

CHEMICAL HERITAGE FOUNDATION

**DOV FROHMAN**

Transcript of an Interviews  
Conducted by

David C. Brock

Via Telephone

on

10 May, 6 June, and 12 June 2006

(With Subsequent Corrections and Additions)

## **ACKNOWLEDGEMENT**

This oral history is part of a series supported by grants from the Gordon and Betty Moor 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 semi conductor industry.

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## DOV FROHMAN-BENTCHOWSKY

1939 Born in Amsterdam, The Netherlands on 28 March

### Education

1963 B.S., electrical engineering, Technion University, Israel Institute of  
Technology  
1965 M.S., electrical engineering, University of California, Berkeley  
1969 Ph.D., computer sciences, University of California, Berkeley

### Professional Experience

1965-1969 Fairchild Semiconductor Corporation  
Technical Staff

Intel Corporation

1969-1971 Engineering Staff  
1974-1981 Consultant, Intel Israel  
1981-2001 General Manager, Intel Israel  
1981-2001 Vice President, Microprocessor Products Group

Kwame Nkrumah University of Science and Technology  
1972-1973 Visiting Professor

Hebrew University of Jerusalem

1974-1980 Associate Professor of Applied Physics  
1975-1980 Director of the School of Applied Science and Technology  
1980-1981 Professor of Applied Physics

### Honors

1982 IEEE Jack Morton Award  
1982 Appointed IEEE Fellow  
1991 Israel Prize for Engineering and Technology

## ABSTRACT

**Dov Frohman** begins the interview by describing his early separation from his parents in the Netherlands due to World War II. After moving between several orphanages, Frohman was adopted by relatives and attended primary and secondary schools in Israel. Fascinated by electrons, Frohman attended the Technion University and majored in electrical engineering. After working for a brief stint in Israel, Frohman moved to the United States to pursue a master's degree in EE at the University of California, Berkeley. Frohman then described accepting and working at Fairchild Semiconductor Corporation for two years before returning to Berkeley as a part-time student to complete his Ph.D. program. After obtaining his doctoral degree in computer sciences, Frohman joined Intel, a start-up founded by former Fairchild employees. While at Intel Frohman was assigned to investigate instability problems in MOS [metal-oxide semiconductor] memories that led to the invention of EPROM [erasable-programmable read only memory]. With EPROM gaining commercial success, Frohman spent a year as visiting professor at the Kwame Nkrumah University of Science and Technology before returning to Intel in the United States. Fueled by his lifelong desire to return to Israel, Frohman convinced Gordon Moore and other Intel executives to invest in a development center in Jerusalem. Frohman then spent the next seven years teaching applied physics at the Hebrew University of Jerusalem while consulting for Intel Israel. The Intel investment was a success and at 1981 Frohman took a leave of absence from the University and became the first manager of Intel Israel's new fabrication plant. As Intel Israel's operations expanded, Frohman's role expanded as well to become Manager of Intel Israel and Vice President of the Microprocessor Products Group within Intel. Frohman concludes the interview by offering impression of the role Intel played in development of the semiconductor and technology-based industries in Israel; tips on maintaining open communications between Intel Israel and Intel headquarters in Santa Clara, CA; and final reflections on Gordon Moore.

## INTERVIEWER

**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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