

IEICE Global Plaza no.7

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

Essay

Invigorating Information and Systems Society

- useful for your academic activities -



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and Systems Society

The IEICE Information and Systems Society is an expert group which focuses their academic activities on the broad field covering from fundamental theories to application technologies concerned with information systems integrating core factors of computer, telecommunications and human being. Nowadays, the information systems remarkably come into our daily lives as **effectively** as neural networks in a human body and support human activities through social infrastructures based on it. In comparison with the other social infrastructures like electric power or water supply, the information systems sound specific in the sense that the technical innovation promptly evolves and each of users directly faces or touches new technologies.

As shown in Fig.1, the important role of the Society expected as a center of excellence, is exactly to provide services supporting academic activities of the expert group with Society membership, furthermore, to build up a social environment where the special field would be sustainably developed through public relations activities to make the importance and attractive attributes of the Society understood widely by general people or students.

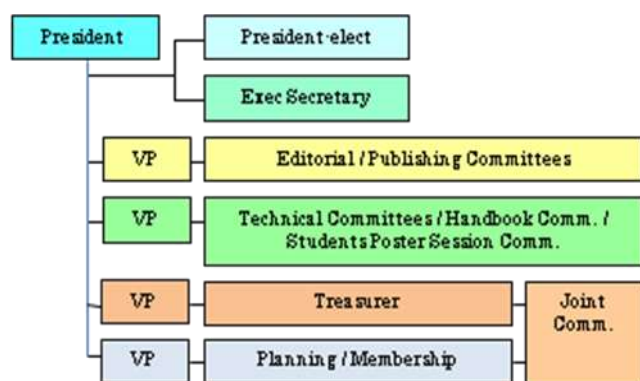


Fig.1 Organization of IEICE Information and Systems Society

The environments around the Society have been promptly changing year by year. The revenue through transaction publication was much improved with electronic media so that we will be relieved of the conventional deficit troubles. All the IEICE's businesses covering the transaction publication, Technical Committee activities and conferences are managed to

be financially sound at the moment. Therefore, it will be easier for us from the financial viewpoint to try new systems, events and internationalization activities based on our scheme of transactions, Technical Committees and conferences including FIT (Forum on Information Technology) co-organized with Information Processing Society of Japan.

Thus, our Society will lead the following academic activities:

(1) Further activation of Technical Committee activities

Our Society activities are based on monthly research forums organized by Technical Committees where members of different organizations, both experienced and younger members will gather, discuss R&D and build up human networks overcoming barriers between organizations or difference between generations. This is the academic system made in Japan combining the Institute and members through grass-roots based autonomous activities as inexperienced by any other institutions like IEEE. We will establish a new business model of electronic Technical Reports and put it forward to globalize the research forums by Technical Committees.

(2) Further quality enhancement of English transactions

Publications provide forums to propose members' own research outcomes and debate upon them in our Society. We will enhance the quality through load reduction and deployment of incentives to volunteer members for edition or paper review.

(3) Development of public relations for younger researchers and students

We will exhaustively support plans to provide forums where younger members come forward to join and play innovative exchanges, and plans of public relations and enlightening activities for general citizens and students.

(4) Promotion of forums where innovations will be created

It is important to overcome conventional schemes in order to explore evolving technologies and create innovations. We will fully support members to organize symposiums or conferences as forums which will lead novel schemes.

(5) Efficient shift to a self-supporting accounting Society

We will promote the efficient financial shift to the new Society commencing this fiscal year and well manage free decisions of the Society based on the self-supporting accounting system.

Most functions of IEICE are based on volunteer activities of the members. The above mentioned 'forum's cannot be provided without active proposals by quite many volunteer members participating in a kind of forum for the institutional management. Therefore, volunteer activities of overseas members are much expected in globalizing IEICE including our Society as well.

Even if the worldwide economic recession might cause the reduction of the revenue due to the probable decrease of cumulative membership fee or business income in the near future, we should not shrink away with folded arms. Fortunately, we somewhat reserve the financial balance. Thus, it is time for us to go ahead toward the invigorating IEICE Information and Systems Society now.

Hot Topics

New-Generation Network toward the Future Ideal Networks - Fundamental Scheme of Realization -



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The National Institute of Information and Communications Technology (NICT) is promoting the research and development of new-generation networks that will form the ICT infrastructure over the coming decades. The new-generation network (NWGN) is more far-reaching concept than the current next-generation network (NGN) in which it aims to completely resolve difficult technical issues and limitations not by simply reforming the internet within the constraints of existing technology, but by redesigning it from scratch.

NWGN should contribute not only to solving the problems of the modern society, but also to the further development of global culture in the 21st century. To achieve this goal, we need a bold and well-targeted R&D strategy. We first settled a vision of how to go about realizing the future society and what sort of role new-generation networks should play in this society. This vision represents the first step to realize the R&D strategy for NWGN.

The Strategic Headquarters for NWGN R&D (Strategy HQ) was established in NICT on October 1, 2007, to strategically promote the research and development of new-generation networks. Its mission is to draw up a medium-term strategy to take the initiative in R&D of NWGN in a climate of international collaboration and competition. The Strategy HQ has set up a Strategy Working Group (Strategy WG) to conduct focused studies. At the Strategy WG, we are devising the strategy by identifying the requirements of NWGN capable of addressing the emerging issues of modern society and realizing the sort of society which we hope to see in the future. These requirements are then broken down into the technologies where further research and development are required.

Towards a delightful future society, NWGN should strongly contribute to minimizing social negatives and maximizing human and social potential. Furthermore, NWGN should be reliable, dependable, trustable, cost-efficient, low-energy consuming, etc. as a lifeline infrastructure. For achieving this new infrastructure in a sustainable manner, we will promote a strategic R&D plan to solicit research activities in Japan, collaborate with the international community and contribute to it through reactivation of the considerable growth in relevant industries.

We suggest that we should tackle the following R&D challenges and create and validate many ideas.

- (1) Value-Creation Challenge: Find out novel mechanisms to evolve service capabilities and their values for customers.
- (2) Complexity Challenge: Find out novel principles to deal with the complexity, scale, technology and service diversity, etc..
- (3) Autonomicity Challenge: Find out novel principles to predict and optimize networked systems behavior.
- (4) Heterogeneity Challenge: Find out novel mechanisms to provide simple and transparent glues which hiding network heterogeneity.
- (5) Energy Challenge: Find out novel principles and/or mechanisms to dramatically reduce end-to-end power consumption in an era of traffic explosion.

For more information, please visit our homepage at:

<http://nwgn.nict.go.jp/report/NWGN-Vision-NICT-Pamphlet2008-EN.pdf>

TJMW 2009 will be held in Bangkok, Thailand on August 20-21 TJMW Steering Committee & IEICE Electronics Society

The Thailand-Japan MicroWave 2009 (TJMW 2009) will be held with the sponsorship of our Society at King Mongkut's University of Technology North Bangkok, in Thailand, on coming August 20-21. The objective of the workshop is to provide a forum for exchange of the latest results and discussions related to microwave theory and techniques. Papers in all aspects of microwave theory and its applications are invited. For more information, please visit our homepage at :

http://www.ieice.or.jp/es/mw/TJMW2009_CFP_en.html .

Let's join 2009 IEICE Society Conference at Niigata University on September 15-18

The 2009 IEICE Society Conference will be held at Niigata University on 15-18 in coming September. Please follow:

- (1) Application for Paper Presentation: closed
- (2) Registration for Participation

Overseas members can retrieve the Credit Card Form from http://www.gakkai-web.net/gakkai/ieice/kaikoku_e/cardform.html and send it to +81.3.3433.6659 by fax.

NOLTA 2009 will be held in Sapporo, Japan, on October 18-21 Subsociety of Nonlinear Theory and its Applications, IEICE Engineering Sciences Society

The 2009 International Symposium on Nonlinear Theory and its Applications (NOLTA 2009) is going to be held at Gateaux Kingdom Sapporo Hotel & Spa Resort, Sapporo, Japan, on October 18-21. The objective of the symposium is to provide a forum for exchange of the latest results related to nonlinear theory and its applications. Papers describing original results in all aspects of nonlinear theory and its applications are invited. Interested topics cover all relevant fields with:

Chaos and Bifurcation / Chaotic Neural Networks / Circuits and Systems Oscillation / Cellular Neural Networks / Self-Validating Numerics Synchronization / Learning and Memory / Modeling and Simulation Coupled Oscillators / Prediction and Identification / Large-Scale Networks Communication / Image and Signal Processing / Analog and Digital ICs Chua's Circuits / Neuro Dynamics / Distributed Networks Control / Evolutionary Computation / Power Systems Complex Systems / Optimization / Robotics Fractals / Fuzzy / Optics Soliton / Biocybernetics / Chemistry Applied Mathematics / Economics / Physics Biomedical Data Processing / Biomedical Engineering / Bioinformatics / Complex Networks / System Biology.

Sapporo (Sapporo-shi) is the capital city of Hokkaido Prefecture in northern Japan, and it is very popular widely over the world for the great landscape with green fields, the host city of 1972 Winter Olympics and the annual international Sapporo Snow Festival which draws more than 2 million tourists from many countries in Winter season. It is famous by eponymous Sapporo Breweries as well. The weather in October will be fine and slightly cold around 5-15°C.

We believe that you will have fruitful discussions at NOLTA2009 and enjoy the beautiful city, Sapporo.

Message from TFIPP Secretariat

For your consultation, please contact Prof. Kenzo Takahashi, IEICE-TFIPP, at global@ieice.org. Back numbers of this issue is available at http://www.ieice.org/eng/global_plaza/index.html.

