

David Norris

<vertd@yahoo.com> Thu, Oct 23, 2008 at 2:33 PM

Thanks for the call regarding a "preferred" bio or CV for my father, for the upcoming Science Museum of Minnesota honor.

I think the best source for such an "official" or "preferred" bio would be the William C. Norris Institute at the University of St. Thomas. Their website has a bio on the following page:

<http://www.stthomas.edu/business/centers/norris/about/default.html>

About William C. Norris (1911-2006)

William C. Norris was the founder and chairman emeritus of Control Data Corporation. He founded the company in 1957 and retired as Chairman and Chief Executive Officer in 1986. From 1988 through 2000 he chaired the non-profit William C. Norris Institute, which supported initiatives to:

- improve K-12 and higher education through development and implementation of technology;
- stimulate technical training in Russia; and
- create good jobs by supporting development of innovative, socially beneficial technology by Minnesota entrepreneurs.

Mr. Norris became an entrepreneur after service in World War II, when he started Engineering Research Associates, Inc. (ERA), in St. Paul, Minnesota. ERA pioneered the development of the digital computer and in 1951 merged with Sperry Rand Corporation. Mr. Norris headed the Univac Division of Sperry Rand through mid-1957, when he and other engineers left to start Control Data Corporation.

Under his leadership, Control Data pioneered large-scale scientific and engineering computers, computer services, and the utilization of technology in education. Its PLATO computer-based education and training program was the world's major pioneering effort in applying computer technology in education. Mr. Norris also pursued new business opportunities by working with the public and non-profit sectors to address major social problems such as unemployment, blighted inner cities, and declining rural economies. Small business incubators and Job Creation Networks supported by Control Data across the country led to more than 1,000 new companies and 13,000 jobs. And Control Data assisted its own employees to develop and spin off more than 80 technology-based new companies.

During his 29 years as CEO of Control Data, Mr. Norris led many collaborative initiatives involving government, universities, and business and industry. For example, in 1983 he conceived and initiated the Microelectronics and Computer Technology Corporation, which is based in Austin, Texas and currently has more than 60 members

and associate members that collaborate on research and development among themselves and with government laboratories and universities. Mr. Norris was instrumental in the drafting and passage of the National Cooperative Research Act of 1984 and the Technology Transfer Act of 1986, leading to the creation of the Small Business Innovative Research program.

In Minnesota, Mr. Norris helped organize and lead the Northwest Growth Fund, Minnesota Seed Capital Fund, Minnesota Cooperation Office, Minnesota Wellspring, and the Greater Minnesota Corporation (now Minnesota Technology, Inc.), and with Control Data's help he established the William C. Norris Institute. All of these initiatives supported entrepreneurship and sought to improve Minnesota's economy by assisting small companies in creating jobs.

In 1986, Mr. Norris was awarded the National Medal of Technology by President Reagan, who cited him for "substantial contributions to the development of digital computer technology, leading to the founding of a successful computer and computer services company, and for his innovative application of computers to societal needs, as well as his initiation of cooperative efforts which promise to maintain U.S. competitiveness in microelectronics and computer technology."

Mr. Norris also is a recipient of the Institute of Electrical and Electronic Engineers' Founders Medal, and of the National Business Incubation Association Founders Award. In 1995 he received the Lifetime Achievement Award of the Minnesota High Technology Council. In 2001 he received a lifetime achievement Tekne Award from the Minnesota High Technology Association and Minnesota Technology Inc. In 2005 the National Ethnic Coalition of Organizations selected Mr. Norris as a recipient of the Ellis Island Medal of Honor, presented for outstanding contributions to the United States.

[The only addition I can think of (in terms of awards) would be his recent (posthumous) 2008 induction into The Nebraska Hall of Computing. The link to that award (and the bio they created) is:

<http://cse.unl.edu/hallofcomputing/index.shtml>]

See below:

2008 Inductees

In recognition of his pioneering work on high speed computational science and systems rooted in cryptography problems during World War II, his leadership and foresight in building a team of computer professionals skilled in both the engineering and marketing trade-offs necessary for successful product development including the first supercomputers, his recognition of the importance of Computer Aided Instruction (PLATO) and education for all levels of our society, his commitment to the development

of inner-city jobs, and his forward-looking management style that led to the successful spinoff of more than thirty enterprises, the Department of Computer Science and Engineering of the University of Nebraska–Lincoln proudly inducts William C. Norris into the Nebraska Hall of Computing.

Inducted 2008.

Biographical Sketch pointer

William C. Norris was born near Red Cloud, Nebraska, on July 14th, 1911. He was raised on a farm on the Republican River in south central Nebraska. He and his two sisters, including twin sister Willa who later taught at Michigan State University, attended a one-room schoolhouse where their mother had been the first grade teacher. He attended the University of Nebraska –Lincoln to study Electrical Engineering and graduated in 1932. Shortly before his graduation, his father died suddenly and Norris returned home to help save the family farm in the midst of the depression.

He worked as a salesman for Westinghouse Electric for seven years until he left to work for the US Navy, where he rose to the rank of commander. In the Navy, he worked on intelligence problems related to the Enigma machine of the Germans and contributed to the breaking of that code. In Washington, he met and Married Jane Malley, a WAVES officer, with whom he would have eight children.

After the war, he co-founded Engineering Research Associates, Inc., in St. Paul, Minnesota. ERA made contributions to the development of digital computer technology, and later merged with Sperry Rand Corporation. Norris headed the Univac Division of Sperry Rand before leaving to found the Control Data Corporation.

Control Data started by selling magnetic drum memory systems to other computer manufacturers, but introduced their own mainframe, the CDC 1604, in 1958. The 1604 was primarily designed by Seymour Cray and the company soon followed with a series of increasingly powerful machines beginning with the CDC 3600. In 1965, they introduced the CDC 6600 which by all rights can be called the first supercomputer. The series of machines were very popular in research universities and government laboratories. As a result CDC, which had gone public, was suddenly the darling of Wall Street and in an envious leadership position with a machine ten times as fast as anything else on the market.

Norris was among the first to recognize the importance of scientific computing and he had the vision to create the fastest computers in the world. He knew from his Navy contacts that such machines were needed. In that effort, he became famous for taking on IBM, which, at the time, was somewhat distant from the need for and possibilities of large scale computational science machines.

He was also early and instrumental in convincing the country of the need to hasten the development of the use of computers in education. That vision led CDC to build PLATO, the first computer-aided instruction system. Using PLATO, the University of Illinois built an automated foreign language lab that set the standard for years to come of what could

be done in this area. Other PLATO pioneers built “dry labs” that realistically reproduced the effects of traditional wet labs at a significantly lower cost of instruction. The logic and philosophy behind these learning units are easily recognized in many of today’s automated teaching units.

Norris was also an industry maverick who built on Control Data's expansion in the late 1960s to bring jobs and training to inner-cities and disadvantaged communities. He argued long and hard that other industry leaders should follow his example and bring up the work capabilities of our undereducated population. He became a champion of moving factories into the inner-cities, providing stable incomes and "high-tech" training to thousands of people who would otherwise have little chance at either.

The CDC 6600 was such a significant threat to IBM’s business, that they quickly started a project of their own to grab the performance crown back from CDC and for the first time pre-announced an advanced Systems 360 that was promised to be faster than the 6600. The machine didn't yet exist and CDC carefully documented sales CDC lost to the unfinished IBM project. In 1968, Norris launched an anti-trust lawsuit against IBM, which was unable to deliver on its promise of a faster machine, and CDC was awarded \$600 million in damages. Norris was a hero to all those who suffered under IBM’s marketing strategies.

Norris continually purchased new companies to fold into CDC, and eventually returned to the peripheral market in the 1970s. This later move proved particularly wise. It was also during the 1970s that Cray left to form his own company, and quickly drove CDC out of its leadership position in the supercomputer market. This left CDC in second place in a market for a small number of machines. Soon large Japanese companies were gobbling up what Cray didn't. CDC tried to regain its footing in the supercomputer market by spinning off ETA Systems, in order to allow the developers to escape an increasingly difficult management structure inside CDC. This effort failed however and CDC gave up on the market entirely.

In the 1980s, CDC was left primarily as a hard disk manufacturer and CDC’s manufacturing facilities included plants in Lincoln and in Omaha. Their series of SCSI drives were particularly successful. CDC morphed into Ceridian which was first headed up by another UNL graduate Jim Ousley and today has grown to be a multi-billion dollar enterprise.

Norris died on August 21 2006 in Bloomington Minnesota. The list of companies spun off from CDC over the years exceeds 30 and many still exist today with capital value exceeding many billions of dollars. Much of this success can be credited to Norris, who, though not educated in business and not subscribing to many of the then-held sacred cows of a successful business venture, gave rise to success that can only be measured by the return from hard work and diligent thinking that he brought with him from a Nebraska farm and a University of Nebraska education.

Eckstein, Peter. "William Charles ("Bill") Norris", IEEE Annals of the History of Computing, IEEE Computer Society, April-June, 2007.

Worthy, J.C. William C. Norris: Portrait of a Maverick, Ballinger, 1987.