A Brief Report on IEEE Milestones Activities in Japan and IEEJ Technical Meeting Featuring IEEE Milestones

Akihiko Yamada, June 22, 2012/6/21, updated on 6/29

There are seventeen dedicated IEEE Milestones in Japan as of May 2012 as shown in Table 1 (next page). We had four IEEE Milestone related events in this spring.

(1) Dedication Ceremony of IEEE Milestone for the International Standardization of G3 Facsimile and Lecture of IEEE Tokyo Section: April 5, 2012

Dedication Ceremony of IEEE Milestone for the International Standardization of G3 Facsimile was held on April 5, 2012, at Imperial Hotel, Tokyo, Japan. The two-dimensional coding MR (Modified READ) method for G3 facsimile was developed through the collaboration of NTT and KDDI. Gordon Day, IEEE President, presented commemorative plaques to Satoshi Miura, President and CEO, NTT, and Takashi Tanaka, President, KDDI.

Dedication ceremony pictures: http://www.ieee-jp.org/section/tokyo/bulletin/2012/no72/0405milestone_pic.htm

After the dedication ceremony, IEEE Tokyo Section lecture entitled "Commemoration of IEEE Milestone Award on International Standardization of G3 Facsimile in 1980" was held with 124 participants. Following lectures were given:

1) "Introduction to the IEEE Milestones", Eiichi Ohno, IEEE Japan Council History Committee Chair

2) "Redundancy Reduction Coding Techniques of G3FAX for International Standardization" by Toyomichi Yamada, NTT

3) "Role and Effectiveness of International Standardization in G3FAX" by Yasuhiro Yamazaki, KDDI

(2) IEEE Technical Tour to Japan : May 20-28, 2012

This is the third IEEE Tour following the first one to Panama Canal in March 2010 and the second one to United Kingdom in May 2011. This tour featured to visit IEEE Milestones and cultural heritages in Japan. It was planned by the Japan Council History Committee (JCHC) and the Tokyo Life Members Affinity Group (LMAG), with the cooperation of three IEEE Sections in Japan - the Kansai, Nagoya, and Tokyo Sections. The visit to related museums and cultural heritages in the districts of Nara, Kyoto, Nagoya, Tokyo, and Yokohama were also included in the tour as shown below:

Day 1: Welcome to Kyoto

Day 2: Sharp Historical Hall* and Temples in Nara

Day 3: Lake Biwa Canal Museum and Heritages in Kyoto

Day 4: Bus trip to Nagoya and Railway Park*

Day 5: Yosami Memorial Museum* and Toyota Commemorative Museum

   Shinkansen (Bullet train) to Tokyo

Day 6: NHK Museum of Broadcasting* and Seiko Institute of Horology*

Day 7: Toshiba Science Museum* and JVC VHS Commemorative Hall*

Day 8: Edo-Tokyo Museum, Akihabara and shopping in Ginza

Day 9: End of Tour

(Mark"*" means IEEE Milestone site

Twenty six from US and one from UK joined the tour from abroad. Fortunately Mt. Fuji was seen from the Shinkansen bullet train on the way to Tokyo. I joined the tour on Day 6 and 7.

Table 1 **IEEE Milestones in Japan** (order of dedication)   May 2012

	Title	Date of Dedication and Dedicated Organizations	Tech Tour	IEEJ Mtg.
1	Directive Short Wave Antenna, 1924	17 June 1995 Tohoku University		
2	Mt. Fuji Radar System, 1964	6 March 2000 Japan Meteorological Agency		
3	Tokaido Shinkansen, 1964	13 July 2000 Central Japan Railway Company	#	#
4	Electronic Quartz Wristwatch, 1969	25 November 2004 Suwa Seikosha, Seiko Group	#	
5	Pioneering Work on Electronic Calculator, 1964-1973	1 December 2005 Sharp Corporation	#	
6	Development of VHS, a World Standard for Home Video Recording, 1976	11 October 2006 Victor Company of Japan	#	
7	Railroad Ticket Examining System, 1965-1971	27 November 2007 Osaka Univ., Kintetsu, Omuron & Hankyu Corps.		
8	First Japanese Word Processor for Japanese Language, 1971-1978	4 November 2008 Toshiba Corporation	#	#
9	Yosami Radio Transmitting Station, 1929	19 May 2009 Kariya City	#	
10	Development of Ferrite Materials and their Application, 1930 - 1945	13 October 2009 Tokyo Institute of Technology, and TDK Corp.		
11	Development of Electronic Television, 1924 -1941	12 November 2009 Shizuoka University		
12	First Transpacific Reception of a TV Signal via Satellite, 1963	23 November 2009 KDDI		
13	Kurobe River No.4 Hydropower Plant, 1956- 1963	9 April 2010 Kansai Electric Power Co.		#
14	Commercialization and Industrialization of Photovoltaic Cells, 1959-1983	9 April 2010 Sharp Corporation	#	
15	First Direct Broadcast Satellite Service, 1984	18 November 2011 HNK (Japan Broadcasting Corp.)	#	#
16	First Practical Field Emission Electron Microscope, 1972	31January 2012 Hitachi High-Technologies		#
17	International Standardization of G3 Facsimile, 1980	5 April 2012 NTT and KDDI		#

IEEE Technical Tour to Japan: May 20-28, 2012

First direct broadcast sattelite service

NHK Museum of Broadcasting

First Japanese word processor

First electronic quarz wristwatch

Development of electronic television

First prototype of VHS recorder

Development of VHS

Commemoration photo of IEEE Technical Tour to Japan at JVC0-Kenwood

(3) IEEE Tokyo Section Lecture Meeting: May 28, 2012

The meeting was held at Japan Society for the Promotion of Machine Industry in Tokyo. Eiichi Ohno, JCHC Chair, reported on the IEEE Technical Tour to Japan just finished. Roland J. Saam, IEEE UK & RI Life Member Affinity Group chair and editor of Region 8 Newsletter Editor, gave a talk entitled "IEEE Technical Tour and Historical Activities in Region 8." He also talked about his impression of the tour this time.

Dedicated milestones in Japan by Eiichi Ohno

Historical activities in Region 8
by Roland Saam

(4) IEEJ Technical Meeting on History of Electrical Engineering: June 8, 2012

The program featured the IEEE Milestones as follows:

1） IEEE Milestones and dedicated Milestones in Japan by E. Ohno, JCHC Chair
2） Key technology to support the safe and reliable transportation of Tokaido Shinkansen by A. Mouri, Central Japan Railway Company
3） Japanese word processor from stand point of innovation by M. Doi, Toshiba
4） The history of Kurobe River No. 4 hydro power plant by F. Shinojima, Kansai Electric Power Co., Inc.
5） The first direct broadcast satellite service by E. Sawabe, NHK
6） Practical use of the field emission electron microscope by M. Suzuki et al., Hitachi High-Technologies Corp.
7） Two-dimensional coding scheme and international standardization of G3FAX – Honored as IEEE Milestone – by K. Yuki et al., NTT, and Y. Yamazaki et al., KDDI
8） Development of early electronic calculators by A. Yamada, CS and Media Lab.

Each presentation is related to a dedicated Milestone except the last one. Besides the technical features of each Milestone, the efforts and struggles for preparing proposals and nominations of Milestone candidates were also introduced. An example is the case of Japanese word processors. Japanese has three kinds of characters, Katakana, Hiragana and Kanji. They are usually input in Roman alphabet. The biggest issue in developing kana-kanji conversion technology is the selection of different kanji with the same reading (kanji homonyms).Toshiba's JW-10 adopted a method based on the factors of context and use frequency. It is not easy to explain to non-Japanese people why the development of Japanese word processors is so difficult. This would be the first time to present and discuss the IEEE Milestone issue at a Japanese society technical meeting.