, good Korean dishes, and good environment. In the field of communication/navigation/ demonstration, small satellite and remote sensing/radar, 37 presentations were conducted as shown in the attached program and more than 80 persons attended. Dr.Eunsup Sim (KARI) is co-chair of this workshop and played important role in this workshop. Dr.Ho-Jin Lee (ETRI) is vice co-chair. In addition to KARI, ETRI, SaTRec (Satellite Technology Research Center) of KAIST, Gist(Gwangju Institute of Science and Technology) participated. However, Chinese delegation did not attend due to VISA problem.

This workshop is only one workshop in the world which covers communication, navigation and observation and their supporting satellite, ground and other technologies. It is expected that new technology and new idea will be produced by exchanging information among various fields. Fusion of various fields will produce higher activities. This workshop was initiated by English Session SB-8 which was held in March, 2004 in Tokyo and the first workshop was held in KARI. Next workshops will be held in China and later in Australia. Through these workshops, we hope that mutual cooperation will be further developed between Korea, China, Australia and Japan in the near future.

Next workshop will be held in Xidian University in

China in April, 2006.

Pictures taken in this workshop are shown in Figures 1 and 2.



Fig.1 Group Photo at Entrance of KARI.  
(Front left end: Dr.Eunsup Sim, KARI)



Fig.2 Group Photo in Reception of Yousung Hotel.

## Program of WSANE2005

### Thursday, 3 March

#### Communication / Navigation / Demonstration (1)

09:00 to 10:40, Thursday, 3 March

Chair: **Korehiro MAEDA (JAXA)**

1. **COMS satellite system**  
Myung-Jin Baek, Seong-Bong Choi (*KARI*)
2. **Development of satellite communication system for Communication, Ocean and Meteorological Satellite**  
Seoung Pal, Lee, Joung Won, Eun, Kyung Soo, Choi, Cheon Sig, Shin, Jae Woo, Park, Young Min, Lee (*ETRI*)
3. **Development of Ka band RF equipment for COMS communication payload**  
Park Jong Heung, Man Seok Uhm, In Bok Yom (*ETRI*)
4. **Development of mobile broadband interactive satellite access system**  
Yun-Jeong Song, Deock-Gil Oh, Ho-Jin Lee (*ETRI*)

#### Break

10:50 to 12:05, Thursday, 3 March

Chair: **Yoshiaki SUZUKI (NiCT)**

5. **Development of broadband satellite multimedia system for broadcasting and communication convergence**  
Dae-Ig Chang, Nae-Soo Kim, Deock Gil Oh (*ETRI*)
6. **Signaling cost of mobile IP in the network of high speed portable internet service using high altitude platform station**  
Tae Chul Hong, Bon-Jun Ku, Do-Seob Ahn (*ETRI*)
7. **KOMPSAT-2 mission control element system**  
Jaehoon Kim, Won Chan Jung, Byoung-sun Lee, Sanguk Lee (*ETRI*)

#### Communication / Navigation / Demonstration (2)

13:05 to 15:10, Thursday, 3 March

Chair: **Eunsup SIM (KARI)**

8. **Application experiment using ETS-VIII**  
Joji Shimura, Hirokazu Fukanoki, Akira Kozaki, Ryouichi Kuramasu (*JAXA*)
9. **Ground validation plan for NeLS**

**inter-satellite optical communication terminal**  
Hiroo Kunimori, Yoshisada Koyama, Hiroshi Watanabe, Shigeru Motoyoshi, Mitsugu Okawa (*NiCT*), Yasuhiko Yasuda (*Waseda Univ.*)

#### 10. High speed bentpipe satellite communication system for WINDS

Yasuo Ogawa, Yukio Hashimoto, Naoko Yoshimura, Ryutaro Suzuki (*NiCT*), Richard T. Gedney, Mike Dollard (*ECC*)

#### 11. Highly-accurate positioning experiment using a Quasi-Zenith Satellite System at ENRI

Ken Ito, Sounosuke Fukushima, Naoki Arai, Takeyasu Sakai (*ENRI*)

#### 12. The ionospheric effect on ambiguity resolution in network RTK

Takaki Tominaga, Yasuto Gomi, Nobuaki Kubo, Akio Yasuda (*TUMSAT*)

#### Break

15:20 to 17:00, Thursday, 3 March

Chair: **Ho-Jin LEE (ETRI)**

#### 13. 3-dimensional GPS receiver system for attitude determination and its optimal processing algorithm

Tadashi Minowa, Yoshiaki Suzuki (*NiCT*)

#### 14. Non-assisted high sensitivity GPS signal processing

Tadashi Oshima, Nobuhiro Suzuki, Atsushi Okamura, Toshiyuki Hirai (*Mitsubishi Electric Corp.*)

#### 15. Perspective of space experiment on ISS/JEM

Susumu Yoshitomi, Shuji Araki (*JAXA*)

#### 16. Observation results of radiation environment using a GTO satellite

Tateo Goka, Haruhisa Matsumoto, Hideki Koshiishi, Yugo Kimoto, Kiyokazu Koga (*JAXA*)

### Friday, 4 March

#### Small satellite (1)

09:00 to 10:40, Friday, 4 March

Chair: **Tomonao HAYASHI (Chiba Inst. of Tech.)**

17. **Attitude monitoring system for STSAT-1**  
HongYoung Park (*KAIST*), SeongWoo Kwak (*Keimyung Univ.*), MyeongRyong Nam, JongTae Lim (*KAIST*)

**18. The STSAT-2 (Science and Technology Satellite-2 of Korea) micro-satellite system**

Eunsup Sim, Jong-Oh Park, Jung-Hoon Keum, Seung-Hun Lee (*KARI*)

**19. Small satellite electrical design interface to the STSAT-2**

Kyungin Kang (*SaTReC, KAIST*)

**20. Development of on-board computers for STSAT-2**

Chang-Wan Ryu, Myeong-Ryong Nam (*KAIST*)

**Small satellite (2)**

10:50 to 12:05, Friday, 4 March

**Chair: Myeong-Ryong NAM (*SaTRec, KAIST*)**

**21. Results of the Micro LabSat project**

Hiroaki Kawara, Hidekazu Hashimoto, Shinichiro Nishida (*JAXA*), Shinichi Kimura (*NiCT*), Shinichi Nakasuka (*Univ. of Tokyo*)

**22. Overview and status of the Micro LabSat-II project**

Shinichiro Takayama, Keisuke Yoshihara, Yosuke Nakamura, Matsuaki Kato, Hidekazu Hashimoto (*JAXA*)

**23. Whale ecology observation satellite (WEOS) system**

Tomonao Hayashi, Yoshiwo Okamoto, Koji Yokoyama, Shigeru Hosokawa, Toshio Koizumi, Eiji Yauchi, Tsuyoshi Sakamoto (*Chiba Inst. of Tech.*), Yoshinari Masumoto (*Professional Eng.*)

**Lunch Break (65 minutes)**

13:10 to 14:00, Friday, 4 March

**24. Tokyo tech small satellite development projects -“Cute 1.7” and “TSUBAME”**

Katsutoshi Imai, Naoki Miyashita, Masafumi Iai, Kuniyuki Omagari, Masashi Asami, Wataru Miyazawa, Hideyuki Yabe, Kei Miyamoto, Takeshi Usuda, Ken Fujiwara, Shinji Masumoto, Saburo Matunaga (*Tokyo Tech*)

**25. SmartSat-1: On orbit experiment plan using mini-satellite**

Shinichi Kimura, Nozomu Nishinaga, Maki Akioka (*NICT*), Naohiko Abe, Kazumi Masuda, Shinobu Nakamura (*MHI*)

**Remote sensing / Radar (1)**

14:00 to 14:50, Friday, 4 March

**Chair: Kazuo OUCHI (*Koch. Univ. Tech.*)**

**26. Earth observation summit and 10 year plan**

Yukio Haruyama (*JAXA*)

**27. Overview of greenhouse gases observing satellite (GOSAT)**

Masahiro Kasuya, Takashi Hamazaki (*JAXA*)

**Break (10 minutes)**

14:50 to 16:40, Friday, 4 March

**28. Data processing systems for ADEOS-II and ALOS in earth observation center of JAXA**

Hirohiko Dosho, Yoshio Ishido, Mitsuhiro Tsuchiya, Shinichi Suzuki (*JAXA*)

**29. Utilities of spaceborne microwave radiometer and its protection**

Korehiro Maeda (*JAXA*)

**30. A new interference multispectral image compression method applied to deep space reconnaissance**

Yunsong Li, Chengke Wu, Hong Yang, Jiang Xiao (*Xidian Univ.*)

**31. Multiresolution analysis-based approaches for image fusion**

Myungjin Choi, Myeong-Ryong Nam (*SaTReC, KAIST*)

**Saturday, 5 March****Remote sensing / Radar (2)**

09:00 to 10:15, Saturday, 5 March

**Chair: Yoshio YAMAGUCHI (*Niigata Univ.*)**

**32. Ka-band 2D Imaging radiometer using sub-T-type interferometric synthetic aperture for earth monitoring**

Yong Hoon Kim, Ho-Jin Lee, Hyuk Park, Jun-Ho Choi, Syung-Hyun Kim (*Gwangju Institute of Science and Technology*)

**33. On the forest biomass and the order parameter of K-distribution in high-resolution airborne polarimetric SAR data**

Kazuo Ouchi, Haipeng Wang (*Kochi Univ. Tech.*), Manabu Watanabe, Masanobu Shimada, Takeo Tadono, Ake Rosenqvist (*JAXA*), Shakil A. Romshoo (*ERI, India*), Masayuki Matsuoka (*RIHN*), Seiho Uratsuka (*NiCT*)

**34. On the cross-correlation of spackle patterns in multilook SAR images of dynamic sea**

**surfaces**

**Kazuo Ouchi**, Haipeng Wang (*Kochi Univ. Tech.*)

**Break**

10:25 to 11:40, Saturday, 5 March

**Chair: Yong Hoon KIM (GIST)**

**35. Four-component scattering model for polarimetric SAR image decomposition based on asymmetric covariance matrix**

**Yoshio Yamaguchi**, Motoi Ishido, Hiroyoshi Yamada (*Niigata Univ.*)

**36. Auto target multiclassification by double negative aggregation of SVM membership**

**Hidetoshi Tanaka** (*Mitsubishi Electric Corp.*)

**37. A high-resolution imaging algorithm based on scattered waveform estimation for UWB pulse radar systems**

**Shouhei Kidera**, Takuya Sakamoto, Toru Sato (*Kyoto Univ.*)

**(2) Special presentations for observation and communication system of lunar and planetary and other space explorations**

In 2005 General conference of IEICE special presentation titled “Success of landing of Huygens on Titan and its results” by Dr. Olivier Witasse (ESA:European Space Agency) was conducted in the morning 11:00-12:00 on March 23, 2005 under chairmanship of Professor Y.Akaiwa (president of CS of IEICE) and more than 70 people attended. In the afternoon 13:00-17:30, results and plan of Japanese science satellites such as BepiColombo (Mercury), Planet-C (Venus), SELENE (moon), MUSES-C (Comet), ASTRO-E2, ASTRO-F were presented and communication data bus (space wire), orbit determination, protection of spectrum were also presented under chairmanship of Prof. H.Tsunemi (Osaka University) and K.Maeda (JAXA).

Concerning Huygens, after a 7-year interplanetary journey onboard the Cassini spacecraft, the Huygens Probe was successfully released on 25 December, 2004. It reached the upper layer of the atmosphere of Titan (reference altitude of 1270 km) on 14 January 2005 at 9:06. UTC. 4 minutes later the main parachute was deployed. Huygens started transmitting the data 1 minute later. After a descent of 2h27, the Probe softly landed on a solid



Fig. 3 Dr. Olivier Witasse (ESA) and Prof. Y.Akaiwa (President of CS of IEICE)



Fig.4 Conference room for BK-1.



Fig.5 Speakers of BK-1.

surface at a speed of about 5 m/s. Cassini received data until 12:50 UTC, when Huygens was still operating. This

presentation outlines the main events that occurred during the descent. The results of all experiments, including the radio-tracking of the signal from Earth-based radio-telescopes were summarized.

Pictures taken in this workshop are shown in Figures 3-5.

On March 22, 2005 we conducted technical tour for Dr. Olivier Witasse of Laboratories of Professor Tadashi Mukai (Kobe University) and Professor Hiroshi Tsunemi (Osaka University).

### Program of BK-1

#### BK—1. Observation and communication system for lunar, planet and other space explorations

Date: March 23, 2005

Place: Toyonaka Campus of Osaka University

Program:

Chairman: Prof. Yoshihiko Akaiwa (President, Communications Society, IEICE, Kyusyu University)

- 11:00-11:05 Opening speech  
Prof. Yoshihiko Akaiwa
- 11:05-12:00 Success of landing of Huygens  
on Titan and its results  
Dr. Olivier Witasse (ESA)

Chairman: Hiroshi Tsunemi (Osaka University)

- 13:00-13:05 Opening remarks
- 13:05-13:30 Spectrum of space exploration and  
its protection  
Korehiro Maeda (JAXA)
- 13:30-13:55 New on board data bus for a space  
spacecraft  
Masaharu Nomachi (Osaka niversity)
- 13:55-14:20 Orbit Determination of Spacecraft  
for Interplanetary Missions  
Takafumi Ohnishi (Fujitsu)
- 14:20-14:45 MUSES-C(HAYABASA) missions  
and its asteroid observation  
system  
Tatsuaki Hashimoto (JAXA)
- 14:45-15:10 Outline of SELENE Mission and  
Communication System  
Hironori Maejima (JAXA)
- 15:10-15:20  
Break  
Chairman : Korehiro Maeda(JAXA)
- 15:20-15:45 Lunar Radar Sounder on-board  
SELENE  
Takayuki Ono(Tohoku University)

- 15:45-16:10 Venus meteorological survey  
system on Planet-C  
Masato Nakamura (JAXA)
- 16:10-16:35 Prospect of the magnetic field and  
magnetosphere of Mercury by  
BepiColombo Mercury  
Magnetospheric Orbiter(MMO)  
Hajime Hayakawa (JAXA)
- 16:35-17:00 Infrared Astronomical Satellite  
ASTRO-F and Observational  
Instruments  
Hiroshi Shibai(Nagoya University)
- 17:00-17:25 ASTRO-E2 satellite and the onboard  
X-ray CCD camera  
Hiroshi Tsunemi (Osaka University)
- 17:25-17:30 Total discussion



## IEICE Overseas Membership Page

The Institute of Electronics, Information and Communication Engineers  
 Membership for Overseas Candidates: IEICE has mainly two grades of membership: **Member** and **Student Member**. Member is mainly for people who are not students. Student Member is mainly for students. **Please be noticed that Overseas Membership applies only to candidates who reside outside of Japan and who have non-Japanese citizenship.** OMDP (Overseas Membership development program) is provided for candidates from countries/areas in Asia(except Republic of Korea and Taiwan), Africa, Central America, and South America. This program is designed so that IEICE can contribute to and support the progress of science and technology throughout the world. Scientists and engineers in these countries/areas are encouraged to apply to the program.

### IEICE Societies and Publications:

Societies	Transactions	Topical areas covered
A. Engineering Sciences	EA:Trans. on Electronics	Engineering Acoustics, Noise and Vibration, Speech and Hearing, Ultrasonics, Digital Signal Processing, Analog Signal Processing, Systems and Control, Nonlinear Problems, Circuit Theory, VLSI Design Technology and CAD, Numerical Analysis and Optimization, Algorithms and Data Structures, Graphs and Networks, Reliability, Maintainability and Safety Analysis, Cryptography and Information Security, Information Theory, Coding Theory, Communication Theory and Signals, Spread Spectrum Technologies and Applications, Mobile Information Network and Personal Communications, Intelligent Transport System, Image, Vision, Computer Graphics, Language, Thought, Knowledge and Intelligence, Human Communications, Neural Networks and Bioengineering, Multimedia Environment Technology, Communication Environment and Ethics, Concurrent Systems, Measurement Technology, General Fundamentals and Boundaries
B. Communications	EB:Trans. on Commun.	Fundamental Theories, Communication Devices / Circuits, Transmission Systems and Transmission Equipment, Optical Fiber, Fiber-Optic Transmission, Wireless Communication Technology, Terrestrial Radio Communications, Satellite and Space Communications, Optical Wireless Communications, Switching, Wireless Communication Switching, Network, Network Management / Operation, Software Platform, Internet, Antenna and Propagation, Electromagnetic Compatibility (EMC), Sensing, Navigation, Guidance and Control Systems, Energy in Electronics Communications, Terminals, Multimedia Systems, Broadcast Systems, Integrated Systems, Media Compound Method
C. Electronics	EC:Trans. on electron.	Electromagnetic Theory, Lasers, Quantum Electronics, Optoelectronics, Microwaves, Millimeter-Waves, Ultrasonic Electronics, Electronic Circuits, Electronic Materials, Organic Molecular Electronics, Electronic Components, Electromechanical Devices and Components, Semiconductor Materials and Devices, Integrated Electronics, Electron Tubes, Vacuum and Beam Technology, Electronic Displays, Superconducting Electronics, Storage Technology, Electronic Instrumentation and Control
D. Information and Systems	ED:Trans. on Inf. & Syst.	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

### Membership Charges (UNIT: YEN):

Membership grades	Entrance Charge	Annual Membership Fee	Additional Society Registration	Additional Transaction Subscription	Journal Subscription
<b>Service coverage for overseas members</b>		Included one Society and its Transaction	Registration of one more Society and its Transaction	Subscription to an additional Transaction of registered Society	(Written in Japanese only)
<b>Member (overseas)</b>	1,400	7,000	3,500(/1 Trans.)	3,000(/1 Trans.)	6,000
<b>Member (overseas) with OMDP*</b>	1,000	5,000	3,000(/1 Trans.)	2,500(/1 Trans.)	5,000
Member (in Japan)	2,600	13,000	3,500(/1 Trans.)	3,000(/1 Trans.)	-
<b>Student Member (overseas)</b>	0	2,000	2,000(/1 Trans.)	1,500(/1 Trans.)	6,000
<b>Student Member (overseas) with OMDP*</b>	0	1,000	1,500(/1 Trans.)	1,000(/1 Trans.)	5,000
Student Member (in Japan)	0	4,500	2,000(/1 Trans.)	1,500(/1 Trans.)	-

\***OMDP** is to support members from countries/areas of Asia(except Republic of Korea and Taiwan), Africa, Central America, & South America.

\***Affiliate Member** is a person who is not a specialist of fields which IEICE subject to and who have an interest to our fields. And when you want to join IEICE as an Affiliate Member, you need recommendation of the society which you want to belong to.

### Notice

1. Annual Membership Fee includes one Society and one Transaction which you choose.

Example : If you want to subscribe to Transaction of EA, please check **Society Registration** as “A”, and your membership fee amounts to 7,000 yen / 5,000 yen.

2. If you want to register other Societies and Transaction, please check “Additional Society registration”.

Example : If you want to subscribe to Transaction of EA, and EB, please check **Society Registration** as “A”, **Additional Society registration (optional)** as “B”, and **Additional Transaction subscription (optional)** as “EB”. Your membership fee amounts to 7,000+3,500 yen / 5,000+3,000 yen.

3. If you want to subscribe to more than one Transaction in the same society which you register, please check “Additional Transaction subscription”.

Example : If you want to subscribe to Transaction of EA and A, please check **Society Registration** as “A”, and **Additional Transaction subscription (optional)** as “A”. Your membership fee amounts to 7,000+3,000 yen / 5,000+2,500 yen.

4. If you want to change membership from “Regular Member” to “Overseas Member”, you don’t need to pay an Entrance Charge.

**Optional Rapid Mailing Service:** Surface mail charge is included in the Annual Membership Fee. Optional rapid mailing service is available by air mail or surface air lifted (SAL) mail. The additional charge per year periodical depends on the mailing address, as shown in the following table.

Zones	Areas	Air mail	SAL mail
1 <sup>st</sup>	Asia; Guam; Midway islands	5,600 yen	3,200 yen
2 <sup>nd</sup>	Oceania; Near & Middle East; North & Central America; Europe	7,800 yen	4,400 yen
3 <sup>rd</sup>	Africa; South America	11,000 yen	5,600 yen

### Further information:

Please contact **IEICE Membership Activities Section;**  
**Kikai-Shinko-Kaikan Bldg., 5-8, Shibakoen 3 chome,**  
**Minato-ku, Tokyo 105-0011 JAPAN**  
 Fax +81 3 3433 6659  
 E-mail: [member@ieice.org](mailto:member@ieice.org)  
 URL: <http://www.ieice.org/>

### IEICE Overseas Membership Application Form

The Institute of Electronics, Information and Communication Engineers

URL <http://www.ieice.org/eng/member/OM-appli.html> E-mail [member@ieice.org](mailto:member@ieice.org)

**◆ Please type or print in English. The deadline for submitting application form is the 1<sup>st</sup> day of every month.**

**Personal Information**

Full name: \_\_\_\_\_ Nationality :  Male  Female  
First name Middle name Last name

Prof.  Dr.  Mr.  Mrs.  Ms.  Miss Place of birth: \_\_\_\_\_ Date of birth: \_\_\_\_\_  
Day Month Year

**Mailing Address**  Home  Office

Name of Company/School/College \_\_\_\_\_ Department/Section \_\_\_\_\_  
Street \_\_\_\_\_ City \_\_\_\_\_ State/Province \_\_\_\_\_  
Postal code \_\_\_\_\_ Country \_\_\_\_\_  
TEL \_\_\_\_\_ FAX \_\_\_\_\_ E-mail \_\_\_\_\_

**Academic Background** The highest academic degree:  Ph.D.  Masters  Bachelors  Others: \_\_\_\_\_

University/college/school of the highest academic degree \_\_\_\_\_ Month & year of graduation \_\_\_\_\_

(For Student Member) Academic degree which will be conferred on you. \_\_\_\_\_ Month & year when the degree will be conferred on you. \_\_\_\_\_

**Application Information** I want to enter the IEICE from  April  October year: \_\_\_\_\_

**Membership:** I want to apply for the following membership (check one item!)

- Member (Overseas)  Student Member (Overseas)
- ◆ If you want to apply for OMDP, please check;  OMDP (Overseas Membership Development Program)

**Society registration (It includes one Transaction in English):**

- A: Engineering Sciences  B: Communications  C: Electronics  D: Information & Systems

Additional Society registration (optional):  A: Engineering Sciences  B: Communications  C: Electronics  D: Information & Systems  
Additional Transaction subscription (optional):  EA: Fundamentals  EB: Communications  EC: Electronics  ED: Information & Systems  
 A (Japanese)  B (Japanese)  C (Japanese)  DI (Japanese)  DII (Japanese)  
Journal subscription (optional)  (Japanese)

**Remittance** Remittance is available only in *Japanese yen* by a *credit card*. (UNIT:YEN)

Entrance charge..... Journal subscription (optional).....  
Annual charge..... Mailing option:  Air mail.....  
Additional Transaction (optional).....  SAL mail.....  
Total remittance.....

Credit Card:  MasterCard  VISA  AmericanExpress Card number: \_\_\_\_\_ Expiry date(Y/M) \_\_\_\_\_

Credit Card Holder: \_\_\_\_\_ Signature: \_\_\_\_\_

**Endorsement** Endorsements by two IEICE Regular Members for Regular/Affiliate Member application and by one Regular Member for Student Member application is required. If it is difficult to find endorsers, please contact the IEICE Membership Activities Section by sending this sheet, and we will help you.

I recommend this applicant for IEICE membership.

Endorser's name Membership number Endorser's signature Date

Endorser's name Membership number Endorser's signature Date

**Send this form to:** The Membership Activities Section,  
IEICE Headquarters Office, Kikai-Shinko-Kaikan Bldg., 5-8, Shibakoen 3 chome, Minato-ku, Tokyo 105-0011  
JAPAN

## From Editor's Room

### ● **IEICE Communications Society Board of Directors will soon change!**

Currently, IEICE Communications Society plan to change its organization of Board of Directors.

At the moment, a new organization will start at this May, just this Global News Letter is published and handed you. Its detail may be appeared on the next volume of Global News Letter.

On this new organization, we “Director, Newsletter Publications” will be intended to change its title and missions. On the new organization, we are merged with the other directors “Director, Technical Activities” and “Director, International Affairs”, and our new title will be “Director, Member Services” (tentatively).

New missions of “Director, Member Services” are mainly member services improvement for IEICE Communications Society members. Examples are as follows.

- Future and new service planning
- Current and past service analysis
- Publicity activities includes Global News Letter
- Electronization
- International exchange
- ...and so on.

And, following this organization change, editors of GNL will discuss how GNL in future. Maybe next GNL also change. Please look forward to the new organization of Board of Directors, and also next GNL, with expectation!

IEICE Global News Letter Editorial Staff

#### Editorial Staffs of this issue

No special order is observed.



**Shinji UEBAYASHI**

NTT DoCoMo

Wireless Laboratories

*Director, Newsletter Publications, IEICE Communications Society*



**Katsunori YAMAOKA**

Tokyo Institute of Technology (Tokyo Tech)

Graduate School of Science and Engineering

*Director, Newsletter Publications, IEICE Communications Society*

# Call for Papers

## Special Section on **Internet Technology VI**



The IEICE (Institute of Electronics, Information and Communication Engineers "Transactions on Communications" announces a fifth coming special section on "Internet Technology VI" to be published in April 2006.

The purpose of this special section is to exchange recent information and to promote research and development on internet technology for further improvement of current internet information and for development of future advanced IP technology. The special section solicits paper submission from all people engaged in this field.

**The topics of interest within the scope of this special section include, but are not limited to be the following areas:**

- Internet technologies and architectures
- Internet architecture
- Routing
- Protocol
- Traffic Control issue
- Mobile IP
- System
- Experiments and applications
- Security CDN (Contents Distribution Network)

**The deadline** of the paper submission is **June 24, 2005**. Manuscripts should be prepared according to the style guidelines indicated in the Information for Authors attached to the IEICE Transactions. The style guidelines are also available at <http://www.ieice.org/eng/shiori/mokuji.html>. The length of a paper should not exceed eight printed pages in principle.

**Online paper submission** (pdf file only): [https://review.ieice.org/regist\\_e.aspx](https://review.ieice.org/regist_e.aspx)

The authors are required to print out the "Confirmation Sheet of manuscript registration" and "Copyright Transfer and Page Charge Agreement" and sent to the following address by post. Authors should choose the [Special-EB] Internet Technology VI as a "Type of Issue/Category of Transactions" on the online screen. Please note that special issue limits the number of papers, so some of the submission papers are deal with regular section.

### Address

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\* Please note that if accepted for publication, all authors, including authors of invited papers, should pay for the page charges covering partial cost of publication. Authors will receive 100 copies of the reprint.

# Call for Papers

## Special Section on the Next Generation Ethernet Technologies

Ethernet has been applied to the LAN field by low cost, and easy installation and operation. However, recently, because IP centric communication has been popularized rapidly, Ethernet has been applied to Wide Area Network as transport networks for such IP communication. For example, optical access networks for FTTH and leased line networks for business users adopt Ethernet technologies. However, Ethernet has some problems which should solve in the case of installation to such wide area networks. These problems include reinforcement of operation and maintenance, network management, and QoS control functions. Some standardized committees and academic societies have started discussion to solve these problems. Therefore, Communications society in IEICE plans the Special Section which investigates current status in detail, discusses the future issues, and proposes these solutions. This Special Section will be published on **March, 2006**.

### Scope

The topics of interest include, but are not limited to, the following areas:

- Network architecture
- Redundant control for high reliability
- QoS control
- TDM emulation
- Performance evaluation
- Operation and Maintenance
- Traffic control
- Optical transmission
- Switching technology
- Standardization and future view

### Submission Instruction

Papers must be submitted by **June 30, 2005**. Manuscripts should be prepared according to the guideline given in the "Information for Authors". The latest version is available at the web site, <http://www.ieice.org/eng/shiori/mokuji.html>, or you can refer to its brief summary attached to IEICE Transactions. The length of the paper should not exceed 8 printed pages in principle. The term for revising the manuscript after acknowledgement of conditional acceptance for this special section could be shorter than that for other issues (60 days) because of the tight review schedule. In this special section, only electronic submission is accepted. Prospective authors are requested to follow the submission process described below carefully.

1. Submit papers using the IEICE web site [http://review.ieice.org/regist\\_e.aspx](http://review.ieice.org/regist_e.aspx). The PDF file format is the only acceptable file format. Any other file formats, e-mail submission, or postal mail are NOT acceptable. Authors should choose "[Special-EB] The Next Generation Ethernet Technologies" in type of Issue (section)/Category of Transactions" on the online screen. Do not choose [Regular-EB] Communications or other special sections.
2. The "Copyright Transfer and Page Charge Agreement" and "Confirmation Sheet of Manuscript Registration" must be sent by postal mail to the following address (secretariat of this issue). Please write "Special Section on the Next Generation Ethernet Technologies" on the envelope.

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