

ADMIRAL GRACE MURRAY HOPPER

Grace Brewster Murray Hopper was sometimes called "Amazing Grace" because she recorded successful careers in academia, business and the United States Navy while making history in the computer field. Just as John Paul Jones was the father of the American Navy, Rear Admiral Hopper was the mother of computerized data automation in the naval service.

Perhaps her greatest contribution to the computer industry itself, as well as the Navy, was pioneering work in programming computer compilers to deal in English beyond their initial limitations of symbols and arithmetic. Until Grace Hopper and her disciples came along, computers were useful mostly for speeding up resolution of complicated mathematical problems.

Rear Admiral Hopper was born in New York City but she claimed Wolfeboro, New Hampshire, as her second hometown. She graduated Phi Beta Kappa from Vassar College in 1928, also earning a Vassar Fellowship at that time. She then attended Yale University, where she received an MA degree in mathematics and physics in 1930, and then a Ph.D. in mathematics in 1934. Concurrent with the receipt of her doctorate degree, she was elected to Sigma Xi and was also honored with two Sterling Scholarships.

She began her professional life as a math teacher at Vassar College, where she ultimately became an associate professor. Later Hopper worked as a top scientist at Sperry Corp. and its predecessors and ultimately as a consultant to Digital Equipment Corp. However, her employer of choice was always the Navy, which she joined in 1943 at the height of World War II. As a lieutenant assigned to the Bureau of Ordnance Computation Project at Harvard University, Hopper was thrust into the world of computing as a programmer on the first large scale digital computer, the Mark I. Mustered out in 1946, she remained at Harvard as a faculty member in the computation laboratory. Hopper continued to work on Mark II and III Navy computers and maintained her Navy career as an active duty reservist.

In 1949 Hopper joined the Eckert-Mauchly Computer Corp. which was building the classic UNIVAC I. She stayed in place as that company was absorbed by Remington Rand and as Rand merged into Sperry Corp.

Although retired from the Navy reserve in 1966 because of age (she was born Dec. 9, 1906), Hopper was recalled within a year to full-time active duty. Her assignment to the Naval Data Automation Command in Washington, D.C. permitted her to refine computer language techniques to the Navy's advantage and to keep that service at the cutting edge of computer technology. She steadily advanced to flag rank.

On 2 August 1973, she was promoted to the rank of Captain and on 8 November 1983, she was promoted to the rank of Commodore. The title of the Commodore rank changed to Rear Admiral on 8 November 1985.



1991 National Medal of Technology Citation

"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."

Hopper retired permanently in 1986 as the Navy's oldest active duty commissioned officer in a ceremony which took place on the USS Constitution - the service's oldest commissioned warship. She received more than 40 honorary academic degrees, countless similar honors and had 34 lines in "Who's Who." The recipient of the 1964 Society of Women Engineers' Achievement Award, her Navy personal awards included the Navy Meritorious Service Medal, the Legion of Merit, and the Distinguished Service Medal. In 1991, she received the National Medal of Technology, presented by President Bush, recognizing her many contributions to the computer field. Hopper was the first individual woman to receive the Medal and was nominated by SWE for the award.

But Hopper said, "If you ask me what accomplishment I'm most proud of, the answer would be all of the young people I've trained over the years; that's more important than writing the first compiler."