CHEMICAL HERITAGE FOUNDATION

EUGENE J. FLATH

Transcript of an Interview
Conducted by

David C. Brock and Hyungsub Choi

at

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on

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(With Subsequent Corrections and Additions)

ACKNOWLEDGMENT

This oral history is part of a series supported by grants from the Gordon and Betty Moore Foundation. This series is an important resource for the history of semiconductor electronics, documenting the life and career of Gordon E. Moore, including his experiences and those of others in Shockley Semiconductor, Fairchild Semiconductor, Intel, as well as contexts beyond the semiconductor industry.

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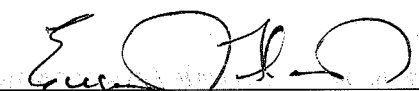
(Signature) 
Eugene J. Flath

(Date) 10/30/2009

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ABSTRACT

Eugene J. Flath was born in Green Bay, Wisconsin but moved to Rockford, Illinois, at age eight. He often went to work with his father, who was an electrical engineer, but who worked for a while on the coal dock in Green Bay. Flath loved all the "things" associated with his father's work and wanted to be an electrical engineer himself. He was always tinkering with "things," making gas-powered engines for planes or taking apart watches. He attended a Catholic boys' school, where he was interested in science and mathematics.

He matriculated at the University of Wisconsin, where he joined the Naval Reserve Officers' Training Corps (NROTC) because he believed he should be in the military somehow and because he could not otherwise afford college. The professor of Flath's class in transistors used his students' class notes for his textbook; from that class Flath decided he wanted to be a circuit designer. During college he also worked with FORTRAN in early analog computers. Most importantly, he met his wife to be.

After graduating, Flath went immediately to Long Beach, California, to spend two years on a destroyer. After his first year he went back to Wisconsin to marry; he and his wife returned to California so Flath could finish his obligation to the Navy. Not enjoying the work on the destroyer, he changed to the Civil Engineer Corps and was transferred to the Portsmouth, New Hampshire, shipyard, where he worked on submarines. Having a great deal of free time, he began classes part time at the University of New Hampshire with backing from the U.S. Navy. When he left the Navy he finished his degree; his thesis dealt with converting FM signal to AM; from there he got into semiconductors. Now with two children, he realized he needed to get a job.

Flath received offers from International Business Machines (IBM) in East Fishkill, New York, and Fairchild Semiconductor in Mountain View, California. He found IBM's culture to be formal and reserved, while Fairchild's was more informal and comfortable; in addition, there were the locations to consider. Flath accepted the position of product engineer at Fairchild. Over the years, he worked his way up and around the "matrix" structure of Fairchild to become general manager of digital integrated circuits (DIC). At first he found the "back of the envelope" approach exciting and productive, but as the field settled down and in, he began to find the trial and error frustrating. In addition, there was growing competition within the company.

When Robert Noyce and Gordon Moore left to found their own company (Noyce Moore Electronics, later Intel), Flath offered his services and was immediately snapped up. Intel began with static RAM but then moved into DRAM. Flath went to Intel Japan, where he stayed for three years, during the evolution of EPROMs. Other companies were by now beginning to compete with Intel, and Flath organized a deal with Mitsubishi to produce EPROMs that Intel could brand with their own name, making Intel's prices competitive. Then Intel moved out of memory and into production of microprocessors. Flath came back from Japan knowing that he would no longer be comfortable at Intel, and he retired. After working for some years in venture capital he retired from that also and now works in his community.

INTERVIEWERS

David C. Brock is a senior research fellow with the Center for Contemporary History and Policy of the Chemical Heritage Foundation. As an historian of science and technology, he specializes in oral history, the history of instrumentation, and the history of semiconductor science, technology, and industry. Brock has studied the philosophy, sociology, and history of science at Brown University, the University of Edinburgh, and Princeton University (respectively and chronologically). His most recent publication is *Understanding Moore's Law: Four Decades of Innovation* (Philadelphia: Chemical Heritage Press), 2006, which he edited and to which he contributed.

Hyungsub Choi is the manager for Electronics, Innovation, and Emerging Technology programs at CHF. Choi earned a Ph.D. from the Johns Hopkins University in the history of science and technology. He earned an M.S. in history of technology at Georgia Institute of Technology and a B.S. in engineering from Seoul National University. Choi took over the center's electronic materials program in November 2006. He has published extensively on such subjects as the history of electronic manufacturing in post–World War II Japan, RCA's transistor production, and solid-state innovations.

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