Report of IEEE Workshop on Japanese Industry Promotion

IEEE Japan Council IEEE Tokyo Section

This workshop was held on November 8-9, 2014, at Nishi-Waseda Campus, 55 Building, Waseda University, Tokyo. It was cosponsored by IEEE MGA and Japan Council, and organized by IEEE Japan Council and Tokyo Section with the support of Waseda University. Number of participants was about 104 consisting of members from IEEE MGA, Japan Council, Sections, Student Branches, YPs, WIE, LMAG and also non-members from industries.

From the IEEE Headquarter, Professor Lawrence Wong, Ms. Fanny Su, Mr. Jamie Moesch, and Mr. John Paserba attended and provided very useful information and comments to the participants.

The organizing team would like to express their sincere thanks to the following organizations and their members for various supports extended:

- Nine IEEE Sections in Japan for the promotion of the 2014 Japanese Section Survey (including both members and non-members) conducted in August and September, and sending the delegates to this workshop.
- Waseda University (faculty and student members) for allowing the use of the university facilities during the weekend and providing various supports in local arrangement.
- > Cyber Creative Institute for their support in logistics for this workshop.

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1. Workshop Program

IEEE Workshop on Japanese Industry Promotion

日本企業の支援促進のためのワークショップ

November 8-9, 2014

Nishi-Waseda Campus, 55 bldg. Waseda Univ.

早稲田大学 西早稲田キャンパス 55号館

organized by IEEE Japan Council and Tokyo Section supported by Waseda University IEEE 日本カウンシルおよび東京セクション 主催,早稲田大学 協賛

November 8 11 月 8 日 (土)

10:30-17:00 Workshop 17:30-19:00 Reception

The Workshop on Japanese Industry Promotion --coordinator M. Koyama

10:30 IEEE Region 10 as Career Development for Global Leaders ~グローバルリーダー育成のための IEEE Region10
keynote speaker T.Fukuda
11:00 IEEE Japan Strategy - Enhancing Member Value and Membership Growth ~ IEEEの日本戦略の紹介 invited speaker L. Wong
13:30 Looking back on my IEEE Activities ~ IEEE における活動を顧みて
guest speaker T.Aoyama
14:10 The Result of the Survey for Young Professionals and Practitioners
~日本の若手専門家と技術者へのアンケート結果報告
J. Moesch, F.Su, and M.Koyama
15:30 Panel Discussion on How IEEE Supports Young Professionals and Practitioners in Japanese Industry ~パネル討論:日本企業における若手専門家と技術者をいかに サポートするか Panelist: L.Wong, T.Tsuda, F.Su, J.Moesch, Y.Mochida,
K.Ishikawa, H.Sugiura, Y.Maeda
Moderator [:] A.Nishihara
1/:30 Networking Reception ~ネットリーキンクレセプション

November 9 11月9日(日)

13:00-17:00 Workshop 17:30-19:00 Reception

Engineers in Industry

	Coordinator R. Onno
13:00	Message from IEEE ~ IEEE からのメッセージ Invited speaker L. Wong
13:10	Technology, Colleagues, and Wishes ~技術と仲間と志K. Nishimiya (YPs)
13:50	Privacy Friendly Technology from a Woman Engineer's View Point ~女性エンジニア観点のプライバシーフレンドリー技術 K. Sako (WIE)
14:30	Experiences as an Industry Engineer and my IEEE (Tentative) ~産業界での技術者生活と IEEE (仮題) H. Kuwahara (LMAG)
15:10	Reality of Standardization Activities (Tentative ~標準化世界の実像(仮題)F. Ono (Tokyo section)
16:00	Panel Discussion on How Japanese Industry and IEEE cooperate together ~パネル討論:IEEE と企業の連携強化のための提案 Panelist: L.Wong, K.Nishimiya, K.Sako, H.Kuwahara, F.Ono, F.Su Moderator: N.Noda
17:30	■



please contact info@ieeejc.net on this workshop

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Message from IEEE Japan Council and Tokyo Section

Welcome to the 2014 IEEE's Industry Promotion Workshop. First of all, let us briefly describe the IEEE. IEEE is one of the largest societies in the world for engineers in the electrical, electronics, and related technology fields. It has more than 430,000 members. Two of the larger sections of the IEEE are the TA (Technical Activities) and the MGA (Member and Geographic Activities). The former is based upon the IEEE professional groups such as the computer society, the communication society, etc. The latter oversees the IEEE's global activities and organization. A region is considered the global organizational unit of the IEEE. Asian and Oceania countries including Japan belong to Region 10. The current Region 10 Director is Professor T. Fukuda who will give his talk at the beginning of this workshop. Under the regions, there are sections and councils. In Japan, we presently have 9 sections and one council. The Tokyo section is one of the largest sections in Region 10. It is chaired by Professor T. Tsuda, who is one of the panelists of today's afternoon session. In the MGA, we have about 20 committees such as SAC - the Student Activities Committee, WIEC - the Women in Engineering Committee, and LMC - the Life Members Committee. SDEA - the Strategic Direction and Environmental Assessment Committee - is also one of the committees. SDEA is currently chaired by Professor L. Wong who will also give his talk this morning. Today's workshop is co-sponsored by MGA/SDEA.

Smart-phones, robots and bio-technologies are currently some of the three biggest elements in our society. These technologies are the targets of not only Japanese industries but also global enterprises worldwide, where serious competition is now under way. It is said that in order to become major players in these fields, the business model is the most important. But this model should be accompanied and endorsed by new technology. In other words, it is the new technology that enables a company to play a major role in these businesses worldwide. In this context, IEEE can contribute value and benefit its members, in particular young professionals and the members working as industry practitioners. Japanese sections together with IEEE/MGA are going to plan workshops, seminars, and various events that help Japanese young professionals and practitioners starting next year. This workshop is thus understood as the first step of IEEE Japanese Sections to help these contributions.

We welcome any comments to further stimulate and help this process.

Thank you again.

Masaki Koyama, Chair	Yukou Mochida, Chair
IEEE Japan Council	Industry Promotion Committee/ IEEE Japan Council
Toshitaka Tsuda, Chair	Kohei Ohno, Chair
IEEE Tokyo Section	Young Professionals Affinity Group/ Tokyo Section

IEEE Region 10 as Career Development for Global Leaders

Toshio Fukuda

Abstract:

IEEE Members can have great and many opportunities to meet and get acquainted with new people, new things and new ways different from the conventional. There are many things going on in IEEE, so that the members can widen the knowledge and experience through the IEEE Activities for their own Career forming and also propagate your ideas and views to the world through the IEEE highway of the human networks.

Biography – Toshio Fukuda

Toshio Fukuda graduated from Waseda University, Tokyo, Japan in 1971 and received the Master of Engineering degree and the Doctor of Engineering degree both from the University of Tokyo, in 1973 and 1977, respectively. He joined the National Mechanical Engineering Laboratory in Japan in 1977, the Science University of Tokyo in 1981, and then joined Department of Mechanical Engineering, Nagoya University, Japan in 1989.

At present, he is Professor Emeritus of Nagoya University, and Professor of Meijo University and Beijing Institute of Technology. He is mainly engaging in the research fields of intelligent robotic system, micro and nano robotics, bio-robotic system, and technical diagnosis and error recovery system.



He was the President of IEEE Robotics and Automation Society (1998-1999), Director of the IEEE Division X, Systems and Control (2001-2002), the Founding President of IEEE Nanotechnology Council (2002-2005), and is the Region 10 Director(2013-2014). He was Editor-in-Chief of IEEE/ASME Trans. Mechatronics (2000-2002) and Journal of ROBOMECH, Springer (2014-).

He was the Founding General Chairman of IEEE International Conference on Intelligent Robots and Systems (IROS) held in Tokyo (1988). He was Founding Chair of the IEEE Workshop on Advanced Robotics Technology and Social Impacts (ARSO, 2005), Founding Chair of the IEEE Workshop on System Integration International (SII, 2008), Founding Chair of the International Symposium on Micro-Nano Mechatronics and Human Science (MHS, 1990-2012).

He has received many awards such as IEEE Eugene Mittelmann Achievement Award (1997), IEEE Third Millennium Medal (2000), IEEE Robotics and Automation Pioneer Award (2004), IEEE Transaction Automation Science and Engineering Googol Best New Application Paper Award (2007), George Saridis Leadership Award in Robotics and Automation (2009), IEEE Robotics and Automation Technical Field Award (2010). He received the IROS Harashima Award for Innovative Technologies (2011), IEEE Fellow (1995), SICE Fellow (1995), JSME Fellow (2002), RSJ Fellow (2004), VRSJ Fellow (2011) and a member of Science Council of Japan (2008-2014). He is a member of the Japan Academy of Engineering (2013-).

IEEE Japan Strategy - Enhancing Member Value and Membership Growth

Lawrence Wai-Choong WONG

Abstract:

This presentation will provide an overview of IEEE's strategy for Japan. It covers background information about IEEE, in general, and IEEE Japan specifically. The specific priorities and the initiatives that have been identified through a methodical process will be elaborated on. The discourse is intended to stimulate engaging interactions and sharing at this workshop, with the aim of stimulating and catalysing a host of programs and activities that will enhance IEEE member value and membership growth in Japan.

Biography – Lawrence Wai-Choong WONG

Lawrence W.C. Wong is Professor in the Department of Electrical and Computer Engineering, National University of Singapore (NUS). He is also Deputy Director at the Interactive and Digital Media Institute (IDMI) in NUS. He was previously Executive Director of the Institute for Infocomm Research (I²R) from Nov 2002 - Nov 2006. Since joining NUS in 1983, he served in various positions at the department, faculty and university levels, including Head of the Department of Electrical and Computer Engineering from Jan 2008 – Oct 2009, Director of the NUS Computer Centre from Jul 2000 -Nov 2002, and Director of the Centre for Instructional Technology from Jan 1998 - Jun 2000. Prior to joining NUS in 1983, he was a



Member of Technical Staff at AT&T Bell Laboratories, Crawford Hill Lab, NJ, USA, from 1980 to 1983.

He received the B.Sc. and Ph.D. degrees in Electronic and Electrical Engineering from Loughborough University, UK. His research interests include wireless and sensor networks and systems, ambient intelligent platforms, multimedia networks, localization and source matched transmission techniques with over 270 publications and 5 patents in these areas. He is an active IEEE volunteer and has held several volunteer leadership positions including IEEE Singapore Computer Society Chapter Chair (1987-1989), IEEE Singapore Section Chair (1993-1996), IEEE Region 10 Director (2011-2012), and IEEE Member & Geographic Activities Vice-Chair for Strategic Management and Analysis.

Looking back on my IEEE Activities -For encouraging young Japanese engineers to be active in IEEE-

Tomonori Aoyama

Abstract:

The number of IEEE members in the world is increasing beyond 400 thousands, and the number of Japanese members has not been decreasing different from Japanese domestic institutes. It is noted, however that the population of young generation is decreasing rapidly in Japan so that IEEE member in Japan will be decreasing from now on. In addition, engineers in industry are leaving from IEEE, and non-members of IEEE won't join IEEE. In this presentation, one example of the IEEE activity by the speaker is shown in order to encourage young engineers to be active worldwide in IEEE.

Biography – Tomonori Aoyama

Tomonori Aoyama received the B.E., M.E. and Dr. Eng. from the University of Tokyo, Japan. Since he joined NTT in 1969, he has been engaged in research and development on communication networks and systems in the Electrical Communication Laboratories. From 1973 to 1974, he stayed in MIT as a visiting scientist. In 1995 he was appointed to be Director of the NTT Optical Network Systems Laboratories. In 1997, he left NTT, and joined the University of Tokyo as a professor and in April 2006, he moved to Keio University as a processor. He is now



Visiting Professor of Faculty of Science and Technology, Keio University.

Dr. Aoyama is Emeritus Professor of the University of Tokyo, and served as a member of the Science Council of Japan for 6 years. He is IEEE Life Fellow and served as IEEE Tokyo Section Chair. He also served as President of IEICE (Institute of Electronics, Information and Communication Engineers) previously and is now IEICE Fellow. He received several awards from Japanese Ministries, some Japanese organizations, IEICE and IEEE.

Technology, Colleagues, and Wishes

Biography – Kojiro Nishimiya

Kojiro Nishimiya received the Bachelor degree of "Physics" from Gakushuin University. After that he moved to the University of Tsukuba and received the Master and Doctoral degrees of "Engineering" from the University.

He researched the wave propagation visualization method for the ultrasound and also researched the acoustic characteristics of the elastic waves propagated in the layered structure. Also he was adopted as the Research Fellowship for Young Scientists (DC2) of "Japan Society for the Promotion of Science" from 2009 to 2011. After the graduation of the University of Tsukuba, he joined Schlumberger Kabushiki Kaisha as a physicist in 2011.

He joined IEEE Tokyo Young Researchers Workshop from 2008 and he served as the chair of the workshop in 2010. Also he joined IEEE Tokyo Young Professionals (Formerly GOLD) affinity group executive committee and now he is serving as the secretary from 2013.

Privacy Friendly Technology from a Woman Engineer's View Point

Kazue Sako

Biography – Kazue Sako

Kazue Sako is a Senior Engineer at NEC. She received B.S. degree in Science (Mathematics) and Ph. D degree in Technology from Kyoto University.

Her interest lies in how cryptographic protocols serves to make real life better. Some examples are fair lottery systems, sealedbid auction systems, on-line secret voting systems, and anonymous authentication schemes.

She served as an editor of ISO/IEC standards related to anonymous authentication technology, namely ISO/IEC 29191 and 20008-2.

She is currently interested in how privacy of individuals can be improved in this networkbased society, and trying to promote the idea of personal clouds and personal data ecosystem for privacy friendly world as Respect Network Security Architect.





Kojiro Nishimiya

Experiences as an Industry Engineer and my IEEE

Biography – Hideo Kuwahara

Dr. Hideo Kuwahara is a Fellow of Fujitsu Laboratories Ltd. headquartered in Japan. He received his B.S., M.S., and Ph.D. degrees in Electronics Engineering from the University of Tokyo, in 1972, 1974, and 1984 respectively. He joined Fujitsu in 1974, and has since enjoyed a long career in optical communications R&D. From 2000 to 2003, Dr. Kuwahara led the Photonics Networking Lab in Fujitsu Network Communications, Inc. in Richardson, Texas. He was a Board Member of Fujitsu Laboratories Ltd. from 2004 through 2006. In his current position,

Hideo Kuwahara



Dr. Kuwahara leads the direction of photonics technologies R&D at Fujitsu Laboratories Ltd.

Dr. Kuwahara has long been engaged in the activities of the IEEE, and now he is a Life Fellow of the IEEE. He served the President in 2012-2013, and is currently serving as Past-President of IEEE Photonics Society (formerly IEEE LEOS). He served a member of the Board of Governors of the IEEE LEOS from 2006 through 2008, a member of the IEEE Honorary Membership Committee in 2008 - 2010, and a member of the Prize Papers/Scholarship Awards Committee in 2010-2012. He is now serving the IEEE Fellow Committee, IEEE Awards Board Nominations and Appointments Committee, Industry Advisory Board of IEEE Future Directions Committee, and IEEE Access Editorial Board. His other activities include a guest editor of Communications Magazine Optical Communications Series in 2006-2011, a guest editor of IEEE J-SAC, and Chair of Steering Committee of IEEE/OSA CLEO Pacific Rim. In Europe, he served in 2007 -2013 as a member of the International Advisory Committee in ECOC (European Conference on Optical Communications) including presenting a plenary talk in ECOC2008.

Reality of Standardization Activities

Biography – Fumitaka Ono

He has received BE, ME and Ph.D. from the University of Tokyo respectively. He was working with Mitsubishi Electric Corp. from 1973 to 2000 and was Professor of Tokyo Polytechnic University from 2000 to 2014. He is currently Professor Emeritus of TPU.

His interested area covers image processing, image coding and entropy coding. He is Fellow of IEEE, Fellow of IEICE and Fellow of IIEEJ.

He has been engaged in the international standardization work since 1985, and is currently ISO/IEC JTC 1/SC29/WG1 JBIG Rapporteur.

Fumitaka Ono



He has received many awards including the Award from Ministry of Education and Science, and the Award from Ministry of Industry and Trade, for distinguished achievements on image coding and the contribution for standardization activities, respectively.

2. Report of Workshop

Day 1, November 8 (Saturday)

The workshop was opened by Coordinator, Prof. Masaki Koyama, Japan Council Chair. He introduced the objective of the workshop, promotion of Japanese industry by strengthening the collaboration with IEEE, referring to the organization of IEEE, TA (Technical Activities) and MGA (Member and Geographic Activities) in particular.

He introduced Prof. Toshio Fukuda, Region 10 Director, Prof. Lawrence Wong, Chair of SDEA (the Strategic Direction and Environmental Assessment Committee), MGA, Prof. Tomonori Aoyama, Past Chair of Tokyo Section, Mr. Jamie Moesch, Senior Director, Member Experience, MGA, Ms. Fanny Su, CEO, IEEE Asia-Pacific Limited, and Prof. Toshitaka Tsuda, Chair of Tokyo Section, and other key persons.



Prof. Koyama, JC Chair



Day 1 Workshop

1. Keynote Speech

<u>"IEEE Region 10 as Career Development for Global Leaders"</u>

He started to introduce 2014 Nobel Prize in Physics winners, Profs. Isamu Akasaki, Hiroshi Amano and Shuji Nakamura, are all engineers, who invented efficient blue light-emitting diodes. The photomultiplier tube used by Prof. Masatoshi Koshiba, 2002 Nobel Prize winner in Physics in his scientific project "Kamiokande" for the detection of cosmic neutrinos was recognized as the IEEE Milestone 2014 and was produced by the electronic engineers of Hamamatsu Photonics Co.

by Prof. Toshio Fukuda, Region 10 Director



Prof. Fukuda, Region 10 Director

IEEE is the organization of engineers for the benefit of humanity having the history of 125 years and 430,000 members.

He then talked about the engineering culture uniqueness mentioning the characters of chopsticks and forks, and "karakuri" and robots.

Answering to the question by Prof. Koyama, he mentioned IEEE members from industry are 80% in US but, on the other hand, only 20% in Japan so that we have opportunity to grow in Japanese industry. In US the industry expects IEEE as leadership training and education which are provided by MGA function of IEEE.

2. Invited Speech

<u>"IEEE Japan Strategy – Enhancing Member Value and Membership Growth "</u> by Prof. Lawrence Wong, Chair of SDEA, MGA

He first introduced the mission of IEEE mentioning that IEEE information is more than just electrical engineering and computer science. He then mentioned the sections and council formations and their growth in Japan. Looking at the membership numbers in 2012, Japan has almost same numbers of student (354) and fellow (528) out of total members of 14,300, which means that Japan has opportunities in encouraging young members to join IEEE.



Prof. Wong, Chair SDEA, MGA

He reviewed the 2.5 years activities studying revitalization in Japan and introduced the SWOT chart. High retention rate, 8 company sponsors, many researchers as "strength", poor industry penetration, low recruitment student members, low value proposition for local members, being seen as too theoretical, English as barrier as "weakness", global branding, more information in Japanese, more attraction for industry practitioners, expansion of relationship and sponsorship beyond the 8 major companies, up-grading of the English proficiency of engineers as "opportunities", and Japanese associations providing more relevant benefits, demographic imbalance, reducing number of students entering engineering programs and economy in recession/stagnation as "threats" were discussed.

As recommended strategies he proposed:

- (1) Better collaboration with industry within and outside of the 8 sponsoring companies.
- (2) Conduct more relevant technical events and conferences for practitioners & young professionals.
- (3) Facilitate awareness of Japanese technology professionals in the global marketplace.
- (4) Better incorporation of Japanese language in IEEE materials
- (5) Programs to improve "English for engineers" proficiency and others

He then proposed action items for each strategy. For (1), he mentioned to establish IEEE Japan Industry Promotion Committee and to organize Japan based MAW (Metro Area Workshop) for practitioners. As an example, the MAW in Bangalore, India, had participants of about 150 and new members of 50.

For (2), he proposed to establish a Japan Young Professional Awards program that recognizes young professionals from industry with significant accomplishments and others.

The proposed concept of MAW is:

- Practicing professional focused
- Multi-track event
- Under-represented markets & growth sectors
- Sponsored by IEEE Board and MGA
- Technical content provided by Society and local sections

- Goal of MAW: Member recruitment opportunity, Provide value to IEEE members through professional networking, etc.
- Example topics include: cloud computing, robots, smart grid, software engineering, mobile application development, electric vehicle technology etc.

For coordination of young professionals / practicing engineers program he proposed:

- Establish IEEE JC YP/PE Committee
- Develop annual workplan networking sessions, professional talks and seminars, professional development activities
- · Assist in formation of new YP Affinity Groups in other Japan Sections

He also mentioned YPs, WIE and LMAG should collaborate for MAW, and also joint membership promotion with Japanese national societies (such as IEICE) should be considered.

In the Q&A session, the following discussions were made:

- Q (Prof. Tsuda): The first MAW is planned in Tokyo in 2015. What can we expect from IEEE as support? Unlike Region 1-6, Japanese Sections have usually small manpower and mainly supported by volunteers.
- A: Although the landscape is different, US activities are also basically carried by volunteers. The experiences on MAW by Karen Pedersen in US will be useful. MAW is volunteer based, however funding support by IEEE is possible.
- Comment by Jamie Moesch: IEEE HQ is ready to support. Also Singapore office will help in secretary and promotion support. Let us know your wish.
- Q (Prof. Koyama): How can we reach practitioners in Japan? This will be the most difficult task.
- A: The survey outcomes this year will give hints. Also watch expectation from industry.



Prof. Tsuda, Chair, Tokyo Section



Prof. Wong

- Comment by Jamie Moesch: Ask local industries what they expect from IEEE for their employees.
- Comment by Takatoshi Minami (MGA/ Region10 Liaison): In the case of the recent MAW in India, Organizers visited several industries and asked the sending of their employees and support of the participation fees, so that they got many attendees.
- Q (Prof. Tetsuya Miki, Secretary of LMAG Tokyo): I was surprised by the very few student members in Japan. IEEE SB (Student Branches) should collaborate with local societies such as IEICE.
- A: The roll of SB counsellors is expected.



Takatoshi Minami, R10 Liaison

- Comment by Prof. Akinori Nishihara (Vice Chair, IPC / 2015): I would like to encourage Prof. Miki to set up IEEE SB in your university. For that collaboration with IEICE is important. Also persons who were active in IEEE should be involved in establishment of SB.
- Comment by Prof. Koyama: Student members quit because of the high membership fee. It is also the responsibility of industries in Tokyo, who employ big portion of students from outside of Tokyo.



Prof. Miki, VC LMAG Tokyo

- Comment by Takeshi Yamada (Secretary of Kansai Section): In Kansai Section we have 7 SBs. Activeness is dependent of the leaders and sometimes it is unstable.
- A: In Singapore we have 2 SBs, each having 200 members. Every year new recruitment activities are done. Technical trips or various competitions are organized. There is a system to invite excellent students such as "Eta Kappa Nu". The support by Section by funding is also important.
- Comment by Fanny Su: Funding excellent students are also made. In Region 10, not only Section but also IEEE Foundation is supporting.
- Comment by John Paserba (2013 Student Activities Committee Chair, MGA): It is important to keep the young members active in IEEE while they are students. They become strong.
- Comment by Yukou Mochida (Chair, IPC / 2015, LMAG Tokyo Vice Chair): Today Japanese Industries cannot keep the ex-student members or YPs, which is a big loss not only for IEEE but also for individual student. Some mechanism in industries such as industry branch would be desirable. Experienced IEEE members should be involved in the activities outside of the 8 supporting companies, for example industry associations
- Comment by Emi Yano (Vice Chair, JC WIE): After student members join the industry and have no need to write papers, they have no reason to keep the membership.
- A: In US, many industry members are "IEEE General Members without any Technical Societies". They retain the membership because of diversity of benefits. Also in Singapore, through the

collaboration with local societies, 3000 members enjoy the benefits such as insurance, hotel / museum / zoo discount.



Fanny Su, IEEE Asia Pacific



John Paserba, Student Activities Chair



Emi Yano, Vice Chair, JC WIE

Comment by Jamie Moesch: In US, 50% of members are from their student branch time. IEEE supports professional activities workshops for young members, where IEEE helps to find professional answers for tomorrow or next week, rather than basic research for 7 years from today.

<u>3. Guest Speech</u>

"Looking back on my IEEE activities"

by Prof. Tomonori Aoyama, Past Chair of Tokyo Section

After introducing membership numbers in IEEE Japan Council, he made comparison with the case in IEICE. The IEEE membership increased almost steadily to 14,384 in 2013, on the other hand IEICE regular membership decreased 32,689 in 2000 to 25,185 in 2012 mainly caused by rapid decrease of industry members of 10,000 in this period. This is same concern with IEEE in Japan. He also pointed out IEEE student member and Fellow member have almost same numbers, which is big opportunity for IEEE SB.



Prof. Aoyama, Past Chair, Tokyo Section

He then reviewed his own IEEE experience started by joining to IEEE as student member strongly encouraged by his supervisor professor, which was very valuable. He found big pleasure to attend IEEE conferences and to publish his papers to IEEE journals and afterwards to serve as session organizer, guest editor, chair of conferences and to be involved in IEEE section / council activities.

He concluded as the merit of joining IEEE activities to have:

- Human relations in the world
- New information on ICT in the world
- Opportunities to inform / publish research outputs
- Opportunities to contribute to other IEEE members through conferences
- Opportunities to visit various places of conferences in the world.

He encouraged young members to be involved in both IEEE activities in their fields and locations. Finally he showed he is young enough like student members by his experience in the 260m bungee jump in Las Vegas in April 2014.

4. Presentation

"The result of the survey for young professionals and practitioners"

by Jamie Moesch, Senior Director, Member Experience, MGA

He made presentation using data from IEEE member segmentation survey in 2012 and compared with "survey of members / non-members in Japan" worked out in October, 2014, by Fanny Su and Prof. Koyama.

Interesting comparison between IEEE overall vs IEEE in Japan was shown as:

- Education of members: doctoral degree 37% in IEEE vs 73% in Japan • 24% in IEEE vs 52% in Japan
- Employment: educational institution

private industry

44% in IEEE vs 33% in Japan

showing that members are dominated by academia in Japan.

remain technically current join IEEE societies enhance career opportunities continue education reduced fees at IEEE conferences Satisfaction of IEEE products and services online access to standards professional networking IEEE continuing education online career resources

The 2014 IEEE Japan Council survey was responded by 605 members and 652 non-members.

• The largest category of member work was "applied research" while that of non-member was "development", which raises the question "what can IEEE do to become more relevant to development engineers from industry?" 67% in IEEE vs 43% in Japan 44% in IEEE vs 54% in Japan 40% in IEEE vs 23% in Japan 34% in IEEE vs 17% in Japan 21% in IEEE vs 37% in Japan

54% in IEEE vs 39% in Japan 42% in IEEE vs 30% in Japan 38% in IEEE vs 25% in Japan 33% in IEEE vs 18% in Japan



Jamie Moesch, MGA

- The reason of non-members for not joined IEEE was:
 - > fee is high (137 persons) (Members feel 10,000 Yen would be appropriate.)
 - ➤ useless for my job (82 persons)
 - > English problem (50 persons)
 - ▶ too academic (30 persons) etc.
 - Average number of associations joined was 2.4 for members and 0.5 for non-members.

As conclusions he pointed out: To meet our goal, IEEE will need to better engage "working engineers" in Japan. He further raised the following questions:

- In what industries should we prioritize?
- How can we get more information about development engineers?
- What should be done on a local level in Sections for the young working engineers?
- What should be done from IEEE Headquarters for the young working engineers?
- What should be done from IEEE Region 10 for the young working engineers?

In the Q&A session, the following discussions were made:

- Q (Member from YPs): (1) What is the definition of "basic" and "applied" in the working category in the survey in Japan? (2) How about sales engineer of service engineer? These engineers should join IEEE?
- A (Prof. Koyama): "Basic" is activity aiming at Nobel Prize. Japanese people generally like "basic". In Japan, small universities have only course named "Electrical Engineering", which include electronics, telecommunication and power electronics. The name does not mean electric power engineering only but covers broad area and very general.

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- A (Jamie Moesch): In US, many industry members are enjoying Community activities without participating particular Technical Societies, which are sometimes narrow for industry members. One of the reasons may be also increasing interdisciplinary engineering such as "smart grid" or "cloud", which would be better discussed in Communities.
- Comment by Fanny Su: Lawyers and patent office engineers become "General Members" also without joining Societies.
- A (Jamie Moesch): In Japan IEEE is regarded as academic society.
- Comment by Takatoshi Minami: IEEE is regarded as "academic" institute because of the Japanese name. We must redefine IEEE value as "keeping technically current" for system engineers before marketing IEEE, because the value of service by "education" is high.
- Comment by Nobuo Fujii (one of the Workshop organizing team): In Japan people think IEEE is academic institution of US by the Japanese name 『米国電気電子学会』, which should be changed.
- Q (Prof. Tadashi Takano, Secretary of LMAG Tokyo 2015): Japan is a unique country with many practitioners and maybe this situation is similar to Europe.
- A: In Europe, more practitioners are involved in the IEEE. European Sections have more society-oriented activities. Also the agreement with local national societies has greater importance. More agreements with local national societies are desirable in Japan. In US, IEEE is national society.
- Q (Prof. Tsuda): Analysis about the real wish of practitioner should be deepened for the better focus.
- A: We just started the analysis.
- Comment by Prof. Koyama: This time it was good to ask the opinion of non-member industrial practitioners.
- Q (NTT Docomo): As a non-member practitioner because of the barrier of English, IEICE is sufficient at the moment. However if the networking with the global communities is available through IEEE, it would be useful.
- A: If you organize IEEE Docomo-branch, the networking with your global colleagues such as people in Vodaphone, Verizon, ATT worldwide will be possible.
- Comment by Prof. Kohei Ohno (YPs Chair, Tokyo Section): YPs are mainly limited within academic graduate students. After joining companies, their bosses are often the problem.



Fanny Su, IEEE Asia-Pcific



Nobuo Fujii, Organizing Team



Prof. Ohno, YPs Tokyo Chair

How does IEEE encourage the YPs in the company? Nishimiya-san's case would be rather exception,

A: YPs in Columbia grew incredibly. IEEE energized by founding active YPs encouraging "You can use this organization as you like with 10 of young friends for IEEE".

5. Panel Discussion

<u>"How IEEE supports Young Professionals and Practitioners in Japanese Industry"</u> <u>Moderated by Prof. Akinori Nishihara, Vice Chair, IPC / 2015</u>

First, 7 panelists were introduced by the moderator:

Prof. Lawrence Wong, Chair of SDEA, MGA, Prof. Toshitaka Tsuda, Chair, Tokyo Section, Fanny Su, CEO, IEEE Asia-Pacific Limited, Jamie Moesch, Senior Director, Member

Experience, MGA,

Yukou Mochida, Chair, IPC / 2015, LMAG Tokyo Vice Chair,

Kazuko Ishikawa, Chair, JC WIE, and

Isamu Chiba, Secretary, Tokyo Section (for Hiroaki Sugiura).



Panel Discussion

Then the 4 speakers, Tsuda, Mochida, Ishikawa and Chiba, presented short position papers as follows:

Prof. Tsuda: It was difficult to contact non-member practitioners, however the questionnaire was a good approach. IEEE's benefits are almost unknown for non-members. YPs are classified into 4 categories in the IPC preparatory meeting according to their environment: YP1 (Academia), YP2 (Research institute), YP3 (Industry R&D), and YP4 (Industry front-end development). For convincing YPs of the merits of IEEE, precise analysis according to the different 4 groups is

necessary. Under YP3, less than 20% of researchers in the industry are IEEE members. So we must invite more people.

Mochida: IEEE company branch as a virtual network was proposed in the IPC preparatory meeting. This will be a virtual and informal activity, however companies may recognize it positively. The company branch welcomes the new comers (former SB members and new YPs) and gives advice to them. As the visible contribution to the company, this group tries to summarize IEEE's newest topics for the company (to marketing, strategic planning division and/or CTO).



Prof. Tsuda, Panelist



Yukou Mochida, Panelist

Members also try to advise practitioners in the company. He also proposed IEEE

Journal for industry management, which is non-academic journal for non-member management readers with digested articles.

Ishikawa: Japan WIE was established in 2005. So WIE Japan will have 10th anniversary next year 2015. WIE Japan have been working on conferences and networking events actively. WIE Japan started conference on future technologies 3 years ago, which was successful. The topic is at



Kazuko Ishikawa, Panelist

the moment rather limited in electronics or optics, however WIE challenges to widen the area of coverage.

Prof. Nishihara, Moderator, confirmed that male engineers are also welcome to WIE.

Chiba: As one of the good practice for the company branch, he introduced the systematic activities in Mitsubishi Electric Corporation, which is supported officially by Corporate Human Resources Division. Examples of its activities are:

- In-house presentation preceded international presentation of IEEE or others,
- Report meeting after participating academic societies including IEEE or IEICE,
- · Presentation of doctoral dissertation,
- Inviting non-members to become IEEE members in lunch time in R&D center having got 5 new members last time,
- · Supporting elevation to Fellow or Senior member, and
- Holding IEEE Fellow meeting in Mitsubishi, including former Mitsubishi enployees.





Prof. Nishihara, Moderator; Profs. Wong and Tsuda, Su, Moesch, Mochida, Ishikawa and Chiba, Panelists

The speaker for standardization view, Yoichi Maeda (CEO & SVP of TTC), could not attend this time. His presentation "View from a national Standards Developing Organization" was distributed.



Isamu Chiba, Panelist

Then the Q&A between floor and panel was held actively as follows:

(1) Collaboration between industry and IEEE

- Q (Maruzen): How is the introductory lecture about IEEE done in Mitsubishi?
- A (Isamu Chiba): It is officially given to newcomers together with IEICE or IEEJ.
- Q (Prof. Nishihara): Who and how was it started?
- A (Isamu Chiba): When I joined Mitsubishi, this was just started.
- Q (Prof. Aoyama): What is the return for Mitsubishi by doing so?
- A (Isamu Chiba): Advertisement as a global company and motivation for young engineers. However it is not related to job evaluation or salary.
- Comment (Fanny Su): Mitsubishi's Fellow nomination is one of the highest, which is good for young engineers. Some other companies like Tata in India have similar systems. If you have many fellows in your company, it becomes much easier to nominate other candidates.
- Q (Maruzen): All new comers to Mitsubishi are invited to the introductory meeting? Do they stay as member? Does Mitsubishi pay membership fee?
- A (Isamu Chiba): All new employees are invited. Many of them become IEEE member and stay. Mitsubishi however does not pay the membership fee.
- Q (Eisuke Fukuda, Fujitsu Labs.): What is the direct benefit for Mitsubishi to support IEEE activities?
- A (Isamu Chiba): Advertisement in the global industry in broader sense. Also these activities were initiated by our former technical executives of the company.
- A (Yukou Mochida): Sometimes company expects concrete contributions. IEEE members as IEEE company branch could try to summarize new knowledge for the future and digest them for the

company according to their professional fields from the materials issued by IEEE.

A (Lawrence Wong): Hitachi funded an "Award" to IEEE and this was a good example to make the company more visible.

(2) Membership fee

- Q (Prof. Koyama): US companies are supporting membership fee?
- A (Jamie Moesch): Yes, some companies do. However its number and percentage of support are becoming less. Boeing, IBM or maybe HP are supporting 1/3 of the fee. They earlier supported 80%, however after the introduction of Xplore service, the support was reduced but it is still kept. They are also



Prof. Takano from the floor



Questioner from the floor



Eisuke Fukuda from the floor

supporting fellow nomination.

- Q (Prof. Takano): The benefit of 30% is high. How can be the interest of company kept?
- A (Jamie Moesch): The benefit was much higher in the past. In late 60s it was 80% for getting the journals. After Xplore was launched, companies reduced the rate.
- Q (Prof. Takano): Members can get the new knowledge and current trend through journals in Xplore individually.
- A (Jamie Moesch): Yes, for researchers Xplore helps. However practitioner's journal does not exist yet. The journals today are mainly theoretical.

(3) Membership database

- Q (Koichi Inada): How about letting companies know the member increase of competitors. Can responsible persons in the companies be informed about the number of their IEEE members?
- A (Fanny Su): We don't have that service.
- A (Iwao Hyakutake, IEEE Japan Office): We are often asked by companies or universities. But IEEE Japan has no answer. It is an option for the members to indicate where they work. Maybe IEEE HQ can provide such data.



Iwao Hyakutake from the floor

- A (Prof. Tsuda): In the company it is getting more difficult to investigate employees membership because of the privacy issue.
- Comment (Prof. Koyama): As Membership Developing Committee Chair in Kansai Section, I asked 10 companies there about the membership number in each company, which resulted increase of membership.
- A (Jamie Moesch): IEEE Section cannot ask members about their company names, because some of them do not wish to be known by their companies. However 80% of the members do indicate their company names. So the Section cannot tell the company about their members' names. However we could send e-mails to the members of the company to tell them the message from the company.
- Comment (Hidenobu Harasaki, Secretary 2015, Tokyo Section and Japan Council): In NEC active IEEE members were picked up by searching in Google.
- A (Jamie Moesch): It is a great idea. If you access to me, I can help to find some of the data.



Prof. Koyama from the floor



Hidenobu Harasaki from the floor

(4) English as a barrier?

Q (NTT-AT): As a non-member, IEEE's activity for standardization is useful for practitioners. However, English is a hurdle. Can IEEE support English problem?

- A (Fanny Su): Region 10 is multi-lingual. How about technical writing lessons for IEEE members?
- A (Prof. Tsuda): The expectation by practitioners is not English but to get the newest technology trends and human networks. In Tokyo Section we use Japanese.
- Comment (Iwao Hyakutake): IEEE uses no more the Japanese name 『米国電気電子学会』 (Beikoku Denki Denshi Gakkai) but uses 『アイトリプルイー (ai triple ee)』 and avoids the character as "scientific association".

Comment (Prof. Nishihara): "Gakkai" is misleading.

- A (Jamie Moesch): IEEE has the mechanism of on-line community COLLABRATECH, which will be established in 2015 and trialed in December 2014, where not only members but also non-members can join.
- Q (Kojiro Nishimiya, Secretary, YPs Tokyo): How about the idea of English lessons by IEEE, which is given by expert IEEE members to the engineering students?
- A (Fanny Su): English school teachers and IEEE YPs and also Life Members could collaborate as mentors.
- Comment (NTT-AT): Journal for company management by easy and plain English may help and would be another good idea.



Kojiro Nishimiya from the floor

- A (Prof. Nishihara): In Tokyo Institute of Technology the Student Branch organizes mutual lesson session between foreign students and Japanese students.
- Comment (Takatoshi Minami): IEEE's value for Japanese engineers is English information, which could improve their English.
- Comment (Eisuke Fukuda): I have the feeling English of Chinese or Korean people are better than that of Japanese. Cutting edge technical information in English, which is not circulated in Japanese Journal, is valuable.
- Comment (Prof. Koyama): For Japanese members both English and Japanese could be used except IEEE official publication, which was confirmed by Cecelia Jankowski, Managing Director, MGA.
- A (Lawrence Wong and Jamie Moesch): IEEE COLLABRATECH is a multilingual service. The initial navigation is in English, however the participation can be by local language.

(5) Standardization activities of IEEE

- Q (NTT-AT): As a non-member, IEEE sounds too academic. However its activity for standardization is useful for practitioners and could be another advantage.
- Comment (Hidenobu Harasaki): IEEE standardization committee participation is twofold: as individual and corporate. Each standardization group decides to vote individually or by company.
- A (Prof. Tsuda): MAW Tokyo next year will have a session about IEEE standardization.

(6) Journal for practitioners

- Comment (Prof. Aoyama): In IEICE, the software or design papers by practitioners were almost rejected because of lack of originality. How about defining two categories of transactions in IEEE: one for new and theoretical technologies, one for practical outcomes such as good design or software?
- A (Jamie Moesch): It has been long time discussed. The conclusion was rather to provide for management and practitioners digested hot topics.



Prof. Aoyama from the floor

- Q (Emi Yano): How can IEEE contribute for global practitioner education?
- A (Jamie Moesch): Participation to IEEE makes people global, because IEEE itself is global.
- Comment (Takatoshi Minami): Additionally hiring global people and sending employees to global environment would be effective.

6. Networking Reception

After the hot and productive discussion the networking reception was held at "Ginza-Aster Shinjuku Restaurant" moderated by Yukou Mochida. The first greeting was given by Prof. Lawrence Wong and Kanpai was proposed by Koichi Inada. After the pleasant networking activities the final greeting was given by Prof. Koyama thanking Prof. Tsuda and his Waseda team members.



Prof. Wong for the greeting



Koichi Inada for Kanpai

7. Conclusion (Partially synchronized with "Japan Workshop Summary" by Jamie Moesch.)

The objective of this workshop, which is to promote Japanese industry by strengthening the collaboration with IEEE, was discussed from various points of view and by various participants such as non-member industry engineers, Council/Sections/YPs/WIE/LMAG /SBs members. Many questions have been clarified by the managers form IEEE headquarters and the direction for the next targets was found. We, organizers of this workshop, felt this event was very productive and successful, and thank Prof. Lawrence Wong, Jamie Moesch and Fanny Su.

Proposals from this workshop will be studied further in JC Industry Promotion Committee and will be reflected for the Metro Area Workshop in May 2015. Some of the proposals for further studies are:

- Prioritize the disciplines/industries to be initially focused upon
- Develop in-company IEEE networks; replication of "Mitsubishi model" possible?
- Involve company bosses and indicate them the value of IEEE
- IEEE members in the company to summarize IEEE content for business leaders
- Conduct more industry events with national societies
- Discuss with IEEE management to integrate Japanese language in some IEEE pages
- Develop "English for Engineers" program
- Change the IEEE image not being only academic society for Japanese industries
- Increase number of Student Branches, Increase WIE activities/membership
- Metro Area Network planning
- -

(Yukou Mochida)

Survey Summary for Japanese Industry Promotion Workshop

November the 8th,2014

IEEE Japan Council

1

IPC Workshop	Nov.8 th ,20114
Survey	Original is Japan
Thank you for attending IPC workshop. Pleas	se answer the following question.
(1) Check the presentations and the panel th	hat have impressed you most.
IEEE Regin10 as Career Development for	or Global Readers
IEEE Japan Strategy –Enhancing Membe	er Value and Membership Growth
Looking Back on My IEEE Activities	
The Result of Survey for Young Profession	onals and Practitioners
Panel Discussion on How IEEE Supports N Practitioners in Japanese Industry	Young Professionals and
Peacon:	
(2) Was this workshop useful?	
(3) Did you understand the new direction for	young professionals and
practitioners in industry?	
(4) What do you expect for IEEE's activities fro	rom now?
(5) Describe freely.	

(1) Check the presentations and the panel that have impressed you most.

3

4

IEEE Japan Strategy – Enhancing Member Value and Membership Growth

Comments

- Number of National Societies is decreasing.
- I could understand the stance of IEEE toward Japanese Engineers.
- Japanese companies do not evaluate the IEEE activities of engineers. US companies are good in this respect.
- •I could now understand the IEEE's direction.
- I realized the peculiarities of Japanese members in reference to global standards(English).
- I am a student member. Only this and Panel sessions gave me better perspective about IEEE(English).
- This talk is compact and impressive about IEEE activities(English).

The Result of Survey for Young Professionals and Practitioners

Comments

- This explained the present situation of Japan and points that should be improved.
- •This presentation was easy to understand and showed the data.
- •The result and analysis of this survey was good.
- •I could see the expectation of non-members and difference of Japan and overseas.
- I could understand the difference of US and Japanese, for example carrier development.
- •I could understand IEEE's stance on the basis on the survey.
- Many statistics are good. I could understand IEEE.
- ·I could understand the various issues because of survey.
- IEICE discussed the same. I was interested in the same and different perspectives.

5

6

•New information was got.

Panel Discussion on the IEEE Supports Young Professionals and Practitioners in Japanese Industry

Comments

- •I could understand the IEEE thru bilateral discussions.
- Discussion was good to me.
- •I could discuss very actively.
- •Good discussion was done.
- Fruitful discussion was done because of the questions from the floor.
- •I could discuss the role of IEEE and English issue.
- •I could study a lot!
- Many opinions were good.



Number of items to which the participants wrote comments down .

(2) Was this workshop useful?

Comments

- It was good that the issues of any institutes were discussed.
- •I understand the global aspect.
- •I felt the expectation to YPs. It is useful to network with various people.
- Owing to the guest speakers from overseas, I now understand the difference between Japan and other countries. There were non-members.
- It was good. I could hear various opinions.
- I could understand IEEE.
- I was good to be able to hear the ideas and thoughts of 'inside' IEEE people.
- Discussions were active. The issues were cleared.
- •I got various knowledge and opinions.
- I think that the activities by two wheels, academia and industry, will bring new innovations, in particular, new venture business.
- I could understand the IEEE by the views other than attnding the technical conferences and workshop.
- I now know the IEEE survey and Mitsubishi's activity.

8

Continued

- I think that it would be very significant if the VIPs of industry could attend this workshop.
- I could understand how IEEE thinks about the company activities.
- Yes, students and members could get new perspective of IEEE.
- I came here to attend and get hints from this WS because my profession is environmental science.
- Unfortunately, I could not find the significance of this WS. In particular, I could not understand the merits and benefits of IEEE for the engineers of companies that are not aware of IEEE.
- Yes, in particular, the comments from non-members were interesting.
- It was good for not only because of WS contents but the WS being held by English.
- It was good that I could understand the items unknown to me so far.
- ·I could understand the position of Japanese industry with respect to IEEE.

(3) Did you understand the new direction for young professionals and practitioners in industry?

Comments

- It will be expected the collaboration with industry engineers.
- I have felt the networking is not so attractive because of Japanese engineers being too busy. However, I now understand various reasons on this.
- •I felt that the action plan was necessary.
- •Yes, it was explained concretely.
- Yes, the targets are practitioners working in not only 8 hosting companies but other smaller companies.
- Yes, but I still could not understand the motivation for practitioners.
- I deeply felt that it is important to continue from student to the industry in order to elevate my skills.
- It became apparent that the decrease of IEEE members in industry was very important issue in order for Japan to be globalized.

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(4) What do you expect for IEEE's activities from now?

Comments

• Increase of student members.

- Workshop for YPs.
- · Clarification of merits for industry practitioners.
- Collaboration among academia and industry. In particular, famous practitioners such as Prof. Nakamura-Novel Prize winner- and S. Jobs should be IEEE members.
- In order for IEEE to truly widen its activity to industry practitioners, issues of practitioners and their solutions should be clarified.
- Chapter workshops and conferences by sections are important to connect universities and industry.
- Lectures for practitioners on current technology.
- Strategies to stop decreasing members in collaboration with national societies.
- IEEE should understand the information that is needed for companies and provide it.
- Training practitioners in English.
- Information provision by Japanese language because translation technology is improving.
- Provisioning of various technology workshop without any fee like this WS.
- Company branch.

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(5) Describe freely.

Comments

- •I want to get stuffs presented in this WS.
- Talking about English seemed taboo. But I now know that it is not.
- High membership fee is most important because the company does not pay for it. It is necessary to get monetary merit like in the U.S.
- I understood the issues of Japanese IEEE.
- English problem is one thing but I felt other factors were more essential.
- Company needs solution and thus IEEE should provide solution combining many technical societies.
- It should be clarified the merit of increasing membership and member value (cost vs. merits) in view of members.
- IEEE should match engineers and the users like trading companies. This is most important role of IEEE. More students should be IEEE members.

Day 2, November 9 (Sunday)

The Day 2 was managed by Tokyo Section. It was the extension of regular events of Tokyo section joint YPs, LMAG and WIE of Japan council workshop. Difference from the regular event was that wider participation even from non IEEE members was invited, and the networking aspect was more strengthened, therefore the rich reception party compared with the regular events was provided. During the session, very active Q&As took place, which is exceptional in Japan. Most of the participants joined the network reception, and enjoyed the conversation with people even whom met for the first time. In total, the event ended in a big success.

1. Statistics of participants

Workshop total: 70 Industry: 34, Academia: 29, IEEE: 4, Others: 3 Women: 13 or more Networking reception: 60



Figure 1 Participants classified by sectors

Compared with the regular Tokyo section joint YPs, LMAG, and JC WIE workshops whose number of participants is usually around 20 to 30, this workshop could attract more than 3 times more people. As is shown in figure 1, almost half of the participants are from industry sector, which meets the intention of the workshop trying to provide more value to industry engineers. Number of woman participants is estimated by name, but some of the participants are difficult to judge genders by name. Percentage of YPs cannot be analyzed, but seems to be around half.

Networking reception is the successful one having 60 participations. This kind of networking reception is a new trial which is not provided in the regular Tokyo section workshop. From the statistics, it can be said that participants appreciate this kind of networking opportunity.



Figure 2 Participants of the workshop

- 2. Workshop details
- 2.1 Program

Workshop theme: Engineers in industry

13:00	Message from IEEE			
	Invited speaker Professor Lawrence Wong (IEEE MGA Vice Chair)			
13:10	Technology, colleagues, and wishes			
	Dr. K. Nishimiya (Tokyo YPs Secretary)			
13:50	50 Privacy friendly technology from the woman engineer's view point			
	Dr. K. Sako (WIE recommendation)			
14:30) Experiences as an industry engineer and my IEEE			
	Dr. H. Kuwahara (LMAG, IEEE Photonic Society			
	Past president)			
15:10	International Standardization -Current status and related issues-			
	Professor F. Ono (Tokyo section recommendation)			
16:00	Panel discussion among speakers			
	Moderator Professor Noda			
	Panelists: Speakers + Ms. Fanny Su			
17:30	Networking reception			

Program was made by the coordination of Professor Ohno, Tokyo YPs chair. Speakers were invited by the recommendation of Tokyo YPs, LMAG, and JC WIE, as shown in above program. Presentations are in Japanese, except the one by Professor Wong. However, presentation materials are prepared using both English and Japanese, so that the participants from IEEE headquarter can understand the key points of the presentation. In the panel discussion, both languages are permitted to use. Professor Liu kindly acted as an interpreter from Japanese to English.

2.2 Program details

It started with an invited speech by Professor Lawrence Wong. His talk was about the result of the strategic analysis of Japanese situation viewed by IEEE activities. There are two major problems pointed out. The first one is that, even 8 companies strongly supporting IEEE activities, members in industries sector are low. Decrease of industry member is the general trend in the developed countries. IEEE should consider to increase value proposition to these members. It is pointed out from the floor that the industry member showed increase in Japan, but the percentage is still low, and need some strategic action approaches.

The second is the very small percentage of student members. It is only 7%, and equivalent to that of Fellow members. This is very special in Japan, and the action such as adding more student branches and activating activities.

Based on the analysis, IEEE MGA requested to JC and Japanese sections to move forward such as starting Metro Area Workshop (MAW), which achieved big success in USA, in Japan, and establishing new YPs in sections in addition to Tokyo section. He stated his gratitude to see this workshop was held, which can be considered as the pre workshop of MAW in Japan to be held in May or June next year.



Figure 3 Presentation by Professor Wong

The second speaker is Mr. Nishimiya, Schlumberger, who is recommended by Tokyo section YPs. He presented his experience of establishing the student circle named as "TYRW". It started in Tokyo Institute of Technology (TIT) aimed at making "the space for the student by the student of the student". Many new activities were proposed, planned, and carried out. Gradually, student outside the TIT joined. He felt the circle

very comfortable place to stay, and after the graduation he personally established the "TYRW supporting group" in IEEE Tokyo section YPs.

Audiences were impressed with his talk, and the questions such as "Is there any possible way that IEEE can help the student proactively work and feel comfortable through the work as yourself?". This is the question that he himself seeking for the answer, and he responded that he will at least continue the "TYRW supporting group" activities in IEEE Tokyo section.

Other Q&As included the followings:

- Q (Ericsson Japan, YPs): Most of Japanese student members quit their membership after graduating the university. What made you to continue the membership?
- A: In my case, I joined the committee member of Tokyo Young Researchers Workshop (TYRW). It is important to join the affinity groups or student branches for themselves, and to make many friends in the group.
- Q (Dr. Mochida (Japan in Bayern, LMAG)): Do your company know that you are an IEEE member?
- A: My boss and staff in personnel section know. My company recommends to participate society activities. I can use the name of the company. Sometime, the personnel section gives the slide to introduce my company. However, I heard that some Japanese companies confine for academic society activities for young workers.

My company pays one annual membership fee of a society.

- Q (Hitachi, YPs and WIE): Many students do not continue the IEEE membership even they were the committee member of TYRW. How to approach them to let them continue the IEEE membership?
- A: It is difficult by only making contact with them by e-mail. Letting them to meet with friends in IEEE and continue the activities are important.

The third speaker Dr. Sako, NEC, was invited by JC WIE. She is not a member of IEEE, but is very well known as a women security engineer and as an executive committee member of IEICE. She presented that there are several differences in view points on privacy between men and women. For example, stalking and candid shot issues are big problems to women but not be understood well enough by men engineers. Therefore, more women engineers are expected to enter the field.

Many people expressed that they could have new view, and appreciated the presentation. One asked why she is not the member of IEEE. The answer was that the fundamental study of cryptographic algorithms is not necessarily active in IEEE. The other commented that the security application discussion is active in IEEE, and many security researchers in Japan are IEEE members. She responded that she could learn the relevant IEEE activities from this workshop. She finally declared that she will sign up IEEE entry.

Other Q&A included the followings:

- Q (Prof. Takano (Nihon Univ.)): Which academic society is the major one in Cryptology technologies?
- A: It is International Association for Cryptologic Research.

Dr. Kuwahara, Fujitsu Laboratories, who is a new life member and is serving as Past President of IEEE Photonic Society, presented his activities in IEEE. He also explained how the management is done in IEEE society based on his experiences. For the young participants, it was new to hear how to step up in IEEE, and they also seemed to be interested in the management procedure in IEEE Society. Since the procedure is generally used one, his talk was very intuitive and interesting.



Figure 4 Presentation by Dr. Kuwahara

In the Q&A session, the following discussions were made:

- Q (Prof. Aoyama (Keio Univ., Tokyo Section past-chair)): I agree that making network among IEEE members is a merit. Young members should better make network with excellent engineers and researchers in IEEE. By the way, what kind of benefits exist for IEEE members in US? I have a feeling that recent discussions in the technical society are slightly different from the ICT technology progress in the actual world. There are less practitioners involved and so are the participants from other society. I think it is necessary to discuss among different societies and walls between the societies should be broken. In IEEE future directions committee, do the members discuss this kind of topics?
- A: There are IEEE pensions for American members, and this gives the merits for retired members. In photonic society, the committee members discussing about the more use of social network and videos, for example the possibility to submit a video material as a paper. "IEEE Access" is one of the new projects. In past, the paper that proposed i-pad concept was rejected because there are no new technologies. However, i-pad has high rating all over the world. The members start discussion about evaluation for the new innovation like i-pad.

The last, but not the least, speaker is Professor Ono, Professor Emeritus of Tokyo Polytechnic University. Since he has engaged in international standardization activities of JPEG for a long time, Tokyo section invited him. He explained how the international standardization process goes on. His material is very well prepared for this workshop, and participants could understand the standardization process and also the importance of the standardization for industries. Many questions and appreciating comments are given from the floor. Question came from not only industry but also academia participants. This showed a strong interest to the international standard in Japan. One of the Q&As was as follows:

- Q (Prof. Takano (Nihon Univ.)): Participants from industry are decreasing. How can IEEE increase the participants from the industry?
- A: The participants from the industry must consider merits for the company. There are many advantages in attending the standardization activities. Merits that can be obtained by proactively attending the standardization activities are not only the technical advantages, but also experiences and ideas for innovation. It should be noted that no contribution can gain nothing, in standardization.

The last part of the work shop was the panel discussion among the presenters and Ms. Fanny Su, moderated by Professor Noda. Due to the very hot Q&A during the preceding presentation session, time for the panel session was reduced to 40 minutes.

The panel took the form of collecting the question form distributed at the time of registration, and moderator asking these questions to the appropriate panelist. This is with the objective to analyze participants' interest. Since the majority of participants were the same as the previous day, we avoid the duplication of questionnaires. The result showed high interest to standardization both from industry and academia. This is a big hint in considering the session of coming MAW.

Main Q&As were as follows:

- Q (Prof. Noda): There are many comments and questions about standardization. Prof, Ono said "Let's discuss more about standardization activities in the panel session." after his presentation. Do you have additional comments? And what IEEE can help for standardization?
- A (Prof. Ono): Giving the opportunity to have a simulated experience of standardization meeting is a good activity example in IEEE. Standardization education is important and recently spot-lighted.
- A (Dr. Sako): Japanese people have few experience in debating, so a place to practice discussions as in standardization meeting would be helpful, especially for those who would attend for the first time.
- A (Dr. Kuwahara): In my field, de-fact standard is given priority over standardization. It takes too much time until the standard is fixed.
- Q (Prof. Noda): What do you expect to IEEE?
- A (Dr. Sako): Most companies propose technologies to standardization body when the proposal benefits their business. IEEE can evaluate the technology with fair and multidimensional metrics, then helps a good technology expand beyond one company.
- A (Prof. Ono): What IEEE contributes to industries? Not only members can read papers and attend conferences, but there are also non-visible advantages for the members. For example, the activities what Dr. Nishimiya did are one of the excellent ideas. It is important to promote the IEEE activities to industries.
- Q (Prof. Noda): What are attractive points of IEEE for Japanese?
- A (Ms. Su): In Japan, there are domestic academic societies. However, IEEE member can take interaction with engineers and researchers all over the world. They have opportunity to make new precuts and to do collaboration projects with them.

There are many volunteers in IEEE. If some Japanese students have English barrier, they can be taught from LMAG members. It is also advantages for the industry practitioners.

A (Dr. Nishimiya): Most of companies do not pay annual membership fee, however, they pay registration fee for the conference. It is a reason for not joining the IEEE. Therefore, individual merits from IEEE are necessary.

I think making IEEE branch in companies is good solutions like the student branch. They can ease to make network in the company and it is useful for their jobs.

- A (Dr. Sako): In most Japanese companies, the percentage of women engineers are not high. Meeting other women engineers who are working in other company in IEEE or other academic society is an attractive opportunity. I agree that it is important to consider how IEEE can provide merits to individual.
- A (Prof. Ono): Recruit and bridging between students and companies are good for Japanese students
- A (Dr. Kuwahara): IEEE Access has merits for industries. However, it needs to gain recognition. Upper layer engineers have weaker relation to IEEE or academic societies comparing to lower layer engineers. Promoting to industries is the same meaning as promoting to social world. The academic society is not only IEEE, thus IEEE should collaborate with other societies for promotions.

In IEICE (Japanese Society), technical visit to industries are popular for members. This kind of activities should better be held in IEEE.

- A (Ms. Su): IEEE has many affinity groups like YP, WIE and LMAG. LMAG is a mentor for YP. So, please utilize those affinity groups.
- A (Dr. Mochida): We already held the exchanging workshop among LAMG/Students/YP/WIE.



2.3 Networking reception

Figure 5 Scene of networking reception

Network reception was held in the facility of Waseda University. As can be seen from Figure 5, network reception this time provided the participants with excellent opportunity to talk with people beyond generation and gender, which was the intention of this event.



Figure 6 Assembly photo after networking reception

3. Conclusion

As a whole, the event of this time can be evaluated as a successful one judging from the number of participants, which is 2-3 times more compared with the similar events Tokyo Section provides. It should be noted that the very active discussion was done between the speakers and the floor, which is rare in Japan, and one of the base to judge the event successful. These heavily owe to the participation form the IEEE head quarter managers. The participants seem to have enjoyed listening to the presentation of IEEE view and future direction. We can say that one of the values of being IEEE member in Japan is to have the opportunity to feel a global sense.

We, however, should create new mechanism to attract younger generation members who fall into the category of YPs. Even the statistics is not available, but the feeling is that the majority of participants are senior than YPs category. It is also pointed out the need to filter out the participants who are not necessarily suited to this kind of events.

We can conclude that the event is a good rehearsal for the coming MAW.

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