Computer History Museum

Volunteer Information Exchange

Sharing what we know with those we know

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VIE

I'm relatively happy with the VIE. I think it serves a purpose and I enjoy doing it. The research is fun and I think it enhances my tours and docenting and I hope, yours.

But, it seems to be much less of a community effort than I had hoped. For the VIE to be as good as it can be, it really should have input from many (read *you*).

So, please send me your experiences, stories articles and jokes.

Jim Strickland jlstrick@aol.com

I think the government made Facebook in an attempt to make privacy uncool. Think about that. I think that's true 'cause they don't have to tap our phones or survey us when we just yield to them everything, just on our own free will. Home address? It's a little weird, OK. Phone number? Call me. Photos? Photos of everyone I know? Here, let me tag those for you. *Pete Holmes*

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COMPUTERS IN SPACE

IBM on-board computer for Project Gemini -1965

NASA used mainframe computers extensively with Project Mercury, but the capsule had no on-board general purpose computer. Space program engineers realized one would be needed for the complex maneuvering required for the eventual moon landing. So an on-board computer was contracted for Project Gemini - the bridge between Mercury and Project Apollo. IBM received a teletype proposing the computer on March 7, 1962 and work began on what one engineer described as "fitting a refrigerator inside a hatbox."

IBM delivered the 19-inch long, 58 pound computer in May 1963. It was contoured to fit inside the wall of the capsule and contained a 159,744 bit array of core memory about the size of a small loaf of bread. Core memory was chosen for its reliability and ability to continue storing data in the event of a complete power loss.

The computer made its operational debut on March 23, 1965 with Gus Grissom and John Young on board Gemini 3. They were instructed to ignore the computer if it disagreed with prior test calculations. It did, but mistakes in the human test calculations resulted in a splashdown 60 miles off target. Had the computer been followed, splashdown would have been closer to target. This incident paralleled the experience with the election prediction by the Univac computer years earlier.

In December 1965, Gemini 6 rendezvoused with Gemini 7 (which had launched first) – the first successful rendezvous in space.

STORIES

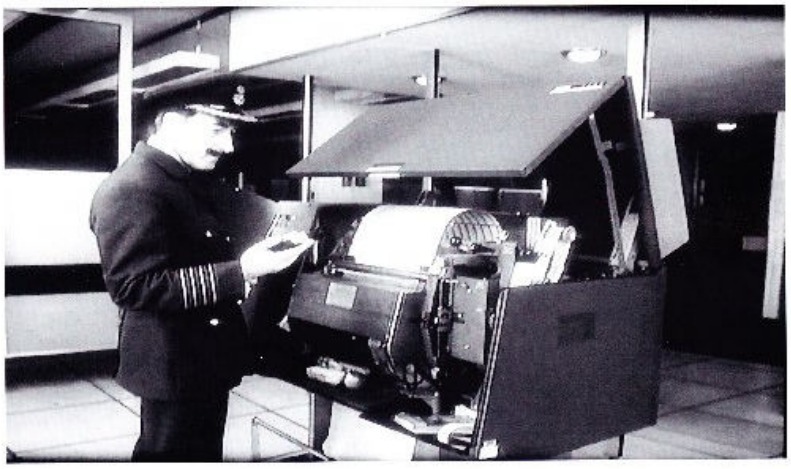
Do you have a favorite story? Did you just learn something new that you want to share. Even if you think, "Everybody knows that ...", please let us hear from you.

Hollerith's first commercial customer was the Prudential Life Insurance Co. Two machines were installed at Prudential in 1891. Initially, Prudential adopted tabulating technology simply to speed up manual processes of sorting, counting, and adding numerical data.

Next, machines were installed at the New York Central railroad in 1895. "The Central alone processed nearly 4 million freight waybills a year--each one by hand. If a punched card could take the place of the written waybill transcript, as Hollerith proposed, the giant railroad could chart its freight movements--and freight revenues--on a weekly rather than a monthly basis. It could tell on a nearly current basis how many hundreds of tons of freight were moving East--or West; which of hundreds of stations along its lines were profitable; where freight cars should be sent or returned; what freight agents were being paid. It would give the railroad a much firmer command of its far-flung business." The New York Central stopped using Hollerith machines after only a few months, but Hollerith soon convinced the company to try a new model and then obtained a contract.

Hollerith's initial tabulators counted one unit at a time. To handle the needs of railroad accounting, Hollerith developed tabulators that used a row of adding machines, which simultaneously added multi-digit numbers in each of several fields on a given card (e.g., 65,000 pounds of freight, 325 miles, etc.) to separate running totals.

However, other than the New York Central, no railroad used Hollerith machines until several more years had passed.



Peter Sellers as Group Captain Mandrake (one of three parts that he played) in Dr. Strangelove. In Vol 1 Issue 7 we stated that the IBM 7094 was shown in Dr. Strangelove. And so it was, but so was the IBM 1401.

The 1401 CPU is at Sellers' left in the top picture and he stands by the 1403 printer in the bottom picture. Most 7094's of the time would have had a 1401 "slave" to write and read for input and output.

Submitted by Bill Worthington.

"That the fitness of any system or machine to produce the end for which it was intended, bestows a certain propriety and beauty upon the whole, and renders the very thought and contemplation of it agreeable."
— Adam Smith

And that is why the Babbage Engine is displayed on an oriental rug.

Thanks to Bea Strickland for that observation.

Mauchly and Eckert after Univac

We know that John W. Mauchly and Presper Eckert invented ENIAC at the Moore School of Engineering School at the University of Pennsylvania and that after that, they started their own company and began development of UNIVAC. When their company failed, they sold out to Remington Rand, finished UNIVAC and are credited with creating the first commercially available electronic digital computer in the US.

But what happened after that?

Presper Eckert

"Pres" Eckert was the real electronic genius. He stayed with Remington Rand and became an executive within the company serving in various vice-presidential roles. He continued with Remington Rand as it merged with the Burroughs Corporation to become Unisys in 1986. In 1989, Eckert retired from Unisys but continued to act as a consultant for the company. He died of leukemia in 1995.

John Mauchly

Mauchly was always as interested in the use of computers as in the building of them.

In 1956, chemical company E. I Dupont De Nemours Inc. began development of a project planning system. In 1957, they contacted Remington Rand and began working with Mauchly, who was Director of Univac Applications Research, and James E. Kelley to develop a computer implementation. The system was called CPM (Critical Path Method) and it borrowed from a system developed by the US Navy called PERT (Project Evaluation and Review Technique.) PERT was used in the development of the Polaris missile.

In 1959, John Mauchly was asked by Remington Rand to spend full time in marketing. He did not want such an assignment and resigned. He started his own company Mauchly Associates and continued on developing CPM. Mauchly Associates later introduced the Critical Path Method (CPM) for construction scheduling by computer.

In 1967 he founded Dynatrend, a computer consulting organization. In 1973 he became a consultant to Sperry Univac. He was a founding member and president of the Association for Computing Machinery (ACM) and also helped found the Society of Industrial and Applied Mathematics (SIAM). Mauchly stayed involved in computers until his death in 1980.

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The following is by Bill (John William) Mauchly Jr. in a forward to the book. "People, Machines, and Politics of the Cyber Age Creation" by Dr. Rocco Martino. He refers to his father's leaving Remington Rand and forming a new company in 1959.

> So finally he was his own boss again. More importantly to him, I think, was that he had his own computer. The new company bought an IBM 1620 computer (yes, IBM had been his competitor until now, but already they were pulling ahead of Sperry Rand). The company used the computer by day, but Dad used it at night. It was his first of many "personal" computers. Sometimes he would bring my sisters and me to the office in the evening. We got to be very comfortable around computers and learned to use the key punch to enter data onto punch cards. I remember listening in as Dad was trying to teach assembly language to my older sister. The best part was playing Blackjack against the IBM mainframe. It was 1960.

The company was Mauchly Associates. The most important product of which was CPM (Critical Path Method) for project planning and scheduling..

Tip to Docents

Sometimes the videos can be a distraction but sometimes you can use them to your advantage.

Palm Pilot is a stop on my general tour. After discussing trends in place in the 90's and the market and the prototyping, I talk about the need for and function of synchronizing with one's PC, first using a cable, then using infrared beaming. Making that the last thing I mention, and softshoeing for a few seconds, I can then turn to the video and let the group watch the Palm Pilot ad.

I then close saying something like, "Not only did Palm show there was a market for hand-held devices, but it started computer dating."

Jim Strickland

FACTS AND FACTOIDS

Factoid (Oxford English Dictionary) "something which becomes accepted as fact, although it may not be true." If you submit an item, please differentiate the facts from the factoids. And if you can verify something, thus changing it from a factoid to a fact, please let us know.

On the need for ENIAC. By World War II the U.S. had battleships that could lob shells weighing as much as a Volkswagen over distances up to 25 miles.

Physicists could write the equations that described how atmospheric drag, wind, gravity, muzzle velocity, etc. would determine the trajectory of the shell. But solving such equations was extremely laborious. This was the work performed by the human computers. Their results would be published in ballistic "firing tables" published in gunnery manuals.

During World War II the US military scoured the country looking for (generally female) math majors to hire for the job of computing these tables. But not enough humans could be found to keep up with the need for new tables. Sometimes artillery pieces had to be delivered to the battlefield without the necessary firing tables and this meant they were close to useless because they couldn't be aimed properly.

Faced with this situation, the U.S. military was willing to invest in even hair-brained schemes to automate this type of computation.

- ***A printer consists of three main parts: the case, the jammed paper tray and the blinking red light.***
- ***How do I set a laser printer to stun?***
- ***Error message: "Out of paper on drive D:"***

Coming Events

Date	Day	Time	Event
Jun 29	Wed.	12 Noon	CHM Soundbytes - The History of Magnetic Striped Media Technology – A Lecture by Jerome Svigals
Aug 24	Wed.		Software patent debate
Nov 08	Tues.		The Technology of Animation DreamWorks Animation's Jeffrey Katzenberg and Ed Leonard will kick off this series, in a conversation moderated by HP's Phil McKinney.

Please contribute to the Computer History Museum Volunteer Information Exchange.

Share your stories, your interesting facts (and factoids) and your knowledge.
Send them to Jim Strickland (Jlstrick@aol.com)

Contribution is voluntary BUT please volunteer to contribute.