Transcript of an Interview
Conducted by
David C. Brock and Christophe Lécuyer
at
Woodside, California
on
20 January 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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(Date) 9/14/07

Jay T. Last

2/4/07

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GORDON E. MOORE

1929  Born in San Francisco, California, on 3 January

Education

1950  B.S., chemistry, University of California, Berkeley
1954  Ph.D., physical chemistry and physics, California Institute of Technology

Professional Experience

Johns Hopkins Applied Physics Laboratory
1953-1956  Research Chemist, Physical Chemistry

Shockley Semiconductor Laboratory
1956-1957  Member, Technical Staff

Fairchild Semiconductor
1957  Founder
1957-1959  Director of Engineering
1959-1968  Director of Research and Development

Intel Corporation
1968-1975  Co-founder and Executive Vice-President
1975-1979  President and Chief Executive Officer
1979-1987  Chairman and Chief Executive Officer
1987-1997  Chairman
1997-present  Chairman Emeritus

Selected Honors

1975  Distinguished Alumni Award, California Institute of Technology
1978  Harry Goode Award, American Federation of Information Processing Society
1979  Frederik Philips Award, Institute of Electrical and Electronics Engineers
1980  Computer Society Pioneer Award, Institute of Electrical and Electronics Engineers
1988  Founders Award, National Academy of Engineering
1990  National Medal of Technology
<table>
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<tr>
<th>Year</th>
<th>Award Description</th>
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<tr>
<td>1993</td>
<td>Medal of Achievement, American Electronics Association</td>
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<td>1993</td>
<td>John Fritz Medal, American Association of Engineering Societies</td>
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<tr>
<td>1996</td>
<td>Excellence in Achievement, California Alumni Association</td>
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<tr>
<td>1996</td>
<td>Elected to Horatio Alger Association of Distinguished Americans</td>
</tr>
<tr>
<td>1997</td>
<td>Founders Medal, Institute of Electrical and Electronics Engineers</td>
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<td>1997</td>
<td>Alumnus of the Year, California Alumni Association</td>
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<td>1998</td>
<td>Fellow Award, Computer History Museum</td>
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<tr>
<td>2000</td>
<td>D.L. (honorary), Princeton University</td>
</tr>
<tr>
<td>2000</td>
<td>D.Sc. (honorary), University of Illinois at Urbana-Champaign</td>
</tr>
<tr>
<td>2000</td>
<td>Lester Center Lifetime Achievement in Entrepreneurship and Innovation Award</td>
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<td>2000</td>
<td>PricewaterhouseCoopers Leadership Award for Lifetime Achievement, The Smithsonian Institution</td>
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<td>2001</td>
<td>Othmer Gold Medal, Chemical Heritage Foundation</td>
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<td>2001</td>
<td>Vollum Leadership Award, Oregon Graduate Institute School of Science and Engineering</td>
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<tr>
<td>2001</td>
<td>World Technology Awards: IT-Hardware</td>
</tr>
<tr>
<td>2002</td>
<td>Millikan Medal, California Institute of Technology</td>
</tr>
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<td>2002</td>
<td>Presidential Medal of Freedom</td>
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<tr>
<td>2002</td>
<td>Order of the Golden Ark, The Netherlands</td>
</tr>
<tr>
<td>2002</td>
<td>25th Anniversary Lifetime Achievement Award, Semiconductor Industry Association</td>
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<tr>
<td>2002</td>
<td>Bower Award for Business Leadership, Franklin Institute</td>
</tr>
<tr>
<td>2003</td>
<td>Elected Foreign Member of the Royal Society of Engineering (UK)</td>
</tr>
<tr>
<td>2003</td>
<td>L.H.D. (honorary), Johns Hopkins University</td>
</tr>
<tr>
<td>2004</td>
<td>Perkin Medal, Society of Chemical Industry</td>
</tr>
<tr>
<td>2005</td>
<td>Lifetime Achievement Award, Marconi Foundation at Columbia University</td>
</tr>
</tbody>
</table>
JAY T. LAST

1929 Born in Butler, Pennsylvania on 18 October

Education
1951 B.S., optics, University of Rochester
1956 Ph.D., physics, Massachusetts Institute of Technology

Professional Experience
Shockley Semiconductor Laboratory, Mountain View, California
1956-1957 Senior Technical Staff
Fairchild Semiconductor, Palo Alto, California
1957-1959 Senior Technical Staff; Co-Founder
1959-1961 Head of Integrated Circuit Development
Amelco Corporation, Gardenia, California
1961-1966 Director, Research and Development; Co-Founder
Teledyne Technologies, Inc., Gardenia, California
1966-1974 Vice President, Research and Development
Archeological Conservancy, Albuquerque, New Mexico
1980-present President
Sierra Monitor Corporation, Milpitas, California
1980-present Director
Hillcrest Press, Inc., Santa Ana, California
1982-present President
Think Outside, Inc., San Jose, California
1998-present Member, Board of Directors

Honors
1999 Hutchinson Medal, University of Rochester
ABSTRACT

This oral history with Gordon T. Moore and Jay T. Last focuses on the years 1956 and 1957, during which time Moore and Last worked at Shockley Semiconductor Laboratory and Fairchild Semiconductor was founded. This transcript is about the life of ideas and the people who brought those ideas to fruition; Moore and Last reflect on their experiences during these years while flipping through an old notebook that documented various aspects of the meetings they had over an eighteen month period. In order to fully understand this oral history, the reader must consult the Supplement to Gordon E. Moore and Jay T. Last Oral History, oral history number 0327S, which is also part of the Chemical Heritage Foundation’s collection.

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.

Christophe Lécuyer is research historian at the Chemical Heritage Foundation. He holds a Ph.D. in history from Stanford University. He has published extensively on manufacturing districts, university-industry relations, and the history of electronics and scientific instrumentation. He was a fellow of the Dibner Institute for the History of Science and Technology and taught at MIT, Stanford University, and the University of Virginia.
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