COMPUTER SCIENCE EDUCATION TODAY: A DIALOGUE

On November 30, 1983, in the course of Leonard Klein-rock's interview with noted author James Martin on the subject of his recent book, *An Information Systems Manifesto*, Martin makes some provocative statements regarding the state of computer science education in the United States—particularly its lack of response to new technology and the needs of industry.

We are reprinting excerpts from this initial interview as a prelude to a fuller, subsequent discussion (reprinted here in its entirety—"DP and Academia: The Communications Gap"); this discussion took place in the form of a teleconference organized by *Technology Transfer News* in July 1984 to debate the implications of Martin's criticisms. In the transcript of this teleconference, representative figures from computer science education and the U.S. computer industry debate the degree to which computer science education should serve vocational (i.e., short-term industrial) as opposed to long-range purposes. Participating in the roundtable were James Martin, Philip Bernstein, Peter Denning, Michael Dertouzos, and Leonard Kleinrock. We are grateful to Lee Clayton of *Technology Transfer News* for permission to reprint the interviews.*

The cast of characters:

(JM) **James Martin**, seminar leader for Technology Transfer Institute; author of 33 books on computers/communications; consultant to top management of federal agencies and the Fortune 500.

(PB) **Philip Bernstein**, vice-president, software, Sequoia Systems; codesigner of the world's first general-purpose distributed database system, SDD-1; past associate professor of computer science, Harvard University.

(PD) **Peter Denning**, director of NASA's Research Institute for Advanced Computer Science (RIACS); originator of the working set concept in operating systems; past president of ACM; past professor of computer science, Purdue University.

(MD) **Michael Dertouzos**, director of the MIT Lab for Computer Science; professor of electrical engineering and computer science, MIT.

(LK) **Leonard Kleinrock**, professor of computer science, UCLA; president of Technology Transfer Institute; pioneer in the ARPANET; designer of the key analytic and design methods for packet switching networks.

JAMES MARTIN

James Martin, a widely read author and lecturer, has written 33 books on computer/communications technology, including An Information Systems Manifesto. *His five-day seminar on fourth-generation methodologies is sponsored in North America by Technology Transfer Institute of Santa Monica, California.*

Martin is Oxford educated and was with IBM for 19 years, both in the field and in the development laboratories. He spent 10 years as an instructor at IBM's Systems Research Institute in New York. His consulting work has included studies of AT&T, IBM, Honeywell, Texas Instruments, GTE, DEC, Xerox, and other firms in computing and telecommunications. Much of his consulting involves planning product and service strategies for the 1985–1990 time period.

He is chairman of James Martin Associates, a worldwide consulting group, and Database Design, a company that designs software for information engineering. As the creator of Deltak's Advanced Technology Library, he is in the process of making 280 training modules related to the subjects of his books.