CHEMICAL HERITAGE FOUNDATION

CARVER A. MEAD

Transcript of Interviews
Conducted by

Arnold Thackray and David C. Brock

at

Woodside, California

on

30 September 2004, 8 December 2004, and 15 August 2005

(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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CARVER A. MEAD

1934	Born in Bakersfield, California on 1 May

Education

1956	BSEE, electrical engineering, California Institute of Technology
1957	MSEE, electrical engineering, California Institute of Technology
1959	Ph.D., electrical engineering, California Institute of Technology

Professional Experience

California Institute of Technology, Pasadena, California

1955-1958	Teaching Assistant, Department of Electrical Engineering
1958-1959	Lecturer, Department of Electrical Engineering
1959-1962	Assistant Professor, Department of Electrical Engineering
1962-1967	Associate Professor, Department of Electrical Engineering
1967-1977	Professor, Department of Electrical Engineering
1977-1980	Professor, Department of Computer Science and Electrical Engineering
1980-1992	Gordon and Betty Moore Professor of Computing Science
1992-1999	Gordon and Betty Moore Professor of Engineering and Applied Science
1999-present	Gordon and Betty Moore Professor of Engineering and Applied Science Emeritus

Pacific Semiconductors, Inc., Culver City, California

1956-1960	Consultant

Fairchild Semiconductor, Menlo Park, California

1960-1968	Consultant

Intel Corporation, Palo Alto, California

1968-present	Consultant

Synaptics, Inc., Santa Clara, California

1986-present	Director, Co-founder

Foveon, Inc., Santa Clara, California

1997-present	Chairman, Co-Founder

	Impinj, Inc., Seattle, Washington
2000-present	Director, Co-founder

Selected Honors

1981	Award for Achievement, *Electronics* Magazine
1984	Centennial Medal, Institute of Electrical and Electronics Engineers
1984	Howard Pender Award
1985	John Price Wetherhill Medal, Franklin Institute
1985	Harry Goode Memorial Award, American Federation of Information Processing Societies
1987	Honorary Doctorate of Science, University of Lund
1987	Walter B. Wriston Public Policy Award, Hudson Institute
1991	Honorary Doctorate, University of Southern California
1992	Award for Outstanding Research, International Neural Network Society
1994	Secretary of the Navy Captain Robert Dexter Conrad Award
1996	John Von Neumann Medal, Institute of Electrical and Electronics Engineers
1996	Phil Kaufman Award, Electronic Design Automation Consortium
1997	Allen Newell Award, Association for Computing
1999	Lemelson-MIT Prize, Invention and Innovation
2002	Computer History Museum Fellow Award
2002	Dickson Prize in Science
2002	National Medal of Technology

ABSTRACT

Carver A. Mead begins with a review of his family history and his childhood near a power plant in Kernville, California. He discusses his early interest in electronics, which included getting his ham radio license and working for local radio stations during high school. Mead studied electrical engineering at the California Institute of Technology and was invited to teach during graduate school, where he took up solid state electronics. In 1959 Gordon Moore contacted Mead, beginning an informal technical exchange while Moore was at Fairchild Semiconductor and Intel Corporation. Mead conducted transistor research, and also pioneered automated design methodologies for VLSI devices. While consulting with Intel Corporation, Mead came to know its internal business culture and management style as well as the economics of the silicon manufacture. Mead discusses his long history of entrepreneurial activity, which continues to the present day.

INTERVIEWERS

Arnold Thackray is President of the Chemical Heritage Foundation. He majored in the physical sciences before turning to the history of science, receiving a Ph.D. from Cambridge University in 1966. He has held appointments at Oxford, Cambridge, Harvard, the Institute for Advanced Study, the Center for Advanced Study in the Behavioral Sciences, and the Hebrew University of Jerusalem. In 1983 he received the Dexter Award from the American Chemical Society for outstanding contributions to the history of chemistry. He served on the faculty of the University of Pennsylvania for more than a quarter of a century. There, he was the founding chairman of the Department of History and Sociology of Science, where he is the Joseph Priestley Professor Emeritus.

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.

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