Admiral, computer pioneer dies at 85

By Kathy Balog
USA TODAY

Grace Murray "Amazing Grace" Hopper, 85, one of the nation's computer pioneers, has died in Washington, D.C.

Called the mother of computerized data automation, Hopper was a Vassar mathematics professor and Navy rear admiral who had received more than 40 honorary academic degrees.

She pioneered in the development of standardized application programming languages including COBOL — still one of the most widely used computer languages in the world.

A forward-thinking woman, Hopper liked to take chances.

She once described herself as "the kind of kid who enjoyed taking clocks apart to see what made them tick."

She is credited with developing technology, such as the first electronic digital computer, that heralded the age of information.

In 1945 she removed the first computer bug: A moth plucked from equipment with tweezers.

She called the Navy her first love because of her desire to chart unknown waters. She retired from the Navy in 1986.

She died Wednesday.

Kathy Balog writes for the Bridgewater (N.J.) Courier-News

HOPPER: Says the Navy was her first love.

Rear Adm. Grace M. Hopper Dies; Innovator in Computers Was 85

By JOHN MARKOFF

Rear Adm. Grace Murray Hopper, retired, a mathematician and pioneer in data processing who was a legendary figure among both computer scientists and industry executives, died New Year's Day at her home in Arlington, Va.

Admiral Hopper, who was 85 years old, had been in ill health recently, family members said, and died in her sleep, apparently of natural causes.

She had been in the Navy, as an active-duty officer or a reservist, since World War II, and received a special Presidential appointment to the rank of rear admiral in 1983. In 1982, with the retirement of Adm. Hyman J. Rickover, Admiral Hopper became the oldest officer on active duty in the armed service, which she remained until retiring herself in 1986.

Admiral Hopper made several vital contributions to the development of modern computing systems, including helping invent the Cobol programming language, which is still in widespread use in business.

Award from President

In September, President George Bush awarded her the National Medal of Technology "for her pioneering accomplishments in the development of computer programming languages that simplified computer technology and opened the door to a significantly larger universe of users." She was the first woman to receive the award individually.

At the time of her death she was a senior consultant to the Digital Equipment Corporation. She joined Digital in 1986, shortly after her retirement from the Navy.

"Grace took every opportunity to challenge people young and old to consider the infinite possibilities of technology," said Kenneth H. Olsen, Digital Equipment's president.

Admiral Hopper was born Grace Brewster Murray on Dec. 9, 1906, in New York City. After receiving a Ph.D. in mathematics from Yale, she taught math at Vassar College, her alma mater, where she later became an associate professor. She was divorced in 1945 but kept her married name.

In 1949 she worked as a mathematician at the Eckert-Mauchly Corporation. The company was formed by Dr. John W. Mauchly and J. Presper Eckert, who in 1946 had developed one of the world's first electronic computers, ENIAC, at the University of Pennsylvania. Eckert-Mauchly was then building the Univac I, the first commercial electronic computer. The company was later bought by the Remington Rand Corporation.

Earlier, in 1943, Dr. Hopper had joined the Navy. As a lieutenant assigned to the Bureau of Ordnance Computation Project at Harvard University, she worked as a programmer on a calculating device called the Mark I, a precursor electronic computers.

Recalled by the Navy

Leaving the Navy in 1946, she remained at Harvard as a faculty member in the computation laboratory. She continued to work on early Navy computers and maintained her Naval career as a reservist. Although retired from the Navy reserve in 1966, then-Commander Hopper was recalled within a year to active duty to oversee a program to standardize the Navy's computer programs and languages.

In 1962, she was elected a fellow of the Institute of Electrical and Electronic Engineers. In 1969, the Data Processing Management Association selected her as its first computer sciences "Man of the Year."

Her work led to the first practical compiler for modern computers. A compiler is a program that translates instructions written by a human programmer into more specific codes that can be directly read by a computer.

Among her many contributions, Admiral Hopper is known for coining the term "bug," which is widely used to refer to mysterious computer failures.

The first bug actually was — a moth, as Admiral Hopper told the story. It was discovered one August night at Harvard in 1945 inside the Mark I.

"Things were going badly, there was something wrong in one of the circuits of the long, glass-enclosed computer," she is quoted as saying. "Finally, someone located the trouble spot and, using ordinary tweezers, removed the problem, a two-inch moth. From then on, when anything went wrong with a computer, we said it had bugs in it."

Like another Navy figure, Admiral Rickover, Admiral Hopper was known for her combative personality and her unorthodox approach.

A self-described "boat rocker," she once said in a speech that she hoped to live until the year 2000. "I have two reasons," she said. "The first is that the party on Dec. 31, 1999, will be a New Year's Eve party to end all New Year's Eve parties. The second is that I want to point back to the early days of computers and say to all the doubters, 'See? We told you the computer could do all that.'"

She is survived by a brother, Dr. Roger F. Murray II of New Hampshire, and a sister, Mary Murray Westcote of New Jersey.

Rear Adm. Grace M. Hopper
U.S. Navy, 1985