

This issue reports about IEEE Workshop on Japanese Industry Promotion and also two recent lectures jointly organized with Tokyo Section. The new officers for LMAG Tokyo 2015 and retiring officers for 2013-2014 are introduced along with the message by retiring officers.

#### 1. Workshop on Japanese Industry Promotion Organized by IEEE Japan Council and Tokyo Section

This Workshop was held on November 8–9, 2014 at Nishi-Waseda Campus, Waseda University, Tokyo, organized by IEEE Japan Council and Tokyo Section. Many LMAG-Tokyo and Kansai Members contributed as speakers, panelists and discussants from the floor.

Also WIE (Women in Engineering), YPs (Young Professionals), Student Branch delegates and non-IEEE members from industries were attending and productive discussions for deepening collaboration between industry and IEEE were made.

The activities of IEEE are divided into Technical Activities and MGA (Member and Geographic Activities), and this workshop was organized as the activity for MGA to discuss the bidirectional collaboration with the Japanese industries.

Prof. Koyama, Chair of Japan Council, Prof. Tsuda, Chair of Tokyo Section, Prof. Fukuda, Region 10 Director, and also 4 key persons from MGA headed by Prof. Lawrence Wong led the discussion among 100 participants about the future possibilities of IEEE in Japan. From LMAG-Tokyo, Dr. Hideo Kuwahara, one of the youngest members, talked about his rich experiences as an industry IEEE member.

It was recognized that using IEEE networks is the useful key for international competitiveness of Japanese industry. LMAG members will continue to try to encourage the IEEE networks in the company and to organize joint programs with YPs, WIE or Student Branches.

This Workshop was planned as the preparation of "Industry Promotion Committee" which was officially



Workshop on Japanese Industry Promotion

started on January 1, 2015 (Chair; Dr. Yukou Mochida) under IEEE Japan Council. LMAG will collaborate with this newly born committee. The record of this workshop will be posted on the web page of Japan Council. (<http://www.ieee-jp.org/japancouncil/>)

#### 2. Lectures Celebrating the IEEE Milestone to the First Trans-Pacific Cable (TPC-1) by KDDI (former KDD), AT&T and Hawaiian Telecom

The first Trans-Pacific Cable (TPC-1) was approved as the IEEE Milestone on July 14, 2014, which is the first telephone cable crossing Pacific Ocean that KDDI (former KDD), AT&T and Hawaiian Telecom started operation in 1964. The Dedication Ceremony of the IEEE Milestone for TPC-1 took place on Wednesday Nov. 12, 2014, at Hotel Grand Palace, Tokyo. The commemorative lecture meeting was held after that ceremony.



Commemorative lecture for IEEE Milestone

In this lecture meeting, Dr. Isao Shirakawa, Chair of Japan Council History Committee, overviewed IEEE Milestone. Then, Mr. Atsuo Ebata (President of AMMEC, formerly with KDD) summarized the TPC-1 project, and Hachirou Tamaki (formerly with Ocean Submarine Cable Co.) presented the situation of cable makers at that time. Finally, Mr. Shigeto Kiritani (CTO, KDDI) gave a lecture entitled "TPC-1 to FASTER".

The submarine cable used for TPC-1 was the coaxial cable with one inch outside diameter called SD cable, and it was laid from Ninomiya, Japan to Hawaii via Guam, Wake and Midway by the route length of 9,800km. The cable system transmitted 128 telephone channels with each 3kHz band using the amplifiers installed every 37km which Western Electric Co. produced.

One third of the laid SD cable was made in Japan by Ocean Submarine Cable Co., which was established for the development of SD cable. The cable laying was carried out from Jan. 12 through May 14, 1964, and an inauguration ceremony of TPC-1 was held on June 19, 1964. In the ceremony, the first Japan-US call was performed between President Lyndon Johnson and Prime Minister Hayato Ikeda.

TPC-1 enabled a stable telephone between Japan and US for the first time instead of an unstable short wave radio. Therefore, TPC-1 played an important role to respond to the increasing international call demand in those years when the Japanese economic growth was remarkable.

After that, the appearance of optical communication technology have pushed forward submarine cable systems with a digital transmission over optical fiber. TPC-3 with 560Mbps (7,560 telephone circuits) transmission using regenerative repeaters was installed between Japan and US in 1989. Later, TPC-5 with 10Gbps (120,000 telephone circuits) transmission using the optical amplifier was developed, and the Pacific crossing TV broadcast was realized for the first time in the Atlanta Olympic Games in 1996. The latest submarine cable system called FASTER, of which laying was started in 2014, has been developed so as to realize transmission capacity of up to 60Tbps over six-fiber-pairs with each 100 wavelength multiplexing channels using a digital coherent transmission technology of 100Gbps.

### 3. Lecture Jointly Organized with Tokyo Section, Japan Council WIE Affinity Group Application-oriented Human Interface R&D ---Common Sense from No Common Sense by Dr. Miwako Doi

Dr. Miwako Doi, one of the leaders of Human Interface R&D in Japan, gave a lecture for Tokyo Section, WIE and LMAG, on December 8 (Mon) in Tokyo. After the introduction of NICT (National Institute of Information and Communications Technology) where she is now auditor, with many actual examples she reviewed her track as human interface researcher and engineer, and top technology executive in Toshiba.



Dr. Miwako Doi at the lecture

A few decades ago, it was said that human-interface research was not research. However, she continued to work on it for 35 years, and accomplished numerous big successes. Also, it was said that there could be no patent of software, but she continued to challenge the patent application. As a result, she was recognized as All Japan Best Patent Award recipient. She pointed out the importance of aiming at the target beyond the existing common sense. She challenged new technologies, thinking always about the applications. Some examples are machine translation, gesture recognition, wearable devices, brain modeling, which deeply impressed the audience in various ages.

### 4. Election of the 2015 Officers

Call for the additional nomination of the officer candidates was announced, but there was no proposal by the time limit of Sept.30. At LMAG officers meeting of Nov. 12, the original candidates shown below were elected as **LMAG-Tokyo officers for 2015**.

Chair: Koichi Inada; Advisor, Fujikura, Co. Ltd.

Vice Chair: Tetsuya Miki; Professor, University of Electro-Communications

Secretary: Tadashi Takano; Guest Professor, Nihon University

The handing-over meeting between the resigning officers shown below and the new officers shown above was held on the afternoon of Dec.19, 2014 at Kikai-Shinko-Kaikan Bldg.



New officers from the left:  
Dr. K. Inada, Prof. T. Miki and Prof. T. Takano



Resigning officers from the left:  
Dr. Y. Mochida, Prof. K. Tada and Prof. T. Miki

## 5. Greeting from Resigning Officers

The Life Members Affinity Group of IEEE Tokyo Section (LMAG-Tokyo) is a volunteer-based group composed of all the life members of Tokyo Section. The group enjoys a variety of activities on the basis of its self-governance and spontaneous collaboration among members.

Among so many IEEE Sections in the world, only about 80 Sections host their LMAGs. In Region 10 (Asia-Pacific Region), there are only 5, and in Japan, only 2 (Tokyo and Kansai). This surprising fact may show an aspect of LMAGs. Forming LMAG and operating it in a proper way are not easy tasks. An intense collaboration and efforts are required for members, officers and those involved in the Section, etc. Otherwise, the objective of LMAGs is not fully fulfilled, which is described as "to enrich each member's life through wide-ranged collaboration, stemming from their invaluable long-ranged experiences, and deep knowledge."

Currently LMAG-Tokyo has about 500 members and is the biggest in the world outside the U.S.A. It was inaugurated on Oct. 8, 2010, and two basic activities of LMAG-Tokyo; to hold technical lecture meetings, and to publish Newsletters; were established in the first two-year period owing to efforts by founding officers, Kohei Habara Chair, Shiro Usui Vice Chair, and Yukou Mochida Secretary.

We, the succeeding officers as shown below, have served for two years, from Jan.1, 2013 to Dec.31, 2014.

Chair: Kunio Tada; Professor Emeritus, University of Tokyo

Vice Chair: Yukou Mochida; State of Bavaria (Germany) Japan Office

Secretary: Tetsuya Miki; Professor, University of Electro-Communications

Some of our initial goals were as follows:

1. Expand and enhance two basic activities shown above,
2. Look for new kind of activities.

Fortunately, soon after we assumed our officers' job, Prof. Yoshihisa Okumura (formerly with NTT; Prof. Emeritus, Kanazawa Inst. of Technology) received the Charles Stark Draper Prize. In celebration of this prestigious prize granted for the first time to a Japanese researcher, we held a lecture-discussion meeting, which was very well received by the audience. (cf. Newsletter No.10)

<http://www.ieee-jp.org/section/tokyo/lmag/newsletter/2013/10.pdf>

On July 10, 2014, we tried a technical tour probably for the first time in Tokyo Section. It was a visit to Chofu Aerospace Center of Japan Aerospace Exploration Agency (JAXA) followed by well-organized lecture by Dr. Keiji Tachikawa (former Chairman of JAXA) and a get-together party. These three successive events were also quite welcomed by the participants. (cf. Newsletter

No. 13)

<http://www.ieee-jp.org/section/tokyo/lmag/newsletter/2014/13.pdf>

From the viewpoint of life members, it is important to record and publish what they were involved in so as to transfer their long-ranged experiences and accomplishments to younger generation. Also, it seems many of life members are willing to serve as mentors or advisors for younger people if they are requested. Such activities for inter-generation and interdisciplinary exchange and collaboration are becoming more and more important nowadays. On March 15, last year, a collaborating meeting among 4 groups (LMAG, YPs, Student Branch of Tokyo Section, and WIE of Japan Council) was held successfully. (cf. Newsletter No.12)

<http://www.ieee-jp.org/section/tokyo/lmag/newsletter/2014/12.pdf>

As is introduced in Article 1 at the top of this issue, LMAG-Tokyo made a great contribution to the Workshop on Japanese Industry Promotion, newly held last November. Furthermore, as shown in Article 3 of this issue, the first collaboration lecture meeting was realized with WIE of Japan Council.

At this moment to wrap up activities responsible for the resigning officers of LMAG-Tokyo, we are pleased to review some of recent accomplishments and discuss some future direction of LMAG activities. If we may add one more remark, the participation and involvement in various events by life members are most welcome. Your comments, suggestions, and proposals for the advance of LMAG-Tokyo are also appreciated. Finally, we sincerely hope and believe that the LMAG-Tokyo activities will develop further under leadership of the new officers.

## 6. Call for Contribution

Your contributed articles are always welcome. Please contact to the secretariat. < [tokyosec@ieee-jp.org](mailto:tokyosec@ieee-jp.org) >

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