

## Cuthbert C. Hurd

*Born April 5, 1911, Estherville, Iowa; key leader within IBM in the introduction of computers to the corporation, and, later, a remarkable computer entrepreneur*



*Education:* BA, mathematics, Drake University, 1932; MS, mathematics, Iowa State College, 1934- PhD, mathematics, University of Illinois, 1936; post-doctoral work at Columbia University and MIT.

*Professional Experience:* assistant professor of mathematics, Michigan State College, 1936-1942; Lieutenant Commander, US Coast Guard Academy-Educational Officer, 1942-1945; dean, Allegheny College, chairman of curriculum committee, 1945-1947; technical research head, Union Carbide & Carbon Corp., Oak Ridge Tennessee (applied existing computational methods to the

design of diffusion processes and commercial reactors), 1947-1949; IBM Corp. (1949-1962): director, Applied Science Department (led the development of System/701, IBM's first computer), 1949-1953; director, Applied Science Division (managed the development of System/650 and 704. Also directed the production of IBM's first software for customers, which included Bootstrap, Assembler, Utilities, SpeedCode, and Fortran), 1953-1955; director, electronic data-processing machines (responsible for developing IBM's first high-speed printer), 1955-1956; director, Automation Research (initiated the STRETCH project, IBM's first transistorized supercomputer), 1956-1961; director, Control Systems (participated in the design and manufacture of the System/1701), 1961-1962; consultant, IBM Corp. (advised on projects and participated in product decisions on the System/360 and System/370), 1962-1985; chairman of the board, Computer Usage Corporation (built to \$15,000,000 in five years. Supervised software products for companies such as IBM and Texas Instruments), 1962-1974; Cuthbert C. Hurd Associates (consulted for companies including American Express and Rockwell), 1974-1978; chairman, Picodyne Corp. (oversaw operations of this microcomputer-based company that specializes in educational courseware and networking for educational projects), 1978-1986; founder, president, and chairman, Quintus Corp. (directed company until it was acquired by Intergraph Corporation), 1984-1989; chairman, Nu Thena (advises on the strategic direction and operation of Nu Thena, a company that produces CASE products), 1990-present.

*Honors and Awards:* university fellow, University of Illinois, 1934-1936; fellow, American Association for the Advancement of Science, 1960; LLD, Drake University, 1967; life fellow, MIT, 1975; IEEE Computer Society Pioneer Award, 1986.

After teaching and serving as a technical research head at the atomic energy facility in Oak Ridge, Tennessee, he joined IBM in 1949. He formed the Applied Science Department, which was responsible for introducing the 701, the 650, the 704, and Fortran. As the first IBM Applied Science leader, he pushed his reluctant management into using the IBM-701 to enter the world of computing. He created the environment and served as the manager of the group containing John Backus which developed the programming language Fortran.

He also was involved in the development of the IBM-7030 (STRETCH) and the IBM-1710. From 1962 to 1974 he was chairman of Computer Usage Company. He is now chairman of Cuthbert Hurd Associates, the Holistic Construction Company, Quintus Computer Systems, and Picodyne Corporation. In addition, he consults with corporations and venture capitalists.

## **BIBLIOGRAPHY**

### **Biographical**

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Hurd, Cuthbert C., "Early IBM Computers: Edited Testimony," *Ann. Hist. Comp.*, Vol. 3, No. 2, Apr. 1981, pp. 163ff.

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Hurd, Cuthbert C., "A Note on Early Monte Carlo Computations and Scientific Meetings," *Ann. Hist. Comp.*, Vol. 7, No. 2, Apr. 1985, pp. 141ff.

### **Significant Publications**

Hurd, Cuthbert C., "Asymptotic Theory of Linear Differential Equations Singular in the Variable of Differentiation and in a Parameter," *Tohoku Mathematical Journal*, Vol. 44, 1938.

Hurd, Cuthbert C., "Asymptotic Theory of Linear Differential Equations Singular in Several Parameters," *Tohoku Mathematical Journal*, Vol. 46, 1940.

Hurd, Cuthbert C., ed., *Seminar on Scientific Computation*, IBM Applied Science Department, Armonk, N.Y., 1949.

Hurd, Cuthbert C., "The IBM Card Programmed Calculator," *Proc. Seminar on Scientific Computation*, IBM, New York, Nov. 1949, pp. 37-41.

Hurd, Cuthbert C., "Automatic Digital Computing in Engineering," *Applied Mechanical Review*, July 1955.

## **UPDATES**

Cuthbert died May 22, 1996 (MRW, 2013).