

Technology Heritage Activities in Japan

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The National Museum of Nature and Science (NMNS), academic societies, and governmental organizations are establishing ways to recognize and commemorate important historical artifacts as part of our technological heritage to promote the preservation of important artifacts and technology. For the same reasons, IEEE Milestones activities are also popular in Japan.

Since April 1997, NMNS has conducted the “Research on the Evaluation, Preservation, and Publication of Materials on Industrial Technology” project in partnership with industries, academic societies, and the public sector. In 2002 NMNS established the Center of the History of Japanese Industrial Technology¹ which has published survey reports on the systematization of technologies for each technology area and has built a database of the history of Japanese industrial technology. Since 2008, NMNS holds a recognition ceremony of Essential Historical Materials for Science and Technology every year and issues a certificate of registration and a plaque to the artifact owners. So far 113 artifacts were registered².

The “Commemoration: One Step Electro-Technology (Look Back to the Future)” of the Institute of Electrical Engineers of Japan (IEEJ) started in 2008 to commemorate technical achievements in electrotechnology. Achievements are categorized into four areas—products, places, events, and people—and must be at least 25 years old, the same as IEEE Milestones. A commemoration ceremony is held during the IEEJ’s annual national convention. At the first ceremony in October 2008, 10 achievements were commemorated, including the electric town “Akihabara” in downtown Tokyo. Five additional achievements were commemorated in the fifth ceremony this year³, for a total of 30.



Akihabara Electric Town in downtown Tokyo was commemorated as a technical achievement by the Institute of Electrical Engineers of Japan in 2008.
(Courtesy of Akihabara Electrical Town Organization)



Shinko-Seisakusho electromechanical telecommunication devices certified as a Japan Society of Mechanical Engineering Mechanical Engineering Heritage in 2008.
(Courtesy of Shinko MechatroTech Co. Ltd.)

The Japan Society of Mechanical Engineering (JSME) collected machine tools developed and used before 1912 as monument of machinery in 1997 as a part of its 100th anniversary events. In 2007, JSME established the Mechanical Engineering Heritage certification program as a part of its 110th anniversary to preserve important artifacts as a cultural heritage for the next generation. The heritage artifacts fall into four categories: sites (mechanical heritage with historical landscape), landmarks (architecture or construct with machinery), collections (machinery), and documents. In 2007, 25 artifacts were certified including Tokaido-Shinkansen electric multiple units (bullet trains). The mechanical calculator Jido Soroban (Automatic Abacus) and electromechanical telecommunication devices made by Shinko Seisakusho were certified in 2008. This year, five additional heritage artifacts were certified including Ricoh’s Ricopy101 (desktop copier) sold in 1955, for a JSME grand total of 56.

The Information Processing Society of Japan (IPSJ) started the Information Processing Technology Heritage program in March 2009, certifying 23 artifacts and two satellite museums of historical computers⁴. IPSJ also holds a certification ceremony during their annual convention and this year certified 12 additional artifacts and a satellite museum, for a total of 55 artifacts and six satellite museums. The number of software products certified so far is just two. IPSJ has tried to find additional heritage software candidates, but most historical software materials have not been kept.

The Japan Society of Civil Engineering (JSCE) started the Civil Engineering Heritage program in 2000 to preserve historical civil engineering structures. In the first year, JSCE certified 10 structures. So far, JSCE has certified 215 structures. The Chemical Society of Japan (CSJ), Japan Industrial Archaeology Society, Japan Aeronautic Association, Atomic Energy Society of Japan, and Ministry of Economy, Trade, and Industry also have similar heritage programs. At the IEEE annual convention in March 2012, a panel was arranged to report and discuss the current status and issues about heritage commemoration in Japan. Panelists were from the IEEE, JSME, IPSJ, CSJ, and NMNS. The objective of each society's program might differ, but the exchange of information was certainly useful.

IEEE Milestone activities are promoted by the IEEE Japan Council History Committee (JCHC) and IEEE sections in Japan. The first was the "Directive Short Wave Antenna" (Yagi-Uda Antenna) dedicated in 1995. So far 17 Milestones were dedicated including International Standardization of G3 Facsimile⁵. JCHC and the Tokyo Life Members Affinity Group coordinated an IEEE Technical Tour to Japan from May 20 to 28.

A full report will be published in the upcoming issue of IEEE Annals of History of Computing.

References

1. Visit <http://www.kahaku.go.jp/english/institution/sts/index.html> for more details on the Center of the History of Japanese Industrial Technology.
2. Visit <http://sts.kahaku.go.jp/english/material/index.html> for the details of registered artifacts
3. A. Yamada, "IEEJ Commemoration; One Step on Electro-Technology," *IEEE Annals of the History of Computing*, vol. 34, no. 3, 2012, pp. 70–73.
4. A. Yamada, "IPSJ Information Processing Technology Heritage Program," *IEEE Annals of the History of Computing*, vol. 31, no. 3, 2009, pp. 78–82.
5. "IEEE Milestone Dedication Ceremony and Commemorative Lecture (The 2012 Fourth Commemorative Lecture of Tokyo Section)," 2012; http://www.ieee-jp.org/section/tokyo/bulletin/2012/no72/2012-03_e.htm.