Marcian E. Hoff Biography

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Biography

Marcian Edward Hoff, Jr., known as "Ted, " was born in Rochester, New York. His interest in science was encouraged by his father, who worked in railway signaling, and his uncle, a chemical engineer with Kodak. Hoff graduated in 1958 from Rochester Polytechnic Institute with a bachelor of science degree in electrical engineering , then went on to Stanford, earning his master's degree in 1959 and his Ph.D. in 1962. Hoff's inventiveness was apparent while he was still a student. Working summer jobs in Rochester, Hoff was a co-patent applicant for railway signaling and lighting devices. At Stanford, he patented an analog computer memory cell and a digital filter.

Hoff stayed at Stanford for six years as a research associate, then joined Intel Corporation in 1968 shortly after it was founded by Robert Noyce. As manager of applications research at Intel, Hoff was given the project of designing a set of integrated circuits for a line of desktop calculators. Seeking a way to simplify the complex plans, Hoff suggested putting the more complex steps into programs in memory, reserving the basic logic circuits for a single chip. Hoff--who had always wanted to build his own computer--refined his concept and produced the first microprocessor, a chip that held all the logic circuits of an entire computer central processing unit. Hoff's invention ushered in the era of the minicomputer and the "smart" computer-assisted household appliance.

Hoff worked on microprocessor development at Intel until the mid-1970's, then investigated different areas where Intel technology could be used. In 1983, he joined Atari, the video game company, as vice president of research and development, but left in 1984 when Warner Communications sold Atari. Hoff then worked as a consultant to various electronics companies in California's Silicon Valley.