

CHEMICAL HERITAGE FOUNDATION

CRAIG R. BARRETT

Transcript of Interviews
Conducted by

Arnold Thackray and David C. Brock

at

Intel Corporation Headquarters
Santa Clara, California

on

14 December 2005 and 23 March 2006

(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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CRAIG R. BARRETT

1939 Born in San Francisco, California on 29 August

Education

1957 B.S., material science, Stanford University
1961 M.S., material science, Stanford University
1964 Ph.D., material science, Stanford University

Professional Experience

1964-1965 National Physical Laboratory, England
Postdoctoral Fellow

1972-1973 Danish Technical University
Fulbright Fellow

1965-1970 Stanford University
Assistant Professor
1970-1974 Associate Professor

Intel Corporation

1974-1984 Technology Development Manager
1984-1987 Senior Vice President
1987-1990 Executive Vice President
1992-present Member, Board of Directors
1993-1997 Chief Operating Officer
1997-2002 President
1998-2005 Chief Executive Officer
2005-present Chairman of the Board of Directors

Selected Honors

1969 Robert Lansing Hardy Award
1994 Member, National Academy of Engineering

ABSTRACT

Craig R. Barrett begins the interview by describing his family background and the origins of the “Barrett” last name. Influenced by his biological father, Barrett gravitated towards the outdoors and had to choose between attending university or becoming a forest ranger. After being accepted to Stanford University, Barrett chose to major in metallurgical engineering. Upon graduation, Barrett decided to stay at Stanford and continued on to receive his master’s and doctoral degrees at the institution. Barrett then spent a year in the National Physical Laboratory in England as a postdoctoral fellow before returning to Stanford as an assistant professor. While teaching at Stanford, Barrett consulted for Fairchild Semiconductors which laid the groundwork for his future career at Intel. Frustrated with basic research, Barrett jumped at the chance to take a temporary leave of absence to join the Intel R&D department. Returning to Stanford after a year long hiatus, Barrett realized his zeal for applied research and returned to Intel for a permanent position to run the Reliability Engineering department. Barrett then described Intel work culture at the time and working dynamics of senior management personnel such as Andy Grove, Les Vadasz, Gordon Moore, and Robert Noyce. Then in the 1980s, Barrett was selected to be in charge of two major division relocations from Santa Clara, California to Arizona. In 1984, Barrett’s promotion to vice president signaled Intel’s commitment to the manufacturing division and coincided with the company’s shift from memory to microprocessor manufacturing. Barrett then described his career rise to senior vice president, executive vice president, and eventually to chief executive office and president. He concludes the interview by offering thoughts on Intel’s future direction; reflection on Gordon Moore’s contributions to the development of Intel and the industry; and thoughts on how to keep the U.S. technologically competitive in the world.

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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NOTES

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2. Andrew S. Grove, *High Output Management* (New York: Random House, Inc., 1983).
3. Philip B. Crosby, *Quality is Free* (New York: McGraw-Hill Book Company, 1979).

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