

Southeastern PA Cold War Historical Society

Celebrating
our 16th
year



*Preserving History Through the Memories
of Those Who Created It*

The Greater Philadelphia Region has a rich aerospace heritage!

To celebrate **America250**, we'll be sharing some of the region's aerospace heritage (and high tech history) throughout 2026!
Look for our monthly posts and Happy Birthday America!



250 AMERICA PA
NONPROFIT AFFILIATE



250 AMERICA PA
BUCKS COUNTY

Did you know that the Philadelphia Region played a critical role in early mainframe computer innovation?




The UNIVAC SYSTEM

(14)

ECKERT-MAUCHLY COMPUTER CORPORATION
SPECIALISTS IN ELECTRONIC DIGITAL EQUIPMENT
INCLUDING AUTOMATIC COMPUTERS FOR INDUSTRIAL CONTROLS
RAPID, ACCURATE, AND ECONOMICAL PROCESSING OF INFORMATION

The
UNIVAC
Universal Automatic
Computer
(Decimal and Alpha-
betic)



The
BINAC*
Binary Computer for
Engineering and
Industrial Control
Applications

The ECKERT-MAUCHLY COMPUTER CORPORATION, designers and builders of the UNIVAC SYSTEM, have incorporated into that equipment all of the knowledge and experience which their chief engineers gained through their technical direction of the ENIAC and initiation of the EDVAC projects. Their background and skill in the field of electronic digital computers is unequalled.

The new and important additional developments which make the UNIVAC a practical and reliable commercial device are not merely paper designs or laboratory curiosities, they are tested devices already incorporated into the BINAC design. Although the BINAC is not a decimal computer, nevertheless, the same principles of electronic design and the same basic electronic circuits and components, including the mercury delay line memory and four - megacycle computing and control circuits, are used in its design and construction. The BINAC, although not intended as a general - purpose computer, is a practical commercial application of the same devices which are used in the UNIVAC.

The UNIVAC is the only electronic computer which has been designed by an engineering staff who have successfully produced other computers employing the same electronic techniques. The UNIVAC is the only decimal electronic computer now under construction.

Information on the BINAC, and additional data regarding the UNIVAC, will be sent to those who request it.

*Trade Mark

ECKERT-MAUCHLY COMPUTER CORPORATION
Broad and Spring Garden Streets,
Philadelphia 23, Pa.

- 8 -

The **Eckert-Mauchly Computer Corporation** (EMCC) (March 1946 to 1950) was founded by John Presper Eckert and John Mauchly and was incorporated on December 22, 1947.

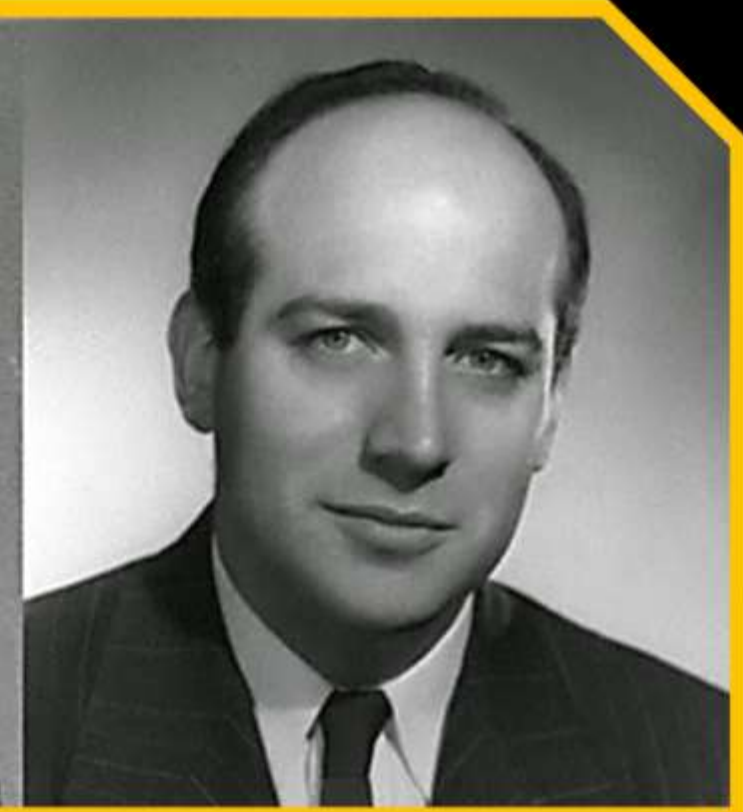
After building the **ENIAC** at the Moore School at the University of Pennsylvania in 1946, Eckert and Mauchly formed EMCC to build new computer designs for commercial and military applications.

The company was initially called the Electronic Control Company, changing its name to Eckert-Mauchly Computer Corporation when it was incorporated. In 1950 the company was sold to Remington Rand, which later merged with Sperry Corporation to become Sperry Rand, and survives today as Unisys.

John Mauchly



John Presper Eckert



WOW!

ENIAC was the first general-purpose electronic computer. It weighed over 27 tons and used over 17,000 vacuum tubes.



The company's work on ENIAC led to the development of the **UNIVAC I**, the first commercially available computer.

It was designed for business use, such as calculating payrolls and managing inventory.

The UNIVAC I was a groundbreaking machine, capable of performing calculations 1,000 times faster than its predecessors.

WOW!

The UNIVAC I was 25 feet by 50 feet in length, contained 5,600 tubes, 18,000 crystal diodes, and 300 relays. It utilized serial circuitry, 2.25 MHz bit rate, and had an internal storage capacity of 1,000 words or 12,000 characters. UNIVAC took up a huge room to perform its computations. The UNIVAC I was also the first computer to come equipped with a magnetic tape unit and was the first computer to use buffer memory. Each Univac I was equipped with ten magnetic tape drives each and all were compatible, that is, tapes generated on one drive could be used on any drive. In addition, since input and output operations on magnetic tapes were buffered, they could proceed independent of other central processing tasks which greatly increased throughput. These two characteristics made Univac I uniquely suited for large data-processing tasks, and it was capable of completing 1,905 operations per second.

Mauchly persuaded the U.S. Census Bureau to order a UNIVAC – receiving a contract in 1948 that called for having the machine ready for the 1950 census.

Eckert hired a staff that included a number of the engineers from the Moore School at the University of Pennsylvania, and the company launched an ambitious program to design and manufacture large-scale computing machines. A core group of programmers were also hired from the Moore School: **Kathleen McNulty, Betty Holberton and Jean Bartik**— three of the original programmers of the ENIAC – and **Grace Hopper**.

Evans, Claire (2018). *Broad band: the untold story of the women who made the Internet*. New York, New York: Portfolio/Penguin.

[Grace Hopper - Kids | Britannica Kids | Homework Help](#)

[Kay McNulty — Women’s Museum of Ireland](#)

[Betty Holberton - Wikipedia](#)

[Jean Bartik - Alchetron, The Free Social Encyclopedia](#)

Kathleen McNulty



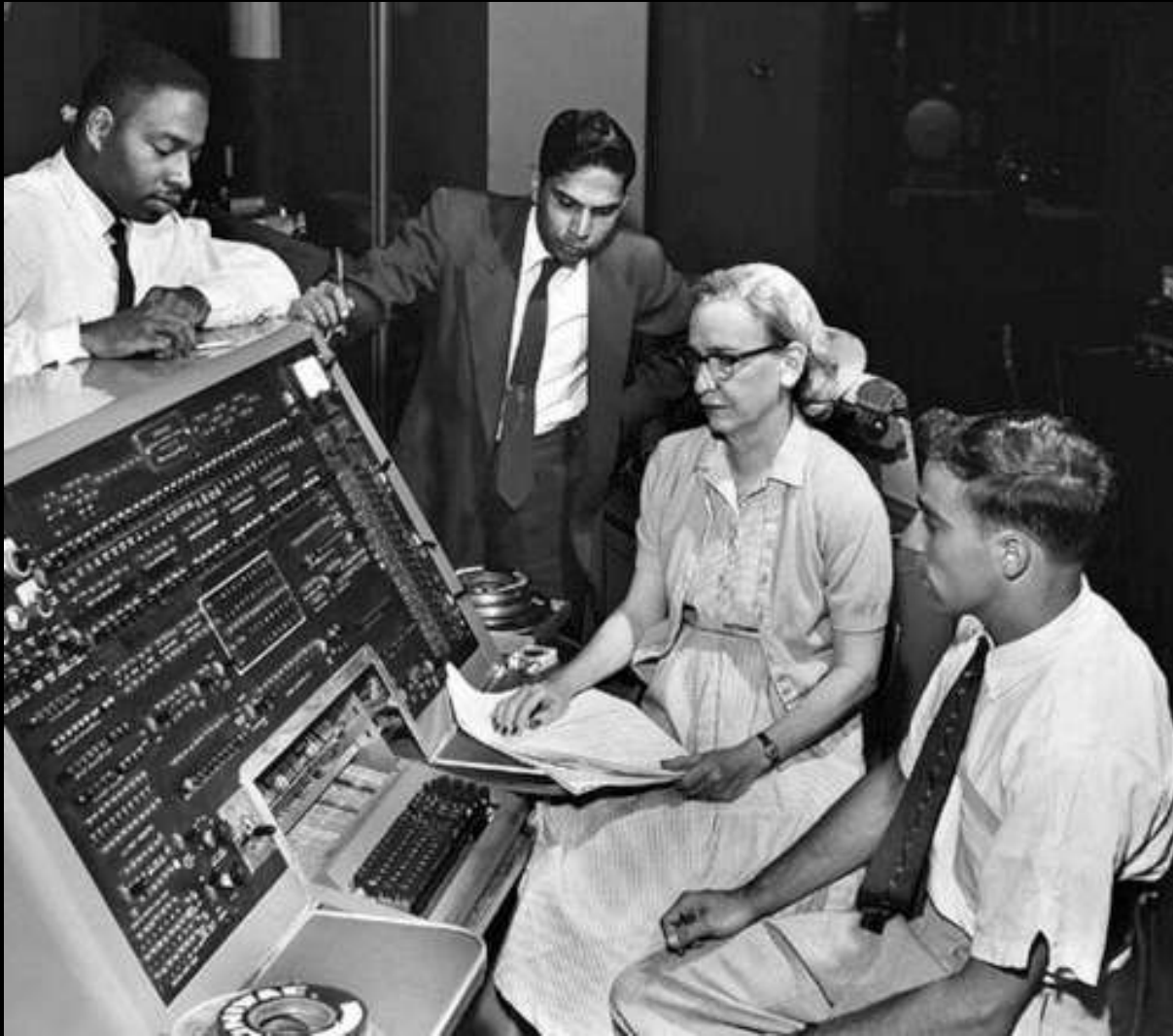
Betty Holberton



Jean Bartik



Grace Hopper



The UNIVAC also featured an input device modeled on a typewriter keyboard, an innovation suggested by **Grace Hopper**, who joined the Eckert-Mauchly Corporation in 1949. Hopper believed that computers should be easy to use and program. A former math professor at Vassar and lieutenant in the Navy WAVES during World War II, Hopper had outlined the fundamental operating principles of computing machines while working at Harvard University.

In the mid-1950s, Hopper developed the compiler-based English language pseudo-code, Flow-matic, for the UNIVAC II Data-Automation System, and pioneered programming language that laid the foundation for the development of Common Business-Oriented Language (COBOL), which helped revolutionize computer coding in the 1960s.

John Presper Eckert demonstrates the UNIVAC mainframe computer that he helped design for the United States Census Bureau, Philadelphia, PA, June 14, 1951.

Eckert and Mauchly's UNIVAC computer featured an input device modeled on a typewriter keyboard, data tapes rather than punch cards, and data recall from memory.

Delivered to the U.S. Census Bureau on March 30th, 1951, the first UNIVAC I performed so well that Eckert and Mauchly soon had dozens of orders from military and commercial buyers.



Eckert-Mauchly Computer Corporation: History & Legacy
ExplorePAHistory.com - Image
On This Day 75 Years Ago - UNIVAC I Delivered

UNIVAC featured on CBS TV, presidential election night, 1952. John Presper Eckert (center), co-designer of the UNIVAC, and Harold Sweeny of the US Census Bureau, with Walter Cronkite (right)



After selling their company to Remington Rand in 1950, Eckert and Mauchley continued to work improve their UNIVAC computers. In 1952, UNIVAC received a publicity boost when it appeared on CBS's television coverage of the Presidential election. Though the *New York Times* called the computer "more of a nuisance than a help," it did humble doubtful pundits when it successfully predicted Eisenhower's landslide victory within 3 percent of his total 33 million votes.

Mauchley, however, had to participate working from his home. Blacklisted as a communist sympathizer, he had been banned from company property.

In 1955, the US Census Bureau used a UNIVAC for the first time to tabulate the results of the 1954 Census of Business.



Computer operators tabulating the 1954 Census with a UNIVAC Computer, October 17, 1955.

According to the Pennsylvania Center for the Book:

The legacy of UNIVAC persists to this day as the little-known father of modern computers. The UNIVAC was a room-filling machine and was not very fast by today's standards, but it showed a lot of what computers could do for people.

The image shows the word "UNIVAC" in a large, bold, black, sans-serif font. The letters are thick and blocky, with a slightly irregular, hand-drawn appearance. The word is centered horizontally and occupies most of the width of the image.

[UNIVAC - Wikipedia](#)

[UNIVAC: From Punch Cards to PCs | Pennsylvania Center for the Book](#)