

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)

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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

2000-present Impinj, Inc., Seattle, Washington
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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