

IEICE Communications Society GLOBAL NEWSLETTER Vol. 14

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New Era for Communications Society

Yasushi WAKAHARA, The University of Tokyo
Vice President, Communications Society



As already announced by President Yukou MOCHIDA of the IEICE-CS (Communications Society) in his inauguration message (<http://www.ieice.org/cs/about/aisatsu.html>), times have steadily changed and we are expected to open a new era, which should be characterized by more autonomous operation of the CS for better services to its members. In order to make this era a success, new concrete advanced services are important for both current members and potential members of the CS.

The total number of the IEICE members is around 36,000 and the CS, which is the largest society in the IEICE, has a little less than 14,000 members at present. However, we have to admit that both of the numbers of the IEICE and CS members are currently decreasing very slowly. In order to cope with this trend and make the CS more attractive to its members, the CS has started and conducted the following new programs this year.

- Reorganization of executive committees for efficient and distributed operation of the CS including competence delegation and rapid decision process.

<http://www.ieice.org/cs/about/org.html>

- Monthly financial management based on the above reorganization results with the cooperation of a lot of volunteers.
- Complete renewal of web pages of the CS for prompt provisioning of useful and beneficial information in both English and Japanese.

<http://www.ieice.org/cs/index.html>

- New awards for extraordinary large contributions to the activities in the CS.
- Setup of a new Task Force team with President-Elect Yuji INOUE of the CS as its chair to study and work out new programs for the progress and

expansion of the CS.

The services provided by the CS at present mainly consist of annual general conferences, annual society conferences, and nearly monthly held technical committee workshops and conferences. Their participants are mainly active researchers in the related research fields. However, in practice, the number of these actively participating researchers out of the total CS members is considered less than half. This implies that the CS may be expected to provide new services oriented toward a lot more members for their satisfaction so that they are willing to stay as members to accept and enjoy the services and also potential members so that they wish to join the CS.

A Task Force team established as described above has started the study on the possible new services for a lot of worldwide members including the analysis of the trends of the CS members and their expectation on the activities and services of our society in addition to the issues related to the harmonious and autonomous operation of the CS. In the study, some of new technologies such as IT and networking which are closely related to the fields of the CS are considered to play important roles. For example, online publishing of various papers in the workshops and conferences with authentication and authorization will become feasible by making full use of these technologies.

From above mentioned viewpoints, we appreciate your understanding, support and contributions to the activities of the CS. Decision on further programs will be made for the new services, where effectiveness, magnitude of expectation, financial aspect, magnitude of necessary volunteer contributions and so on will be taken into account.

Sister Society Agreement between VDE/ITG and IEICE-CS

Satoshi Yoshizawa, Hitachi, Ltd.
Director, Membership Services
Yasushi Wakahara, University of Tokyo
Vice President, Membership Services and Finance



1. Introduction

On September 14, 2005, the Communications Society of the IEICE has made a new Sister Society agreement with VDE/ITG, a German society in the field of information and communications technology. This is the 4th Sister Society agreement for IEICE-CS, following those with the Communications Society of the Institute of Electrical and Electronics Engineers (IEEE ComSoc), the Korean Institute of Communication Sciences (KICS), and the Mongolian Communications Union (MCU).

Through this new agreement, both societies will cooperate towards the progress of the academic fields of mutual interest, and will implement programs to bring various benefits to their members.

2. About VDE/ITG

VDE (*Der Verband der Elektrotechnik, Elektronik und Informationstechnik*), the Association for Electrical, Electronic & Information Technologies, is one of the largest technical and scientific associations in Europe. Founded in 1893, it currently has over 33,000 members.

VDE consists of 5 technical and scientific societies, ITG (*Die Informationstechnische Gesellschaft*), the Information Technology Society, being the oldest society. Founded in 1954, it currently has around 11,000 members. It deals with all aspects of information technology, and its primary aims are to promote the scientific and technical development of information technology and its practical application. Through the conversation between VDE/ITG and IEICE-CS, it was obvious that both societies have a lot in common, and it was soon agreed that constructing a cooperative relationship would be mutually beneficial.

3. Sister Society Agreement

To confirm the cooperative relationship between VDE/ITG and IEICE-CS, an agreement was drawn to be signed by the presidents of both organizations.

The main article of this Sister Society Agreement states that both organizations will promote cooperation in academic fields of mutual interest, and to implement its details for items such as, but not limited to:

1. Membership Service for Members of the other Organization.
2. Privilege of Members of either Organization upon submission of papers to the meetings and conferences sponsored by the other Organization.
3. Privilege of Members of either Organization upon registration to the meetings and conferences sponsored by the other Organization.
4. Privilege of Members of either Organization upon subscription to the publications by the other Organization.
5. Promotion of the other Organization's activities through publications, web sites and mailing lists.
6. Technical co-sponsorship to the meetings and conferences sponsored by the other Organization.

- This Agreement will be valid for 4 years. Using this as an umbrella, details of the member benefits will be worked out over the next few months.



Prof. Joerg Eberspächer & Dr. Yukou Mochida
signing the Sister Society Agreement
(All photos courtesy of *German-Japanese Symposium*)

4. Agreement Ceremony

The Agreement was signed on September 14, 2005, at the Get-Together Party of the 11th German-Japanese Symposium in Tokyo, with the following delegates.

(1) Signers:

- Prof. Joerg Eberspächer, Past President VDE/ITG, Board Member of VDE for Dr. Hans Heinz Zimmer, VP (Deputy CEO) of VDE
- Dr. Yukou Mochida, President of IEICE-CS

(2) Witnesses:

- Prof. Arnold Picot, Steering Committee Chair of G-J Symposium
- Prof. Heinz Thielmann, Former Member of VDE/ITG Board
- Dr. Roland Raschke, President of VDE Rhein-Main Branch, Speaker VDE/ITG-Section Communication Technology
- Prof. Shigeo Tsujii, Former President of IEICE, Steering Committee Chair of G-J Symposium
- Prof. Tomonori Aoyama, VP of IEICE, Former President of IEICE-CS
- Dr. Kazuo Imai, Auditor of IEICE
- Prof. Yasushi Wakahara, VP of IEICE-CS
- Satoshi Yoshizawa, Director for Membership Services of IEICE-CS

With Dr. Raschke and Prof. Aoyama presiding over the ceremony, the event went through with a warm and friendly atmosphere, affirming the future prosperity of the two societies. Prof. Picot and Prof. Tsujii gave congratulatory greetings, followed by a cheerful toast by over 150 people attending the party.



“Kampai!” (a toast) to congratulate the new Agreement

5. In Conclusion

At the Agreement Ceremony, Dr. Mochida, President of IEICE-CS announced that IEICE-CS will technically co-sponsor the World Telecommunications Congress 2006 (WTC2006), organized by VDE/ITG and HTE. Dr. Mochida assured that IEICE-CS will actively take its role to lead this conference, to be held in Budapest, Hungary in spring of 2006, into a great success.

This is only the beginning of a long and promising future in the collaboration between VDE/ITG and IEICE-CS. Please look forward to the announcements of added IEICE-CS Membership benefits implemented based on this Sister Society Agreement.



From left to right: Prof. Heinz Thielmann, Prof. Arnold Picot, Dr. Roland Raschke, Prof. Joerg Eberspächer, Dr. Yukou Mochida, Prof. Shigeo Tsujii, Prof. Tomonori Aoyama, Dr. Kazuo Imai, Prof. Yasushi Wakahara, and Satoshi Yoshizawa

“Technological Trends in Wireless PAN/LAN” A Report on the Tutorial Lecture Session

Tetsuo Tsujioka (Osaka City University)
 Fumio Ishizu (Mitsubishi Electric Corporation)
 Noriyoshi Yamauchi (Waseda University)
 Tomoyoshi Inasaka (Mitsubishi Electric Corporation)
 Hiroshi Matsuya (Toshiba Corporation)
 Yasuyuki Arai (UWB Forum Japan)
 Shoichi Horiguchi (NTT DoCoMo)



Session Organizer:
Tetsuo Tsujioka

1. Introduction

Wireless communication technologies are becoming an indispensable tool for personal area networks (PAN) and local area networks (LAN) systems. The IEICE Communications Society produced a tutorial lecture session entitled “technological trends in wireless PAN/LAN” in the 2005 IEICE Society Conference held at Hokkaido University on September 21 as the society special program. In this article, we report an overview of the tutorial session.

2. Session Program

We had 6 lectures for the tutorial session. They are summarized as follows.

BT-3-1: A Trend of IEEE802.11

Fumio Ishizu (Mitsubishi Electric Corporation) lectured on recent topics of IEEE 802.11 wireless LAN, especially the latest information of IEEE 802.11n technology enabling over 100Mbps/s throughput. Currently, IEEE 802.11a/b/g specification is widely used in available wireless equipments, and extended to IEEE 802.11e and IEEE 802.11n where multiple input multiple output (MIMO), frame aggregation techniques are examined to be implemented. He introduced their

features and outlook in detail.

BT-3-2: Technological Trends in Wireless Sensor Networks Using Low-Power Radio

Noriyoshi Yamauchi (Waseda University) introduced technological trends in sensor networks using “low-power radio” which was established by Japanese radio law. The low-power radio is suitable for sensor networks due to low power consumption and no certification. In recent several years, various wireless



Fig. 1 Participants in the lecture session.



Fumio Ishizu (Mitsubishi Elec. Co.)



Noriyoshi Yamauchi (Waseda Univ.)



Tomoyoshi Inasaka (Mitsubishi Elec. Co.)

Fig. 2 Lecturers of BT-3-1 to BT-3-3.

sensor modules have been developed and provided attractive research areas for various application systems. He explained their technologies and applications. As one of challenging experimental trials, measurement damage/stress of strawberries suffered in transit using low-power radio was presented.

BT-3-3: Wireless Sensor Network System with ZigBee™

Tomoyoshi Inasaka (Mitsubishi Electric Corporation) introduced recent topics on technologies related to ZigBee™ and wireless sensor network systems. Three major topics on sensor nodes, gateway servers and network protocols were presented. He showed several prototype nodes and gateway servers which were implemented on business card box size Linux machines with various sensors. Specifications and architectures including address resolution were discussed. An experimental trial for security equipment for cherries was presented as an application example.

BT-3-4: Technical Trends and Future Views of Bluetooth®

Hiroshi Matsuya (Toshiba Corporation) introduced outline of Bluetooth® wireless technologies widely used on PC and mobile phones. Bluetooth® has been attracted many researcher's attention because of low power consumption, ad hoc connectivity, high compatibility supported by various profiles with SIG certification process. He made a fundamental lecture including recent technologies of adaptive frequency hopping, enhanced data rate (EDR), etc. Attractive applications such as head-sets, car navigation systems were provided. He suggested that one of important subjects was multicast/multi-profile with EDR technologies.

BT-3-5: The Latest Update and Application of UWB

Yasuyuki Arai (UWB Forum Japan) provided important information about UWB, which could achieve high-speed (up to 1.6Gbits/s for uncompressed

HDTV transmission) in short-range (10-20m) communications in stead of low power consumption. The latest information about two major UWB specifications (Multiband OFDM UWB and DS-UWB) was studied. Moreover, because UWB is just only physical interface technology, necessity of collaboration with IEEE 1394TA and Bluetooth® profiles was suggested. He also reported about standardization at the IEEE working groups, especially, trends in regulations in each country and related spectral masks.

BT-3-6: Connectivity with Mobile Phone and Wireless LAN/PAN

Shoichi Horiguchi (NTT DoCoMo) analyzed relationship between a mobile phone and wireless LAN/PAN in three categories of corporate, personal and public communication services. The typical characteristics of mobile phones include enabling connections at all times. Mobile phones can integrate various services of voice, video, download and browsing for the next-generation services, if they have additional wireless LAN/PAN interfaces. Even in such a case, voice communications will be still important for major uses, so guarantee of the quality of voice services via wireless LAN (includes non carrier networks) is one of problems. Supporting various interfaces is also important for high connectivity. As an example, he introduced a coupon service where users could get small presents at supermarkets after he downloaded coupons on their mobile phones via PAN automatically from TV or Internet they watched. He concluded that mobile phones would provide good support of scattered wireless LAN areas, and good portability of personal environment related to PAN equipments.

3. Acknowledgement

This tutorial session had a great success with over 80 participants. The program was planned and supported by IEICE technical committee on communication systems (CS). We would like to appreciate them.



Hiroshi Matsuya (Toshiba Co.)



Yasuyuki Arai (UWB Forum Japan)



Shoichi Horiguchi (NTT DoCoMo)

Fig. 3 Lecturers of BT-3-4 to BT-3-6.

Report on ISAP 2005 in Seoul, KOREA

Takuichi Hirano, Tran Thi Huong, Jung-Aun Lee,
Kaoru Sudo, and Yasuhiro Tsunemitsu
Tokyo Institute of Technology

1. Introduction

The 2005 International Symposium on Antennas and Propagation (ISAP2005) [1] was held at Seoul KyoYuk MunHwa HoeKwan (TEMF hotel) [2] in Seoul, KOREA. Symposium date was on August 3-5, 2005. Conference was sponsored and organized by Korea Electromagnetic Engineering Society (KEES), and cosponsored by Communication Society of the Institute of Electronics, Information and Communication Engineers (IEICE) under the technical co-sponsorship of Antennas and Propagation Society of the Institute of Electrical and Electronics Engineers (IEEE/AP-S). It was also cooperated with Antennas and Propagation Professional Network of the Institution of Electrical Engineers (IEE), Chinese Institute of Electronics (CIE), and International Union of Science (URSI). Korea was the first country where ISAP was held outside Japan.

2. Venue

TEMF hotel is in the southern part of downtown Seoul. It was good recreation area surrounded by woods. In the hotel room, we can see green woods, mountains and skyscrapers (Fig. 1). At the entrance of the hotel, there was the information of ISAP2005 (Fig. 2).



Fig. 1 View from TEMF Hotel



Fig. 2 Information of ISAP2005

3. Conference

413 attendees from 22 countries participated in the symposium.

Coffee Break and Lunch

Coffee, tea and snacks were served in coffee break (Fig. 3). Lunch was served in the buffet-style restaurant (Fig. 4). It was very convenient to concentrate on the conference.



Fig. 3 Coffee Break



Fig. 4 Lunch

Oral and Poster Sessions

320 papers were presented including 2 plenary sessions (Prof. Jean-Charles Bolomey and Prof. Raj Mittra) and 9 special sessions (incl.: MIMO; Recent Advances of DOA Technologies; Metamaterials and Applications; Adaptive Array; Small Antennas; RFID Antennas; Terahertz Wave Technology), along with 37 regular sessions (incl.: EMC/EMI; Waveguide Structures; Microstrip Antennas; Mobile and Indoor Propagation; Time Domain Techniques; Active and Integrated Antennas; Reflector and Lens Antennas; Adaptive Array; Antenna Measurements; Handset Antennas; Multi-Band and Wideband Antennas; Computational Electromagnetics; Propagation and Remote Sensing; Theoretical and Analytical Methods;

Periodic and Band-Gap Structures; Biological and Medical Applications; Adaptive Array; Array Antennas; UWB Antennas; Small Antennas; Inverse Problems; Scattering and Diffraction; Antenna-Related Topics; Millimeter Wave Technology; Slot Antennas; Earth-Space and Terrestrial Propagation; System-Related Topics). Figure 5 and 6 show photographs of oral and poster sessions, respectively.



Fig. 5 Oral Session



Fig. 6 Poster Session

Exhibition

11 companies joined the exhibition (Fig. 7).



Fig. 7 Exhibition

Banquet

Banquet was held in a room of TEMF hotel. Wines and delicious dishes are served. Participants enjoyed talking as well as dinner. Three persons were awarded

ISAP2005 Paper Award (Fig. 8). There was also nice Korean musical performance in banquet (Fig. 9).

Word from Prize Winner

(Mrs. Tran Thi Huong, middle in Fig. 8)

ISAP2005 is the first international conference I have participated. It was great honor for me to receive the ISAP Paper Award. I was very happy not only because of the Award but also because I have a chance to listen to interesting presentations and make friend with another student were there. I would like to thank my Advisor professor and all the members of our lab for helping me a lot in my research.



Fig. 8 Paper Award



Fig. 9 Musical Performance in Banquet

Closing Ceremony

There was an announcement of the next ISAP2006 in Singapore. ISAP will be exciting!

4. Reference

- (1) <http://www.isap05.org/>
- (2) <http://www.temf.co.kr/>

5. Appendix

We could enjoy Korean culture as well as foods (Korean BBQ, Kimchi, and so on). It was very good chance for me to study the history between Japan and Korea.

The 2nd IEEE VTS Asia Pacific Wireless Communications Symposium (APWCS 2005) Report

Takeshi HATTORI, and Shoichi NARAHASHI
 General Chair Secretary
 (Sophia University) (NTT DoCoMo, Inc.)

IEEE VTS Japan Chapter and Seoul Chapter jointly organized a two-day symposium, the 2nd IEEE VTS Asia Pacific Wireless Communications Symposium (APWCS 2005) on August 4-5, 2005 at Hokkaido University, Sapporo Japan, with technical co-sponsorship by IEICE Communications Society, Science Council of Japan and Yokosuka Research Park (YRP). More than ninety participants were actively involved in fifty-eight presentations including two key note speeches given by the leading researchers from Japan and Korea. The symposium was successfully closed with the promise of APWCS 2006 in Korea.

With the wonderful memories of IEEE VTC Conferences held both in Japan 2000, and Korea 2003, members of IEEE VTS Japan and Korea Chapters have decided to have a symposium to discuss technical issues in wireless communications. The first symposium, APWCS 2004, was held in Seoul, Korea.

The symposium started with the opening address from Prof. Takeshi Hattori of Sophia University, the general chair, the contribution summary from Prof. Fumiuyuki Adachi of Tohoku University, the Technical Program Committee Chair, and the venue guidance from Prof. Yasutaka Ogawa of Hokkaido University, the Local Arrangement Chair on August 4, 2005.

The keynote speech entitled “Super 3G Concept as 3G Long-term Evolution” was presented by Dr. Seizo Onoe (NTT DoCoMo, Inc., Japan). Dr. Onoe stated the current status of the 3G (third generation) services, views on the migration scenario from 3G to 4G (fourth generation), and the outcome of research on radio access technologies for realizing the target of the 4G.

Another keynote speech entitled “Mobile Communications in Korea” was presented by Prof. Yongwan Park (Yeungnam University, Korea). Prof. Park introduced the general information about “IT 839”, the new strategies for IT (Information Technology) acceleration announced by Korean Government. Prof. Park also stated the current issues of mobile communication and the key technologies for beyond 3G including the WiBro (Wireless Broadband) and 4G.

Fifty-six papers were presented in parallel 16 sessions. Most of the papers were related to the physical layer technology such as OFDM, MIMO and diversity techniques. However, there were also many presentations with topics related to mobile networks like multi-hop network, etc. These presentations were essential technical elements for the next generation



Fig. 1 APWCS2005 sign



Fig. 2 Dr. S. Onoe (Upper) and Dr. Y. Park (Lower) in their keynote speeches

mobile communication systems. Many researchers gathered and had in-depth discussions, in a friendly atmosphere, about the state-of-the-art wireless technologies. All the manuscripts were compiled as a proceeding of the 2nd IEEE VTS APWCS 2005.

<Acknowledgment>

This symposium was supported by International Communications Foundation (ICF) grant, Support Center for Advanced Telecommunications Technology Research (SCAT) grant and YRP grant, respectively.

Interoperability Demonstration of 10GbE-LANPHY over OTN technologies

- A recent activity of Interoperability Working Group of Kei-han-na Info-Communication open laboratory -

Secretariat of Interoperability Working Group,
Kei-han-na Info-Communication open laboratory
contact@enni.jp

1. Introduction

NICT, NTT, KDDI R&D Laboratories, NEC, Fujitsu, Fujitsu Laboratories, Hitachi Communication Technologies, Mitsubishi Electric, and Anritsu, have successfully demonstrated the multi-vendor interoperability of 10GbE-LANPHY over OTN equipments. This demonstration aims to establish the next generation carrier-to-carrier physical interface technology which is one of targets of the joint research project: “Interoperability Working Group (thereinafter IWG, Chair; Professor Naoaki Yamanaka, Keio University)”. IWG is collaborated of industry, academia and government. In this demonstration, Cisco systems KK has also participated by the open call of the interoperability test participant. This is a unique feature of the “Open Laboratory” which realizes a neutral interoperability test environment for the industrial world.

2. Background

IWG proceeds the interoperability test of Optical Transport Network (OTN: ITU-T Recommendation G.872) optical interfaces to establish the interface technology between two OTNs. OTN, which is using the wavelength division multiplexing (WDM), is more suitable to accommodate broadband IP/Ethernet services than PSTN/ISDN services. Therefore, the OTN optical interface which accommodates 10 Gigabit Ethernet (10GbE) should be developed. The OTN optical interface which accommodates legacy synchronous digital communication system namely SDH/SONET designed for voice signal transmission was already standardized in 2001 and was already in practical use. 10GbE-WANPHY which uses the same frame format of SDH/SONET is also supported by this interface. However, in the recent 10GbE market, 10GbE-LANPHY is a dominant interface for the user equipment. Therefore, service requirements of 10GbE-LANPHY over OTN will blow up soon. But OTN optical interface regarding the 10GbE-LANPHY is not standardized yet. The standardization of the 10GbE-

LANPHY OTN optical interface becomes urgent assignment in this field.

3. Interoperability Test

IWG, attract international attention with its activity, to take the lead of verifying the interface which transmit transparently above OTN without any processing to 10GbE-LANPHY signal, and to propose its standardization at ITU-T since September 2004. In this demonstration, transparent transmission of the 10GbE-LANPHY signal over OTN optical interface has successfully demonstrated by Japanese carriers and worldwide vendors. The evaluation of the basic performance will accelerate the international standardization activities being triggered by Japan. (Ref.figure.1). 100% throughput of the 10GbE-LANPHY signal was confirmed and signal latency of less than 10 micro seconds was guaranteed for its simplicity of OTN processing. This transparent transmission feature enhances customer’s satisfaction. Basic alarm signal transmission to detect and specify the network failure point between two different carries were also examined and confirmed the interoperability.

4. Goal

We demonstrated the applicability of the proposed OTN interface as the physical interface between carriers. IWG will expect both the early establishment of the concrete interoperability between carriers, as implemented complete alarm signal sets at 10GbE-LANPHY over OTN equipments, and of the international standardization from this Japanese technology in the future.

5. Reference

[1] <http://www.khn-openlab.jp/bunkakai-gw/kokinonet/sousetsu/>

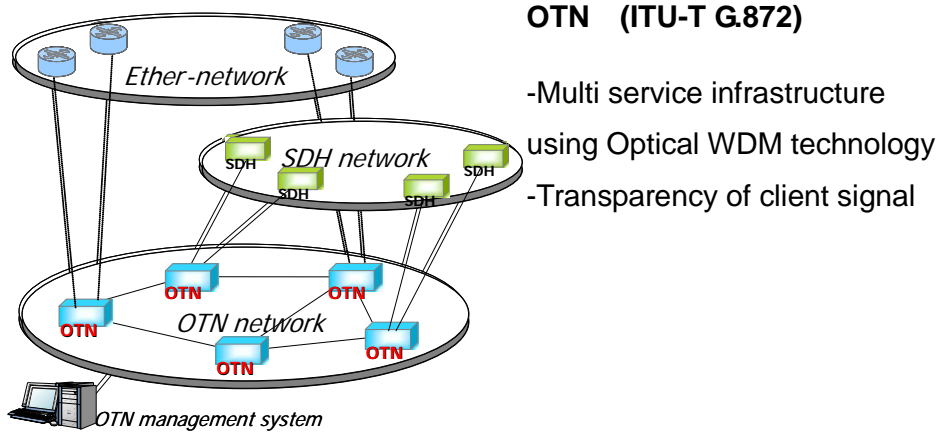
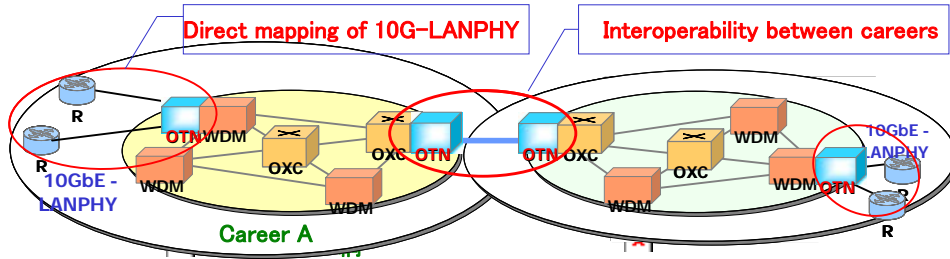


Fig. 1 Optical Transport Network (OTN)



Trend of that LAN interface can connect directly to WAN



Big advantage to carry 10GbE-LANPHY by OTN

Figure.2 Interface points of 10GbE-LANPHY over OTN

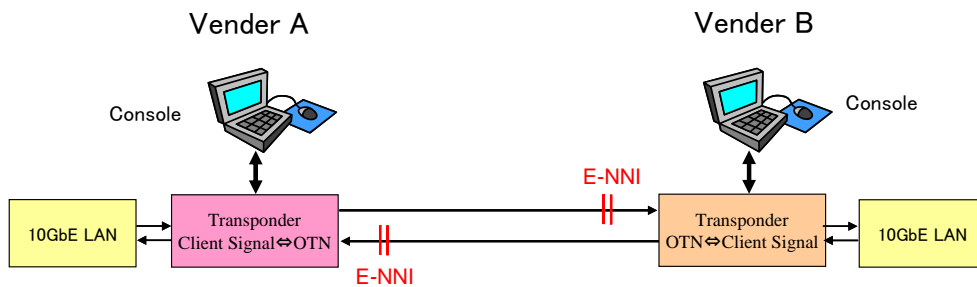


Figure.3 Test Network



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 Fundamentals
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
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
Service coverage for overseas members	—	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)
Member (overseas)	1,400	7,000	3,500(/1 Trans.)	3,000(/1 Trans.)	6,000
Member (overseas) with OMDP*	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.)	-
Student Member (overseas)	0	2,000	2,000(/1 Trans.)	1,500(/1 Trans.)	6,000
Student Member (overseas) with OMDP*	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 st	Asia; Guam; Midway islands	5,600 yen	3,200 yen
2 nd	Oceania; Near & Middle East; North & Central America; Europe	7,800 yen	4,400 yen
3 rd	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
 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

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

Personal Information

Male

Female

Full name: _____ Nationality : _____
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-CS Autumn Activities

In September, the IEICE conference took place at Hokkaido University. Because Hokkaido is in the northern part of Japan, it was fairly cool because of their early autumn. Most attendees found that they needed long-sleeved shirts.

The signs of autumn are now becoming visible all over Japan, and there are even reports of snow on Mt. Fuji, although when I saw it from the Shinkansen there was only a little snow on the top.

Anyway, the directors for membership services of IEICE-CS are looking into a new service of Communication Society. More information on this plan will be available in the near future.

IEICE Global News Letter Editorial Staff

Editorial Staffs of this issue

No special order is observed.



Yoshiyuki FUJINO

National Institute of Information and Communications Technology
Kashima Space Research Center

Director, Membership services, IEICE Communications Society



Shinji UEBAYASHI

NTT DoCoMo
Wireless Laboratories

Director, Membership services, IEICE Communications Society



Satoshi YOSHIZAWA

Hitachi
Central Research Laboratory

Director, Membership services, IEICE Communications Society



Katsunori YAMAOKA

Tokyo Institute of Technology
Global Scientific Information and Computing Center

Director, Membership services, IEICE Communications Society

Call for Papers

Special Issue on Software Defined Radio Technology and Its Applications

The Institute of Electronics, Information and Communication Engineering (IEICE) Transactions on Communications is pleased to announce that it will publish a special issue entitled "Special Issue on Software Defined Radio Technology and Its Applications" in **December 2006**. The software defined radio is based on a common platform and its performance can be reconfigured by modifying the software. Progress respecting digital signal-processing devices such as FPGAs, DSPs, and A/D & D/A converters has spurred development of software defined radio technology to the point where it is poised to be widely adopted for radio wave monitoring, broadcasting, mobile communications, ITS, etc. With a view to promoting further progress of R&D in this field, the special issue will present the latest work on software defined radio technology and its applications.

1. Scope

The topics of interest include the following areas, but are not limited as long as related to software defined radio technology:

- Software defined radio, prototypes, experimental models
- Hardware platform for software defined radio
- Software defined radio architectures and application program interfaces
- Software, operating systems and description languages for software defined radio
- Security for software defined radio
- SDR technology for realization of ubiquitous system and service
- Cognitive radio and dynamic spectrum technique
- Roaming technologies among different networks
- Software download technology
- Implementation of radio signal processing technologies on reconfigurable devices
- Broadband or multi-band antennas
- Broadband, multi-band, adaptive analog circuits and devices
- High speed, broadband, adaptive analog to digital and digital to analog converters
- Reconfigurable signal processing devices
- RF direct sampling, band pass sampling technology
- Adaptive signal processing systems for software defined radio
- Surveys related to software defined radio technology and its applications.

2. Submission Instructions

Papers must be submitted by **March 24, 2006**. Manuscript should be prepared according to the guideline given in the "Information for Authors". The latest version of it is available at the web site, <http://www.ieice.org/eng/shiori/mokuji.html>, or you can refer 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 issue could be shorter than that for other issues (60 days) because of the tight review schedule. In this special issue, only the electric submission is adopted. Prospective authors are requested to follow carefully the submission process described below.

[IMPORTANT NOTICE] At least one of the authors must be an IEICE member when the manuscript is submitted for review. Invited papers are an exception.

1. Submit papers using the IEICE Web site https://review.ieice.org/regist_e.aspx. The acceptable format of the file is PDF file. Other any files, e-mail submission, and postal mail are NOT acceptable. Authors should choose the [Special-EB] Software Defined Radio Technology and Its Applications as a "Type of Issue/Category of Transactions" on the online screen. Do not choose [Regular-EB] Communications or other special sections.
2. "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 mark "Special Issue on Software Defined Radio Technology and Its Applications" on the envelope.

Kei Sakaguchi

Dept. of Electrical and Electronic Engineering
Tokyo Institute of Technology
2-12-1 O-okayama, Meguro-ku, Tokyo 152-8552, Japan
Tel: +81-3-5734-3910, FAX:+81-3-5734-3594
E-mail: kei@mobile.ee.titech.ac.jp

3. Special Issue Editorial Committee

Editor-in-Chief: Hiroshi Harada (NICT)
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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 Mobile Multimedia Communications

The IEICE (Institute of Electronics, Information and Communication Engineers) Transactions on Communications announces a forthcoming special section on Mobile Multimedia Communications to be published in **October 2006**.

With the migration to high speed systems beyond 3G and last one mile mobility by the introduction of WIMAX, high end mobile multimedia services like mobile Internet, mobile high definition TV etc. are expected to be in service. In order to support such high volume mobile multimedia services, high-end technologies in mobile terminal design, network and application services are necessary. In pursuing these, Mobile Multimedia Communication (MoMuC) working group of the IEICE has been concentrating on mobile technologies and applications in collaboration with other work groups as ITS and CQ. In this year, we will also focus on the convergence or fusion of different technologies like broadcasting, home-networking and so forth.

The purpose of this special section is to accelerate research activities on advanced mobile multimedia communication.

1. Scope

Suggested topics include but are not limited to the following:

- Mobile terminal technologies
Mobile Multimedia Terminal
- Mobile network technologies
All IP Mobile Network, Ubiquitous Network, IP Mobility, Mobile Video Communication, Mobile Multicast/Broadcast Network, Home Networking, Mobile QoS, Moving Network, Mobile Security, Sensor Network, Ad hoc Network
- Mobile application and service level technologies
Context-aware Service, Multimedia Location-based Service, Mobile Contents, Contents Security on Mobile, Mobile Multimedia Application, Broadcast and Mobile, ITS

Note: *multimedia* aspects shall be addressed in the papers, which is our consideration of decision of adoption. *Radio/Wireless technologies are out of our scope, although Radio/Wireless technologies of multimedia aspects are welcomed.*

2. Submission Instructions

The deadline for submission is December 20, 2005. Manuscript should be prepared according to the guideline given in the "Information for Authors". The latest version of it is available at the web site, <http://www.ieice.org/eng/shiori/mokuji.html>, or you can refer 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 the electric submission is adopted. Prospective authors are requested to follow carefully the submission process described below.

1. Submit papers using the IEICE Web site https://review.ieice.org/regist_e.aspx. The acceptable format of the file is PDF file. Other any files, e-mail submission, and postal mail are NOT acceptable. Authors should choose the [Special-EB] Mobile Multimedia Communications as a "Type of Issue/Category of Transactions" on the online screen. Do not choose [Regular-EB] Communications or other special sections.
2. "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 mark "Special section on Mobile Multimedia Communication" on the envelope.
3. Please note that editorial committee will strictly keep the deadline for paper submission. In case if you are not sure whether your paper submission by uploading via Web could succeed or not, please confirm it by contacting a secretariat.

Toshihiro Suzuki
NTT DoCoMo R&D Center
3-5 Hikari-no-oka, Yokosuka, 239-8536, Japan
Phone: +81-46-840-3332, FAX: +81-46-840-3781, E-mail: toshi@netlab.nttdocomo.co.jp

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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.*

[IMPORTANT NOTICE] From July 1, 2005, at least one of the authors must be an IEICE member when the manuscript is submitted for review. Invited papers are an exception.

We recommend that authors unaffiliated with IEICE apply for membership.

Manuscripts Contribution from the internet

The IEICE Editorial Board

In order to shorten the period of the review process, and improve our authors' convenience, we have received "Electronic Submissions" since 1st August, 2002.

Please refer to the following URL for the guideline of "How to contribute your manuscript electronically."

The steps for Electronic Submission is rather simple and straightforward! To begin with visiting following Web-Site, and complete the "Manuscript Registration Form," and then, select and upload your manuscript data.

Please note that ONLY PDF file is available.

Submissions to The IEICE Transactions
http://review.ieice.org/regist_e.wbt

This all-new Electronic Submission service is effective for contributions to Regular Issue/Section, in principle. In case that you will submit a manuscript to the IEICE Special Issue/Section, please refer the Call for Papers carefully or ask directly to the Editorial Committee of each Special Issue/Section.

We, the IEICE are looking forward
to receiving your active contributions
with this Web-upload process!!

*Important Notice of Changes in
Author Manuscript Submission Qualifications*

The IEICE Editorial Board

The manuscripts from authors failing to satisfy the required submission qualifications are not accepted from July 1, 2005.

“At least one of the authors must be an IEICE member when the manuscript is submitted for review. Invited papers are an exception. We recommend that authors unaffiliated with IEICE apply for membership.”

<http://www.ieice.org/eng/shiori/mokuji.html>

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*Important Notice of Changes in
Overseas Membership Development Program(OMDP)*

The IEICE Editorial Board

From April 2005, applications to the IEICE Overseas Membership Development Program(OMDP) from members resident in Republic of Korea and Taiwan are no longer accepted.

(The discount on page charges by OMDP is not provided to author(s) whose manuscript is submitted after April 1, 2005(JST).)

<http://www.ieice.org/eng/member/OM-appli.html>



**Workshop for Space,
Aeronautical and Navigational Electronics
WSANE 2006**

Updated on Sep. 2, 2005

*This page is optimized for Internet Explorer.

**Venue: Conference room at Xidian University,
Xi' an, China**

Date: April 9-12, 2006

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What's new

First *Call for Paper* was uploaded on Sep. 4, 2005.

Home page was opened on Sep. 2, 2005.

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[E-mail : sane_ac-chair@mail.ieice.org](mailto:sane_ac-chair@mail.ieice.org)