

Control Data Corporation: The Norris Era

JAMES C. WORTHY

From a modest start in 1957, Control Data Corporation under the leadership of its founder, William C. Norris, grew rapidly to become a worldwide, multibillion-dollar enterprise, the major producer of the world's most powerful computers and peripheral products, and provider of a wide range of vital computer services. Along the way, the company explored means for applying digital technologies to aid in the solution of critical problems of contemporary society. From a pinnacle of achievement by the early 1980s, Control Data slipped into a series of technological and financial crises from which it is still struggling to emerge.

I had the good fortune to be closely associated with Control Data Corporation for 20 years, initially as a consultant to its founder, William C. Norris, and subsequently as a director. These 20 years embraced the period of the company's highest levels of achievement and the time of troubles that followed.

Control Data Corporation was in many ways a unique enterprise, and Norris stands alone among corporate entrepreneurs in the pioneering of innovative applications of digital technology and in his concept of the role of business in society. The article that follows recounts the highlights of what I learned firsthand about the company and the man.*

Laying the foundations

Control Data Corporation first opened for business in 1957 with a handful of employees in rented warehouse space in St. Paul, Minnesota. It had taken 12 years of preparation to arrive at these modest beginnings. William C. Norris, then 46 years old, had played a pivotal role at each stage leading up to this event.

Following the bombing of Pearl Harbor in 1941, Norris, a graduate electrical engineer, joined the US Naval Reserve, where he was assigned to the Navy unit engaged in super secret intelligence work: code-breaking, pinpointing enemy ship locations by intercepting high-frequency radio transmissions, and other activities requiring the processing of vast streams of data. The fastest calculating devices then available were woefully inadequate for the task, and Norris was named to a group charged with designing new electronic technologies that could be applied to intelligence work. He was deeply impressed by the men with whom he worked: in his words, "an almost unbelievable assemblage of talent" that included mathematicians, engineers, and physicists from leading universities and corporations, some of whom already had international reputations.

*For a more complete account of the history of Control Data Corporation and the work of Norris, see the author's *William C. Norris: Portrait of a Maverick* (Ballinger Publishing Co., Cambridge, Mass., 1987).

The urgent needs of all-out war gave powerful impetus to the swift evolution of new devices that were the forerunners of the digital computer. As the end of the war approached, it became obvious to those in a position to know, that the emergence of the computer would revolutionize computational technology and, by extension, cryptology. The Navy was deeply concerned about the impending dissolution of its prized intelligence unit: with demobilization, its members could no longer be kept in uniform and few showed interest in the Civil Service appointments they were offered. When Norris and some of his key associates proposed that they form a private company and continue working for the Navy on a contract basis, Defense Secretary Forrestal approved the plan as the only practical way to keep the team together.

Engineering Research Associates. Engineering Research Associates (ERA) was formed in September of 1946. To raise the necessary capital, a group of outside investors headed by John E. Parker was brought in. Parker was an Annapolis graduate and successful investment banker with connections in both political and military circles. Ownership was divided equally between the insiders and the outsiders, with 100,000 shares sold to each group at 10 cents a share to generate an initial capital of \$20,000. In addition, Parker underwrote a \$200,000 line of credit. No sophisticated site-selection procedure was followed in deciding where to locate the new enterprise. One of Parker's entrepreneurial interests was Northwestern Aeronautical Corporation, of which he was president. Northwestern Aeronautical had a plant in St. Paul, Minnesota, that had produced gliders during the war, and Parker simply directed that ERA open for business in the now-idle plant. As a result of this almost casual decision, the Minneapolis-St. Paul area would grow within a few short years into one of the world's great digital computer manufacturing centers.

Parker was named president with responsibility for financial matters and overall management. Norris, one of three vice presidents, originally headed marketing, but was soon placed in charge of all functions except finance. He recruited a quali-

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fied technical staff to supplement the core founding group, and ERA fast became known as a disciplined, cost- and schedule-conscious supplier of high-speed digital data-handling equipment and large-scale memories. Its principal customer was the Naval Computing Machine Laboratory, and though this meant the company was hobbled by tight security, it also carried the considerable advantage of working for a client with adequate financial resources and access to much of the advanced computer work going on elsewhere in government and private laboratories.

During its first year, ERA had revenues of \$1.5 million and a profit of \$34,000. It was still severely undercapitalized, but the Navy paid its bills promptly and the company continued to grow. By 1951 the work force had expanded to around 1,500 employees, many of whom were skilled technicians and professionals. ERA was now working with other federal agencies, including the Air Force and the Civil Aeronautics Administration, and its equipment had found its way into the BOMARC missile program, predecessor of the SAGE continental defense system, and other advanced military applications.

Remington-Rand. As word of ERA's technical accomplishments spread beyond the confines of military security, elements of the infant private computer industry began to take notice. Among these was James Rand of Remington-Rand. He was one of the first businessmen to sense the commercial possibilities of digital computers, and soon after the war ended he established a laboratory in Norwalk, Connecticut. In 1950 he had acquired Eckert-Mauchly Computer Corporation, a small company that had originally developed equipment to calculate artillery trajectories. In the fall of 1951, Rand approached Parker with the intent of acquiring ERA.

Uncomfortably aware of ERA's tenuous financial position, Parker was receptive to Rand's overtures and, after hard bargaining, sold the company for approximately 85 times what the original founders had paid to start it only five years before. Norris, who was then vice president and general manager, was opposed to the sale, as were his fellow insiders. But there was little they could do about it, since Parker had financial control, and so they went along reluctantly.

With the acquisition of ERA, Remington-Rand had assembled the strongest array of computer talent anywhere in the world. IBM, Burroughs, National Cash Register, and others had nascent capabilities, but none had the technical resources that James Rand had put together. Unfortunately, Rand's managerial capacities were not equal to his entrepreneurial foresight. The three computer units — the Norwalk Laboratory, ERA, and Eckert-Mauchly — reported to different corporate departments and operated as fiercely independent entities.

Left largely to their own devices, the individual operating units accomplished important breakthroughs. The Eckert-Mauchly group produced the Univac system that successfully predicted from early returns the outcome of the 1952 presidential election: Univac I and II, which were installed in the US Census Bureau, greatly speeded tabulation of the 1950 census of population and the 1954 census of business. The ERA group made the fastest and most reliable hardware in the industry and pioneered the introduction of transistors to replace the bulky, failure-prone vacuum tubes that had been

basic to computer electronics. Despite these and other technical achievements, both Eckert-Mauchly and ERA suffered from lack of overall direction and coordination from their Remington-Rand parent.

ERA's efforts were further hampered by the fact that much of its work was so secret that its nature could not be disclosed even to corporate headquarters. When at one point ERA obtained the Navy's permission to bring out a civilian version of a high-speed computer originally developed for military use, corporate officers were amazed to learn some of the things that had been going on and how far the state of the art had advanced. This particular piece of equipment formed the basis for ERA's first venture into the nonmilitary market: the hardware that stemmed from it was able to process great masses of data at a speed, cost, and level of reliability unprecedented in the civilian market.

Sperry-Rand. In 1955 Remington-Rand and Sperry Corporation merged to form Sperry-Rand. The new company consolidated the several disparate computer units under the by-then well-known Univac name and made Norris vice president and general manager in charge of all computer operations. Sperry-Rand thus had a unified computer business entity incorporating research, engineering, manufacturing, and marketing under strong central leadership. The future looked promising.

Norris urged Sperry-Rand to use the substantial resources it had assembled to become the world leader in computers. Under the elder Thomas Watson, IBM had been mesmerized by the success of its punched-card tabulating machines and slow to grasp the significance of the new electronic technology. The younger Thomas Watson, who succeeded his father in 1946, was determined to bring his company into the computer age, but the way was still clear as late as the mid-1950s for Univac to become what IBM in fact became. Sperry-Rand let its chance slip by, hesitant to make the investments and take the risks Norris knew were necessary. Meanwhile, IBM forged ahead, and by the late 1950s it had become the dominant player in the new industry, a position from which it has never been dislodged.

"We just sat there," Norris recalls, "with a tremendous technological and sales lead and watched IBM pass us as if we were standing still." Finally, the frustration proved too much. By the summer of 1957, Norris "had a belly full" and walked out. He was followed by a dozen key associates with whom he formed Control Data Corporation.

Building the company

The new company was financed initially by the sale of 600,000 shares of common stock at \$1 a share, ushering in the dollar stock era in the United States. Control Data Corporation was the first computer company to be publicly financed. There were some 300 stockholders, of whom Norris, with 75,000 shares, held the largest block. The remaining shares were purchased by members of the founding group, their friends, and scattered investors intrigued by the glamour of the emerging computer industry.

Norris and those who followed him from Sperry-Rand set up shop in rented quarters in an old warehouse of the Minneapolis Star and Tribune Company. In the ensuing

months they were joined by other disaffected Univac engineers and technicians. Floor space was divided by temporary chip-board partitions that five years later were still standing and still unpainted. In this unpretentious setting, Norris and his colleagues set out to design and build the most powerful computers the world had ever known.

By this time IBM dominated the industry, and other major companies were struggling to find a niche for themselves. Based on its well-established tabulating machine business, IBM's greatest strength lay in business data processing, which was then thought to represent 80 percent of the total potential market for computers. Its rivals directed their efforts toward the same market segments, but this proved to be a costly strategy that resulted in head-to-head confrontations with the giant. Many of IBM's most financially sound competitors — notably General Electric, RCA, and Bendix — eventually withdrew in defeat.

The big-computer strategy. Control Data was a small fish in a sea of big predators; but that did not worry Norris, because he had picked a different place to swim. With financial resources of less than two thirds of a million dollars, he and his associates chose to stake out their position in the area where their special technical and professional expertise would give them a decisive advantage: powerful, large-scale computers for engineering and scientific applications. IBM and others were also interested in this area, but none had the technological skills to match those of the group Norris had put together. Notable in this group was Seymour Cray, who was among those who followed him from Univac.

Fully transistorized, Control Data's computers incorporated the most advanced features of the rapidly developing computer technology. Initially, they were sold with little accompanying software to customers who could write their own programs and did not need the kind of hand-holding that novice users required. Clients like the Atomic Energy Commission and the Department of Defense were soon joined by some of the nation's largest universities, which appreciated the new equipment's unique problem-solving capabilities.

Even though Control Data had the field virtually to itself, at least at the outset, its strategy of concentrating on giant computers was heavy with risk. Simply learning how to build such computers was a chancy undertaking because state-of-the-art technology — by definition, new and untried — carries with it not only the hope of success but also the threat of failure. The potential market for the kind of computer Control Data produced was limited to federal government laboratories, a handful of universities, and a relatively small number of corporations engaged in military and atomic energy research. The company's precarious financial position meant that a minor error in judgment or a stroke of bad luck could have been fatal. Its sole reliance for revenue on a narrow product line posed another hazard. IBM, National Cash Register, Burroughs, Honeywell, RCA, General Electric, and Bendix all had substantial earnings from other well-established products and services; if the going in the new field proved too rough, they had other sources of revenue on which to rely. Control Data had to make it with its big computers or not make it at all.

The strategy came perilously close to failing. In the beginning, all the new company had was brains. Among other

things, it was sorely lacking in manufacturing facilities, and it especially needed metalworking and related machinery. Realizing that Control Data would have to respond quickly if it was going to survive, Norris embarked on an aggressive acquisition program.

Growth by acquisition. In 1958 Control Data acquired Cedar Engineering Inc., a Minneapolis instrument manufacturer, to provide badly needed production facilities. The acquisition soaked up a sizable part of the company's meager working capital, but the financial bind was relieved when Allstate Insurance Company purchased a \$350,000 issue of 6 percent preferred stock.

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Subsequent acquisitions were made primarily for the purpose of obtaining needed technologies. Control Corporation (acquired in 1960) brought with it desirable know-how in gas, oil, and water distribution control systems; Holley (1961) added capabilities in the design and manufacture of printers; Meiscon (1963) afforded competence in engineering design; and the computer division of Bendix (also 1963) resulted in an influx of skilled personnel. These and other moves greatly broadened and strengthened Control Data's technical competence.

Acquisitions were friendly and accomplished by exchange of stock. After emerging from its difficult early years, Control Data became one of Wall Street's favorite glamour issues. In the "go-go period" of the 1960s, investors were entranced with almost anything electronic, and Control Data's stock was bid up to heights that gave the company considerable leverage in exchange-of-stock transactions and allowed it to make a number of desirable acquisitions on highly favorable terms. The most striking of these was the acquisition of Commercial Credit Company in 1968.

Since the day of its founding, Control Data had been plagued by a chronic shortage of cash, and rapid growth had placed a severe strain on its limited resources. In addition, many computer systems were leased rather than sold outright, and the debt incurred to finance the lease build-up had an unfavorable impact on the company's balance sheet. During the latter part of the 1960s, Control Data's chief financial officer prepared a 10-year projection of the financing that would be needed to cover equipment on lease: the figure came to an astounding \$1 billion, an amount obviously unobtainable by conventional means. A possible answer lay in acquisition of a finance company.

By fortunate coincidence, Commercial Credit Company of

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Baltimore, a diversified financial services company threatened by a hostile takeover, was at that time looking for a buyer. Cognizant of Control Data's problems, Commercial Credit made overtures. Control Data responded with alacrity, a deal was swiftly worked out, and in August of 1968 Commercial Credit became a wholly owned subsidiary of Control Data Corporation. The merger proved beneficial to both parties. Commercial Credit sidestepped the unwanted takeover and gained instead a parent in whom its management had confidence, and Control Data acquired a resource that solved its leasing problem. Moreover, during three subsequent periods of financial stringency — 1969-70, 1974-75, and 1984-85 — Commercial Credit helped Control Data survive sharp downturns in the computer industry.

Peripheral products. Well before the acquisition of Commercial Credit Company, Control Data had accomplished two significant strategic moves: entry into the peripheral products business and entry into data services. While the company had originally directed its efforts toward a relatively small and specialized segment of the computer mainframe market, it soon became clear that this market alone was not sufficient to support the technical and manufacturing resources required to serve it. Moreover, the giant computer market is inherently volatile. Control Data was well established in the scientific computer sector, but it needed to build a broader and more stable customer base.

As much as two thirds of the total cost of a data processing system is represented by peripheral equipment: tape and card readers, magnetic tape transports, random-access memories, printers, and the like. The powerful computers Control Data was building required peripherals with extraordinary performance capability and reliability. Since these were not available from other companies, Control Data had no choice but to design and build its own. Unfortunately, high-speed peripherals are expensive to develop, and economies of scale are important in their manufacture.

In the face of strong internal opposition, Norris decided on a bold course: To secure the volume needed, Control Data would develop and make peripheral equipment for other mainframe companies as well as for itself. At the time, IBM was the only company able to supply its own peripherals, and there were several other companies in the same position as Control Data. These manufacturers welcomed Control Data as a source of reliable, high-quality, reasonably priced equipment for their own products. The decision to move into the original equipment manufacturer (OEM) market proved sound and the business prospered.

Over two thirds of all computer equipment in place was manufactured by IBM, and the OEM market, while substantial, was limited to the remaining third. The temptation was therefore great to challenge the giant in its own backyard by building peripheral equipment that could be used on IBM mainframes — so-called "plug compatibles." The risk was great, but IBM's pricing policies provided an umbrella under which Control Data proceeded to build a profitable business.

Data services. At about the same time Control Data began moving into peripheral products, Norris was envisioning yet another potential market: data services. There were many

companies with the technical sophistication to use powerful computers, but only the largest and most prosperous of these could afford to invest in the type of equipment Control Data offered or keep that equipment busy enough to make it cost-effective. Control Data's computers were simply too powerful and too expensive to have wide market appeal. Norris decided, in his words, to "sell a little bit of a big computer at a time," and to make the power of his machine "available to the guy who couldn't afford to invest in one."

Initially, the data services offered consisted of nothing more than "raw time." Before long, however, Norris and his associates recognized that a much broader and more lucrative market could be tapped by furnishing specialized applications programs that could address individual industries and specific user needs. In the years that followed, the company worked in close cooperation with users to develop a sizable body of software in such areas as seismic exploration and engineering design, and several key acquisitions were made for the specific purpose of adding to its growing store of applications expertise.

Control Data's services business was given a powerful boost in 1973 with the resolution of an antitrust suit the company had filed five years earlier against IBM. The suit was supported by an imposing catalog of damning complaints and demanded triple damages. During the discovery proceedings, Control Data attorneys examined over 20 million pages of IBM documents, photographed over one million pages, and added 500,000 pages (about 150,000 documents) to its own already formidable computerized database. Only with the aid of powerful computers and sophisticated software especially designed for the purpose was it possible to sort, index, retrieve, and organize this enormous quantity of information. This was the first time high-speed computer technology had been used in a major legal proceeding, and it was a significant factor in Control Data's winning an out-of-court settlement five years later.

The central feature of the settlement was the transfer of IBM's Service Bureau Corporation to Control Data at a nominal price. The acquisition was important to Control Data in three ways: First, it more than doubled Control Data's services business; second, it added a strong business data processing capability to Control Data's primarily engineering and scientific applications; and third, it brought with it a first-rate management staff (as Norris would comment with satisfaction several years later, "they were really loaded with talent").

Basic strategy. From early in his career, Norris showed special aptitude for adapting technology to a variety of unique applications. He began with his work in the Naval intelligence unit during the war, where, despite the wall of security, it is clear he played a significant role in developing means for utilizing the emerging digital technology for code-breaking purposes. At the root of his phenomenal business success was his strategy of identifying unmet needs that could be satisfied at least in part by harnessing electronic information technology to the serving of those needs and thereby turning them into profitable business opportunities.

Early in his business career, Norris perceived the growing need of the engineering and scientific community for powerful computers to perform large and complex computations that

had never before been attempted because machines capable of handling them had not yet been invented. He then moved to address the needs of the emerging computer industry itself for peripherals that were too costly for most individual manufacturers to design and build for themselves. He turned next to the needs of smaller clients who could not afford to buy or lease powerful computers but would benefit from using them for limited periods of time. In each case, the need existed but the market did not; it had to be created. Markets were created in all these areas by recognizing and defining the needs, designing means for approaching them as profit-making enterprises, and bringing the two together to make a market. Basic to the process was new product development. Equally basic was understanding that it takes time and commitment to create new markets, and that quick pay-outs are not to be expected. Under Norris' direction, Control Data always exhibited a marked willingness to seek out new areas of opportunity, to take risks, and to stick with new ventures through thick and thin until they became profitable.

Social needs as business opportunities. Some of the areas in which Norris saw needs and opportunities proved surprising. To Norris, one of the primary responsibilities of business is "to take the initiative and provide the leadership in planning, managing, and implementing programs designed to meet society's needs and turn them into business opportunities." Working from this premise, Control Data in the years following 1975 launched a series of ventures designed to convert the marginally employable into productive workers, create new job opportunities through aid to small business, improve instructional technology and rescue the school systems of the country from creeping decay, rehabilitate decayed inner-city areas, revitalize family-size farming, improve the quality of health care, reform the dismal science of penology, and increase the efficiency of local government — altogether a remarkable array of causes designed to deal with pressing social problems and enhance the quality of life.

Despite their seeming diversity, these undertakings had one thing in common: computer-based management of information. His interests were not parochial but global, with special concern for the desperate problems of the Third World. He did not see business undertaking these tasks alone and made it clear from the beginning that the cooperation of government, churches, civic organizations, and other institutions of society was essential if anything constructive was to be accomplished. What was significant in his approach was his conviction that it is the responsibility of business to take the initiative and provide the leadership necessary for significant progress in relieving the persistent ills of society.

Norris' ideas were not well received in the business community, and he won few followers among practicing businessmen. In fact, he was widely regarded as a "strange corporate animal," much more interested in solving the problems of society than in making money for his stockholders. A writer in *Fortune* labeled him "a business genius who unfortunately thinks he's a social philosopher." Control Data was described by one commentator as "more a social laboratory than a business." The critics were many and their language was often colorful.

Nevertheless, the company prospered. Over its first 25 years in business, Control Data grew from a minuscule operation

with \$600,000 in assets to a worldwide corporation with assets of \$6.9 billion; from a dozen employees to over 56,000; from zero revenues to \$4.3 billion. Net profits rose from a negative number to \$155 million. The company held a commanding lead in both peripherals and services, and was the major producer of the world's most powerful computers; and with Commercial Credit Company it was one of America's premier financial institutions. It was altogether an impressive record for a company that had started with paper-thin financial resources and a handful of engineers and technicians and had little going for it but exceptional talent and a strong, imaginative leader.

Consolidation and crisis

In 1980, at age 69, Norris, while not yet ready to retire, began planning for that eventuality, and on his recommendation the board established a corporate executive office with

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himself as chairman and chief executive officer, Robert M. Price as president and chief operating officer, and Norbert R. Berg as deputy chairman of the board. Norris continued to be responsible for overall company policy and performance; Price, subject to that higher level of authority, was to manage the day-to-day affairs of the company, and Berg was to assume certain defined functions, notably the "identification and development of business opportunities in areas of social needs."

Freed from daily operating responsibilities, Norris was able to spend more time pursuing long-range strategic goals and his ideas for improving the economic, social, and political environment of business in general and Control Data in particular. There were elements in that environment that Norris found deeply disturbing: the perennial problems of joblessness, the precarious state of family farming, the threat of hostile corporate takeovers, the need for more effective technological cooperation, and the continued erosion of US strength in international markets. In an effort to deal with these and related matters, he embarked on what amounted to a one-man crusade to alert people in national leadership positions to the dangers and to outline the courses of action he considered essential for the good of the economy and the country.

During the early years of the corporate executive office, things seemed to go very well. Revenues and profits grew handsomely, and many who had been critical of Norris' ventures into unorthodox fields began to be more optimistic about the company and its future. As early as 1982, however, things began to go wrong. The trouble started in the peripher-

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al-products area.

The decision to enter the OEM and plug-compatible markets had for some years appeared to be well grounded: By 1983 Control Data peripheral products was a \$1.5-billion-dollar business, and with 46 percent of the OEM disk drive market, Control Data dominated the peripherals industry. But difficulties had already begun to surface: the business started to come apart in 1984 and crashed resoundingly in 1985 with a staggering loss of over \$300 million. In late 1984 the company withdrew suddenly and completely from the plug-compatible disk drive business, taking a \$130.2-million write-off in the process.

A key reason for going into plug-compatibles was the assumption that it would be an incremental business. So it was at the beginning, but it did not stay that way. The cost of keeping up with IBM's technological advances in memory technology proved prohibitive, and Norris and Price, with the board's approval, decided to cut their losses and get out of the plug-compatible business altogether. Additional difficulties soon compounded this major setback. The market for Control Data's OEM products was the computer industry itself, and 1985 marked one of the most drastic downturns in the industry's history. To complicate matters further, an explosion of new technologies yielded superior products that competitors were selling at sharply lower prices. Any of these problems alone would have created serious difficulties; in combination they were awesome.

Peripheral products were not the only part of the business in trouble. Data services divisions had also seen better days. Remote data processing was losing money in Europe, partly as a result of several acquisitions that had turned sour, but also because of difficulties inherent in maintaining economies of scale on a continent divided by many national boundaries. The advent of microcomputers in the early 1980s had a serious impact on the data services business. Many customers now found that they could use desktop computers to handle on site many of the tasks for which they had formerly used Control Data services. The new technology presented opportunities as well as problems, but the company was slow in finding ways to combine the inherent advantages of desktop computers with those of large central mainframes, and the resulting loss of revenues compounded the problems created by difficulties in the peripherals business. Norris still had faith in the ventures into the social needs areas, but these were proving harder to bring to profitability than anticipated.

Meanwhile, other parts of Control Data's services business were doing well. Arbitron, Ticketron, and engineering and professional services were thriving, as were government systems and, for a time, the computer mainframe business. Revenues and profits from these operations largely masked what was happening elsewhere in the company.

Liquidity problems. As a result of these developments, Control Data was faced with a growing need for cash. Selling Commercial Credit seemed the logical way to go. The necessity had long passed for the lease-financing function Commercial Credit had originally been acquired to serve. Commercial Credit had a net worth of over \$800 million, and a selling price anywhere near that figure would solve Control Data's liquidity problems overnight. The company's invest-

ment bankers, Goldman, Sachs & Co., strongly recommended this course, and in November of 1984 Control Data announced that Commercial Credit was for sale. Unfortunately, finding it impossible to negotiate a sales agreement on acceptable terms, Control Data took Commercial Credit off the market in June of 1985.

Meanwhile, the company's financial problems had grown worse than when Commercial Credit had first been put up for sale. Foreseeing the possibility of trouble finding a suitable buyer for Commercial Credit, work had been started early in 1985 on a prospectus for a public securities offering of \$200 million in bonds and \$100 million in preferred stock. In July, after the sale of Commercial Credit had fallen through and before the new securities had been placed on the market, a letter was received from the staff of the Securities and Exchange Commission challenging the accounting treatment of certain portions of the company's 1984 earnings report. While disagreeing with the SEC position, in order to prevent the securities issue from becoming bogged down by a dispute, Control Data in August restated its 1984 earnings from \$31.6 million to \$5.1 million, and at the same time recognized the effect of the updated financial information and restated its second-quarter 1985 figures from a \$3.8 million profit to a \$4.3 million loss.

Financial restructuring. Continued deterioration in the company's business had by this time made it clear that the company would suffer a larger loss for the year than had been expected, causing increasing concern for both Control Data and the managers of the prospective offering, Goldman, Sachs and Merrill Lynch. The night before the scheduled closing, Price, his chief financial officer, and representatives of the two investment firms debated in a lengthy telephone conference whether or not to go ahead. After painful review, the wrenching decision was made to cancel the offering.

This eleventh-hour move sent shock waves through Wall Street and rocked the already damaged confidence in Control Data's future. The price of Control Data stock dropped sharply, and other troubles mounted swiftly. A short-term money-market debt outside the bank agreement was due to mature in a few days, and the company expected to meet it by drawing on approximately \$100 million still available under revolving fund agreements that were not in default. The company's bankers, however, refused to advance additional funds, and as a result Control Data defaulted on the short-term debts, which in turn placed it in default of its principal bank indebtedness. The situation was critical.

At first there was panic on the part of the bank representatives, but they learned on closer examination of the books that Control Data's assets were far more than enough to pay off 100 cents on the dollar. After months of tortuous negotiation, in June of 1986 the sale of \$125 million in accounts receivable was completed and the defaults were cleared by a new override agreement. The company was no longer in default, but the new covenants were highly restrictive.

With its financial house in order, Control Data went to market on July 31, 1986 — nearly a year after the earlier abortive effort — with a new securities offering of \$200 million in senior notes and \$150 million in convertible debentures. The investment community, its confidence returning, oversub-

scribed the two issues by a total of almost \$50 million. The company could now breathe easier.

L'envoi. During the critical period 1984-85, Control Data was the subject of considerable press attention. Much of this was directed to Norris himself, who became, in effect, the lightning rod for complaints about the company's poor performance. There was widespread belief that the problems were rooted in Norris' unconventional notions, that he was "frittering away resources on offbeat social schemes" and neglecting "the day-to-day details of running a business for a profit."

This attitude reflected a serious misunderstanding of the facts. Not all of Norris' novel ventures had been successful, and some of those that showed promise had not yet reached profitability; but less than 5 percent of the company's assets were employed in the so-called societal needs areas. The problems that brought Control Data to the brink of disaster were in its basic businesses: peripheral products, data services, and, somewhat later, computer systems. Most serious of the latter was failure to recognize the potentialities of the rapidly developing microcomputer technology and the extent to which desktop computers would modify earlier dependence on powerful mainframes.

Both in the press and in private conversation, reference was often made to Norris' age — 74 in July of 1985 — and to the fact that he had well passed the time when chief executives usually retire. Norris was reluctant to do so. He was in excellent health and still had many goals he wanted to achieve; not least important, he did not want to leave while the company was in trouble — "I don't like to walk away from a fight." Even so, he was not unaware of the turning of calendar pages. He had put his basic plan for eventual retirement in place as far back as 1980 when at his request the board had created the corporate executive office with Price as his designated successor. Both he and the board were pleased with the way this arrangement had worked and confident Price had demonstrated his readiness for the top position. Thus reassured, Norris advised his outside directors in November of 1985 of his intention to retire and recommended that Price succeed him as chairman, president, and chief executive officer and that Berg continue as deputy chairman. The board approved, and the actual transfer of power took place at the regular meeting of the board on January 10, 1986.

After months of highly critical comment, the reaction of the press to Norris' retirement was predominantly positive. An editorial in the *Minneapolis Star Tribune* was typical. Under the heading "A Good Corporate Citizen Steps Down, Not Out," the paper paid tribute to Norris as "a man with many visions" and concluded with a moving encomium: "Because Norris wasn't afraid of mistakes, he made them. Because he was a man of vision, he sometimes went too far. Because he was a self-confident leader, he wouldn't be second-guessed. As a result, some promises were not delivered. But because of that courage, vision, and leadership, many promises were. Minnesota and America are richer in many ways because of him."

An era had come to an end. ■



James Worthy was named professor of management and Senior Austin Fellow at the Kellogg Graduate School of Management at Northwestern University in 1978, bringing to the school experience drawn from a career in government, business, and education. He served two tours of duty in Washington, once as assistant deputy administrator of the National Recovery Administration in the early days of the Roosevelt New Deal, and again 20 years later as assistant secretary of commerce in the Eisenhower period.

Professor Worthy's work in private business spanned 23 years with Sears, Roebuck and Co., where he rose to vice president, and 10 years as regional partner of the international management consulting firm of Cresap, McCormick and Paget. On retiring from the latter position in 1972, he was appointed professor of public affairs and management at the newly established Sangamon State University in Springfield, a post he held until joining the Kellogg faculty in 1978. Over his years in business and education, he has been a director of a number of corporations.

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