Events and Sightings

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SIGCIS at SHOT Conference

The 56th annual conference of the Society for the History of Technology (SHOT) met in Portland, Maine, on 10–13 October 2013. Two of the main themes of the meeting were multiple histories and diversity in a global environment.

The Special Interest Group for Computers, Information, and Society (SIGCIS) of SHOT sponsored four sessions in the SHOT main program, including "Analog History: The Forgotten Post-WW II World of Analog Computing," organized by Thomas Haigh; "Gender and Computing: International Perspectives," organized by Corinna Schlombs and Marie Hicks; "Gaming the History of Technology," organized by Laine Nooneyand Jacob Gaboury; and a hands-on workshop on the "Digital Humanities," with organizers and panelists Charles Berret and Kevin Gotkin.

"Computers for What?" was another complete session that was devoted to the history of computing in the SHOT main program. There were also at least several other individual papers that discussed the history of information technology, such as Meryl Alper's "Can Our Kids Hack It With Computers?: Making Hacking 'Family-Friendly,' 1983–1987" and Nathan Ensmenger's "Toward an Environmental History of Computing."

SIGCIS hosted an annual lunch on Friday to award travel grants to graduate attendees of its Sunday workshop and to hold a book auction, with books donated by attendees, SIGCIS members, and especially MIT Press and Jim Cortada. SIGCIS Chair Thomas Haigh reported that the luncheon raised $1,520 (a record), with about 45 people in attendance.

The Sunday SIGCIS workshop was entitled "Old Ideas: Recomputing the History of Information Technology." As the introduction of this workshop mentioned, information technologies have little time for old thinking, or for anything old, but this workshop invited scholars to turn their attention to old ideas and their relationship to information and computer technology.

The day-long workshop had an opening plenary, four sessions, and a closing plenary. During the opening plenary, William Aspray, the keynote speaker, gave a talk entitled "In Search of the Many Histories of Information," which nicely echoed one of the main themes of the SHOT meeting. Aspray traced his research back to Michael Mahoney's speech in 2005 when Mahoney argued that there was no one master narrative of computing but instead there were many histories of computing. Aspray identified some of the many histories of information by exploring the complex relations among the histories of computing, the histories of information technologies, library histories, archive histories, and the histories of information studies.

In the morning session, "New Wine in Old Bottles? Tensions Between Computer Science and Traditional Disciplines," Janet Abbate explored how computer science was constructed in the 1960s; Pierre Mounier-Kuhn traced the emergence of computer science in France between 1955 and 2000; and then Irina Nikiforova examined and compared the emergent computer science journals in the US and Russia, 1945–1970. Another morning parallel session, "Old Ideas on Control and Communication," covered transitions from the analog to the digital domain in electric power systems (by Julie Cohn), a prehistory of the Internet about international teleprinter networks (by Christopher Leslie), and the educational computing networks in Minnesota 1965–1975 (by Joy Rankin).

In the afternoon "work in progress" session, two dissertation-related papers were Trevor Croker's cloud computing and the physicality of the Internet and Jacob Gaboury's computer graphics at the University of Utah. Thomas Haigh had a column in progress titled "Turing Didn't Invent the Computer" for the *Communications of the ACM.* All three articles were precirculated. The other afternoon parallel session called "Old Ideas and New Technologies" focused on punch cards and industrial control (by Barbara Hahn) and on MIT's Project Athena in the development of the distributed computing paradigm (by Mary E. Hopper).

The closing plenary was called "An Ancient Continent as a New Frontier: Discovering that Computing Has a History in Asia," during which three presenters discussed the 19th-century newspaper *Mahratta* and the rise of technological nationalism in India (by Ross Bassett), BBSs and the emergence of online communities in India (by Ramesh Subramanian), and the origins of laptop contract manufacturing and the transnational learning years in Taiwan, 1988–2001 (by Ling-Fei Lin).

During the workshop, Joe November was awarded the 2013 Computer History Museum Book Prize for his *Biomedical Computing: Digitizing Life in the United States* (John Hopkins Press, 2012). Lunch was provided by the IEEE History Center, and the SIGCIS members met jointly with the IEEE History Committee and other SIGs, followed by an informal discussion on the topic of how engineers and historians of technology could work together.

The workshop provided interesting perspectives on connecting different old/new histories from various disciplines, cultures, and countries. In my view, this is a promising new direction. It seems that there is much research yet to be done on the non-US history of computing and information because the developments, applications, or uses of information technology (IT) in various countries and cultures are so different. A great deal remains for us to explore in the future, and hopefully, we can uncover multiple, diverse histories of IT and engage them better with the broader history of technology and the general history.

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IEEE Milestone Awarded to Toshiba's T1100 Laptop PC

On 29 October 2013, Toshiba's T1100 Laptop PC (see Figure 1) received the IEEE Milestone Award. This is the 15th IEEE Milestone in Japan. The dedication ceremony was held at Hotel Okura in Tokyo. IEEE President Peter Staecker gave the certification to Astutoshi Nishida, chairman of Toshiba (see Figure 2). The citation reads,

> The Toshiba T1100, an IBM PC compatible laptop computer that shipped in 1985, made an invaluable contribution to the development of the laptop PC and portable personal computers. With the T1100, Toshiba demonstrated and promoted the emergence and importance of true portability for PCs running packaged software, with the result that T1100 won acceptance not only among PC experts but by the business community.

After the ceremony, a lecture meeting was held and the following presentations were given:

- "Introduction to the IEEE Milestones" by Isao Shirakawa, chairman of the IEEE Japan Council History Committee and professor of the University of Hyogo.
- "Moving Forward with Innovation while Honoring and Learning from the Past" by IEEE President and CEO Peter Staeker.
- "The Laptop PC T1100; A Commemorative Lecture of Receiving the IEEE Milestone Award" by Toshiba Chairman Atsutoshi Nishida.

Figure 1. Toshiba's T1100 laptop PC received the IEEE Milestone Award. (Courtesy of Toshiba.)

Figure 2. IEEE President Peter Staeker gives the IEEE Milestone Certification to Toshiba Chairman Astutoshi Nishida. (Courtesy of Toshiba.)

In the 1980s, personal computers were winning acceptance for both personal and business uses after the Apple II was put on the market in 1977 and the IBM PC was released in 1981. However, it was still limited to a desktop environment. In the US, Compaq Computer developed an IBM PC compatible portable PC in 1983, the Compaq Portable I, a suitcase-sized computer that weighed 12.5 kg. In Japan handheld computers were developed: Seiko's HX-20/HC-20 in 1982 and NEC's PC-8201 in 1983. Both were of A4 file size, weighed 1.6 kg and 1.7 kg, respectively, but used 8-bit CPUs. Toshiba started development of a laptop PC in 1984 when IBM PC compatibles were the de facto standard for desktop PCs. Toshiba took the approach to building portable IBM PC compatible

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Toshiba will display a T1100 in a permanent exhibition with the IEEE Milestone Award plaque at the new Toshiba Science Museum.

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machines designed for the same environment as the IBM PC in the office. Not marketed in Japan, the T1100 was exhibited as a PC for the European and US markets at the Hannover Messe in Germany in 1985. The design target of the T1100 was "anywhere, anytime, anyone." In the early 1980s, prior to the IBM PC, personal computers were mainly tools for computer experts who had special knowledge of systems architecture, programming, and so on. The IBM PC had started to change this in offices, but personal computers were still big,

expensive systems that had to be set up on a dedicated desk. The T1100 was designed to improve this situation.

The main features of T1100 were as follows:

- 16-bit 80C86 CPU, with a maximum of 512 Kbytes of memory;
- built-in high-contrast 80 character × 25 line (640 × 240) liquid crystal display;
- built-in 3.5-inch floppy disk drive (720 Kbytes);
- 83-key full stroke keyboard; and
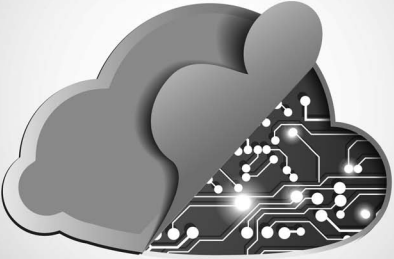- operable for eight hours using built-in nickel-cadmium battery.

The system was 31 (W) × 30 (D) × 6.7 (H) cm and weighed 4 kg.

To make the T1100 fully IBM PC compatible, Toshiba had to solve a big problem. The original IBM desktop PC had a 5.25-inch floppy disk drive as a default. Toshiba wanted to install a 3.5-inch floppy disk drive on the T1100 to implement a smaller size. The 3.5-inch floppy disk was a brand new product at that time, so software venders wouldn't ship their products on 3.5-inch disks. Because releasing software on 3.5-inch floppy disk was an essential issue, Toshiba made great efforts to visit software vendors and ask them again and again to adopt the new technology. Eventually, they succeeded in getting agreements to release software on 3.5-inch disks.Power consumption is also a key issue to realizing battery-driven portable machines. They used CMOS gate arrays to make the machine smaller and lighter and to reduce power consumption. They also developed a power control system to limit power consumption and extend battery life.The T1100 won market acceptance for its portability and sold 10,000 units in its first year in the market, mostly in Europe.

Toshiba will display a T1100 in a permanent exhibition with the IEEE Milestone Award plaque at the new Toshiba Science Museum, which will reopen in Kawasaki City in the early 2014.

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