

5th IEEJ Commemoration: One Step on Electrotechnology

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On March 22, 2012, the 5th Commemoration: One Step on Electro-Technology (Look Back to the Future)* of the Institute of Electrical Engineers of Japan (IEEJ) was held at the Hiroshima Institute of Technology during the IEEJ annual convention. IEEJ started this program in 2008 as part of its 120th anniversary celebration to commemorate excellent technical achievement in electrotechnology in four categories: products, places, events, and people.

The following five technical achievements were recognized this year:

- the NE-type phototelegraphic system (facsimile machine) (NEC),
- realization of television viewing at home and home video recorder (Sony),
- nickel-cadmium rechargeable batteries (Energy Company of and SANYO Electric Co., Panasonic Group),
- PC-9800 Series (NEC Personal Computers), and
- Yosami Radio Transmitting Station and the first radio communication between Japan and Europe (Yosami Radio Transmitting Station Memorial Museum, Kariya, Aichi).

The awardees' names are listed in parentheses following the item.

The NE-type phototelegraphic system was developed by Yasujiro Niwa and Masatsugu Kobayashi of NEC and was successfully used to transmit pictures for a newspaper company on the occasion of Emperor Hirohito's enthronement ceremony held in 1928. Niwa later served as the first president of the Tokyo Denki University.

Sony developed World's first transistor-based videotape recorder in 1961 and the world's first all-transistor consumer use VTR using a 1/2-inch-wide tape in 1965. In 1975 the first Beta system VCR "Betamax" was put on market. It utilized 1/2-inch-wide tape with a cassette and was advertised as a "time-shift machine," allowing users to watch TV programming at their own convenience.

SANYO Electric (present Energy Co. and SANYO Electric.Co, Panasonic Group) succeeded in the commercialization of sealed rechargeable nickel cadmium batteries "CADNICA" based on the company's proprietary technology in 1963. CADNICA batteries were well accepted all over the world and marked the cumulative production of 11billion units in 2010

NEC launched PC-9801 personal computer, the first model of PC-9800 series, in 1982. It used an NEC 16 bit microprocessor and graphic controller LSIs and realized Japanese Kanji handling and high performance capabilities. PC-9801 and later models were introduced for both academic and business purposes. Especially they became essential tools for researchers at universities and contributed to promote research activities. The series was also well accepted by consumers and took the lead in the domestic market.

The Yosami Radio Transmitting Station was built for the wireless communications between Japan and Europe in 1929. The gigantic antenna system of 250-meter-high steel towers and 1,760-meter antenna and the 500 KW high-power very low frequency (VLF) transmitting facilities were used until 1993. Major facilities are preserved as Yosami Radio Transmitting Station Memorial Museum and have been recognized as IEEE Milestones.

On the same day, a symposium on the cooperation of commemoration and heritage activities was held as a part of the national convention. The representatives from the IEEJ, IPSJ, Chemical Society of Japan, Japan Society of Mechanical Engineering, Japan Society of Civil Engineering, and National Museum of Science and Nature reported the current status of their activities. Although their approaches might differ, they have many issues in common. It would be useful to get together and discuss these issues to make the activities more effective.

*Website in Japanese: <http://www2.iee.or.jp/ver2/honbu/30-foundation/index.php>