Office of A.S. Duncan, one of the three founders in 1912 of Commercial Credit Corporation. Control Data stock, on the occasion of Control Data's first listing on the Big Board. Commercial Credit's corporate symbol. First-day stock-market ticker tape for March 6th, 1963, lists newcomer "CDA" as opening at \$41.25 a share. 3 a,b,c,d Early Control Data patents. Company president W. C. Norris, illustrating 1963 cover story which characterized Control Data as "small, smart, sharp." 10 "The Tower" in Minneapolis, Control Data's World Headquarters building. Jeweled tie clip offered to male employees on completion of ten years of service. All employees receive choices at five-year intervals of tokens recognizing loyal service. 11 Circuit card for CDC® 3000 Series computer systems. CDC 1604 mainframe's nameplate. 12 CONTROL DATA® PLATO terminal used in computer-based Invitation to membership in The Shark Club, highest honor education. bestowed on Control Data sales personnel. When a CDC 1604 was submitted in the early sixties and accepted by the State's university in Austin, the mainframe, wired for sound, broke into a rousing rendition of THE YELLOW ROSE OF TEXAS. 13 Sharing congratulations on the floor of the New York Stock Exchange, Edward Gray, Exchange Vice President, William C. Norris, and Robert J. Silver, specialist in 1.5 CONTROL DATA 11 BUSI WEE NEW-YORK-STOCK-EXCHANGE-MAR 3b Oct. 10, 196

The First Twenty Years



Vol. 3, No. 9 August 1977



600,000 shares of this stock were sold at \$1 each in 1957 as the initial capitalization for Control Data Corporation, whose early 14 21 The McGill building, first home of the newly-founded Control Data in 1957. and current logotypes are shown below. Check for \$25,000,000.00 served in 1973 as partial 22 a,b 15 A "building-block" circuit for "Little Character," and the 1604, compensation by International Business Machines Control Data's first system and the world's first transistorized Corporation for losses suffered by Control Data as a result of IBM's practices in restraint of trade. This check, made out to IBM, was countersigned and turned over to Control Data. Further 16 Another occasion for mutual congratulations was shipment of compensation was sale at book value to Control Data of Service CDC 1604, Serial 1. Bureau Corporation, represented here by its logotype. 17 Sign at the door of the "McGill" paper warehouse in 23 Lapel pin or tie tack identifies members of 100% Club, Minneapolis identified the occupancy of Control Data honor bestowed on Sales personnel who achieve 100% Corporation. of yearly quotas. 18 Sandwiched circuit boards for CDC 6600. 24 ID badge of a Control Data employee. 19 Console and tape drives of CDC 1604 system. 25 The corporate seal. Seymour Cray, designer of Control Data's first computers, is 20 shown here at the console of the CDC 6600. 20 21 THE UNITED STATES OF AMERICA OL DATA 22a RATION BANKERS TRUST NEW YORK COMPANY 455835 BRANCH NO. \$25,000.000.00**** CHECK TWENTY FIVE MILLION DOLLARS AND NO ONE HUNDREDS OFFICIAL International Business Machines Corporation 1:0210101031:00010700000311

The First Twenty Years

"Have several former Univac people resigned from the St. Paul Sperry Rand branch to form a firm called Control Data that will deal in electronic research?"

The first public notice of Control Data appeared in Sid Hartman's sports column in the *Minneapolis Tribune* on July 30, 1957.

"All of us own a share in the new business," Norris said. "Our biggest asset is in the skill of our people and our knowledge of how to use each other's talents to best advantage.

"We're aiming at sales of 25 million dollars a year within five years," he said.

Minneapolis Star, November 11, 1957

1957....The fledgling computer industry only one decade from the anniversary the first operational machine. In that decade, however, groundwork has been laid for an explosion in electronic technology that will eventually reach the moon as the Soviet Union prepares for the October launch of Sputnik.

In Minnesota a small group of men led by business executive William C. Norris leaves the Univac division of Sperry Rand to form a new computer company — Control Data. The company is incorporated on July 8, headquartered in a paper warehouse at 501 Park Avenue in Minneapolis, and funded by the sale of 600,000 shares of common stock — priced at \$1 each. Within a few months work begins on a concept for a large-scale scientific computer and Cedar Engineering is acquired, giving Control Data needed manufacturing capability.

1958....The U.S. Navy places the first order for a million-dollar 1604 computer in June. The company's meager capital is rapidly disappearing, forcing salary cuts and a Spartan-like existence. Prospects brighten, thanks to additional orders, and the purchase of 350,000 shares of preferred stock by Allstate Insurance Company at \$25 per share.

1959....Twin City investors begin to regret not buying Control Data at \$1 a share. More orders are landed for the 1604, a new small computer — the 160 — is announced, work begins on a major military contract to supply submarine-based computers to the Navy and the 1604 moves into production. Nearly 200,000 new shares of common stock are snapped up at \$16.25 per share and the warehouse at 501 Park Avenue is getting crowded.

1960....A fledgling data services business begins in Minneapolis by using surplus

ELECTRONIC NEWS, MONDAY, SEPTEMBER 16, 1957

ENGINEERS

electromechanical-mechanical

Control Data Corporation has just started. We're going to grow.

Would you like to be one of the first members of the Control Data Corporation team? A limited number of engineering positions are now available requiring design experience in airborne and industrial data systems, instruments, and controls.

Send your education and experience resume to



CONTROL DATA CORPORATION
501 Park Avenus
Minneapolis, Minnesota

time from a 1604 in the software development department. The U.S. Navy Post-Graduate School, Monterey, Calif., accepts a 1604 computer, serial number one, the world's first fully transistorized machine offering an unbeatable price per calculation. A major expansion program into peripheral products begins with development of the 606 tape drive; design work begins on the 6600, the world's largest, most powerful computer; and Control Data begins to explore computer sales prospects in other countries. 125,000 shares of stock are offered at \$39.50 per share.

1961....Development begins on two new computer models — 3600 and 3200 — to expand Control Data's market share. The stock reaches \$29 and splits 3 for 1; 300,000 shares are sold at \$33; 50,000 at \$39 per share; and construction begins on a peripheral products plant and a headquarters plant in south suburban Minneapolis. Also, another data center is opened in Palo Alto, Calif., and Control Data President W. C. Norris spells out his plans for a nationwide network of service bureaus.

"In such a rat race, you have to be terribly lucky and terribly smart, or you have got to have a lot of money. This is a battle of the giants."

Edwin McCollister, an RCA executive quoted in a March 8, 1963, issue of *TIME* magazine on the hotly competitive computer industry. RCA ultimately dropped out in 1972.

1962....Control Data signs an agreement with the University of Illinois to begin computer-based-education development by furnishing a 1604 computer. IBM stifles 1604 sales with price cuts on "fighting machines" and other unfair marketing practices, halting 1604 orders for a year. The 3600 is announced and an enhanced 1604A comes to market.

The 6600 development team moves into a new laboratory in rural Chippewa Falls, Wisconsin; offices are opened in Canada and Australia; and \$15 million is raised through the sale of debentures.

1963....Control Data enters the European market, establishing wholly owned subsidiaries in the Netherlands, Sweden, Switzerland, West Germany, France and Australia. In the U.S., the Lawrence Livermore Radiation Laboratory in California orders the first 6600 and accepts delivery of the first 3600. Control Data stock is traded on the big board, and construction begins on a huge manufacturing plant in north suburban St. Paul.

1964....Work begins on a new computer concept — STAR — under contract with the Livermore Lab. The stock reaches \$111.86 and splits 3 for 2, the 6600 is delivered and investors are really regretting not buying Control Data at \$1. The company begins efforts for cooperation in industry, seeking partners for joint development.

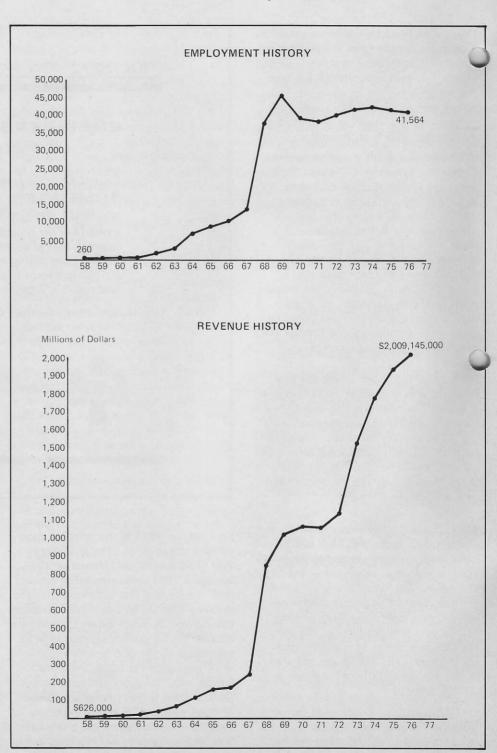
1965....The 6600 runs into technical problems in the field, and IBM mounts another and even more devastating "competitive" attack, announcing new "paper machines" and myriad other unfair marketing practices. The first Control Data Institute is opened in Minneapolis, the first European data center is opened in Frankfurt, West Germany, and new products include the 1700 computer and innovative memory disk drives.

"Contrasting this modest effort with our own vast development activities, I fail to understand why we have lost our industry leadership position by letting someone else offer the world's most powerful computer."

T. J. Watson, Jr., chairman of the board of IBM, in a memorandum on August 28, 1963, after Control Data announced the 6600 computer system.

"Control Data's position in the computer field, both technically and in reputation, plus the growth potential of the computer industry, will, in our opinion, open new areas of growth for your Company."

D.S. Jones, president, and L.S. Willard, chairman of Commercial Credit Company, in a letter to their stockholders on June 21, 1968, announcing the approval, in principle, by the Commercial Credit board, of their acquisition by Control Data.



"One day Salomon Brothers traded 374,000 shares of Control Data for \$52,360,000, the largest single Stock Exchange commonstock transaction in history."

That transaction on August 21, 1968, and noted here in *The Go-Go Years*, a book by John Brooks, took place when the stock sold for \$140 per share.

"Control Data Corporation's decision to establish an experimental electronic sub-assembly plant in the Summit-University area is a prime example of what industry can do to serve the community."

Minneapolis Tribune, September 16, 1969

"Sometimes, I think I'd like us to stay small," Norris says in a reflective mood. "But one can't always have his own way.

"There are certain advantages to size," he goes on. "I suppose we're going to be a big company some day."

Minneapolis Tribune, November 12, 1961

1966....6600 orders begin to pick up, but o little too late. The fiscal year ends with Control Data \$1.9 million in the red. Research and development remains heavy, however, as work continues on the powerful 7600 and STAR computers, new disk products, and expansion of the data centers.

1967....Business is back to normal. Order performance for the 6600 is strong as customers discover that IBM has no competitive machine.

1968....Two momentous events: Control Data acquires mammoth Commercial Credit Company by winning a tender-offer battle with Loew's Theatre Group, and Control Data files suit against IBM, charging unfair marketing practices and violation of Section 2 of the Sherman nti-Trust Act. Control Data installs 6000 computers in its data centers, renames the data centers division "CYBERNET", continues a massive data services expansion program outside the U.S., and announces the 7600 computer. Computer business earnings for the year are a record \$19.6 million.

1969....Rapid growth continues, new plants started in disadvantaged communities in rural Kentucky, Washington, D.C. and Minneapolis. The first 7600 is accepted by Livermore.

1970....The U.S. economy enters a severe recession. Computer orders slump, principally from government customers, and year-end losses top \$47 million in the computer business. (Commercial Credit earns \$38 million in 1970.) Significant events include the adoption of a new pricing policy to unbundle services from computer sales prices and the signing of an agreement with the Canadian government for a joint computer development program.

1971....A new bank credit agreement eases financial pressure on the company. Commercial Credit earnings of \$50 million offset the \$20 million computer business losses. Major systems announcement is the CYBER 70 series, an enhancement of the 6000 line.

1972....The computer business pulls back into the black. After years of trying and promotion, a joint venture is finally established to manufacture peripheral equipment. It is with NCR Corporation and is called Computer Peripherals, Inc. Control Data issues 1.2 million shares of common stock at \$76.60 per share. Plans are laid to bring PLATO-based education to market and to begin wide usage in Control Data for training needs.

1973....Control Data becomes the winner of the largest settlement ever paid to a single plaintiff when its anti-trust suit against IBM concludes out of court in January. Settlement terms include Control Data's acquisition of IBM's Service Bureau for \$16 million, IBM-funded research grants, and agreement by IBM not to enter the data services business for six years. Control Data enters a jointventure with the Romanian government to manufacture peripheral products and signs a ten-year agreement with the Soviet Union to cooperate in fields of science and technology. 1973 ends with computer business revenues topping the billion-dollar mark for the first time.

1974....The CYBER 170 computer line, successor to the CYBER 70, is announced in Toronto, Canada. The first STAR computer, the world's largest, most powerful machine is shipped to Livermore. The year ends with cancellation by a Swiss bank of a joint development contract, resulting in lawsuits and the establishment by Control Data of a \$30 million reserve against possible

losses, which results in the computer business finishing the year more than \$35 million in the red. Commercial Credit earnings top \$34 million.

1975....Stringent asset and cost control programs, coupled with quick customer acceptance of the 170 computer line, bring about rapid improvement. The first 170 is accepted by a customer in Spain. A major joint venture with Honeywell, Magnetic Peripherals, Inc. is established to manufacture peripheral products.

1976....The 170 line emerges as Control Data's most successful computer series. New joint ventures include Control Dataset with ICL Corp. in England and Computer Terminals of Iran with the Iranian government, both designed for peripheral products manufacturing. The processing power of STAR is offered on the CYBERNET data services network. Combined computer and financial services business revenues top \$2 billion for the first time. Control Data publicly announces PLATO as the core of a broad education services business, begins establishing a nationwide network of conconsumer-oriented learning centers, and accelerates marketing of complete PLATO systems to business, government and educational institutions.

1977....Control Data announces its first annual dividend to holders of common stock, and completes its twentieth full year of business in July. With more than 41,000 employees and assets topping \$5 billion, Control Data has operating computer systems, peripheral products, computer services, education services, or financial services businesses in 33 countries. ■

Perspective: Selling a CYBER 76 to the Soviets

A CONTACT Interview with W.C. Norris, Chairman of Control Data Corporation.

In late June, the U.S. Commerce Department denied an export license for the sale of a Control Data CYBER 76 to the Soviet Union. The computer system was to be delivered to the Hydrometeorological Research Center (HYDROMET) in Moscow for use in weather research and forecasting. (See March 1977 CONTACT)

Several members of Congress led a highly vocal opposition to the sale and their viewpoint and comments reached the public media in late May. Control Data received notice of the export license denial on June 23 and had its first forum for answering Congressional critics four days later.

On June 27, Robert D. Schmidt, executive vice president, and Hugh P. Donaghue, vice president and assistant to the chief executive officer of Control Data, appeared before the International Economic Policy and Trade subcommittee of the U.S. House Committee on International Relations. The Schmidt presentation included an explanation of the proposed safeguards for the CYBER 76 and the critical need for the machine in the World Meteorological Organization.

The following interview with William C. Norris provides additional perspective on the CYBER 76 sale as well as a continuation of the more intensive coverage of the subject of East-West trade that began with the special report in the January 1977 CONTACT.

CONTACT: Why was the export license for the HYDROMET sale rejected?

NORRIS: We believe the rejection is essentially political rather than based on sound technical grounds. The rejection notice from the Commerce Department's Office of Export Administration (OEA) said, "Because it (the CYBER 76) is far more powerful than any computer known to the Soviet Union, the likelihood of diversion to military or strategic uses is of serious concern."

Control Data has not been officially informed by the executive agencies of the reasons for their judgment that this export would jeopardize our national security. While TV, radio, and newspapers carried misinformation and gross distortions of fact to the public, our company was denied the right of meeting its critics either in an open or classified forum.

Only after the rejection did Bob Schmidt and Hugh Donaghue present our position in a hearing before the International Economic Policy and Trade subcommittee of Congress. I believe that Control Data and our thousands of employees are just as concerned for the security and well-being of our country as those who opposed this transaction.

CONTACT: What reaction did we anticipate?

NORRIS: As you may recall, this application has been in process for two years. Late last fall we withdrew it temporarily because we were concerned that it might not get thorough and fair consideration from an outgoing administration. The application was re-submitted earlier this year.

The government's analytical process got off to a favorable start — or so we thought back at the time — by the establishment of an inter-agency technical task force under the leadership of the Bureau of Standards, to look at the proposed CYBER 76 safe-

guards. This was a landmark action, because it was the first time that an interagency review of an export case was not chaired by the Department of Defense.

It was our initial understanding that Control Data would get a chance to review task force findings before they were cast in concrete, so that we could make a rebuttal to any that were not correct.

Contrary to that understanding, opportunity to review the findings was denied and they were submitted in final form in a classified document. We still have not officially seen a copy. A government official finally let us read the document in his office, with the understanding that we would not disclose who had shown it to us.

The safeguards task force concluded that the proposed safeguards would fail to detect strategically significant increments of CYBER 76 running time, defined as:
(a) one ten-minute run per day; (b) twelve one-minute runs per week; (c) ten hours per month in 100 millisecond runs.

The only possible explanation for this task force conclusion is that there must have been confusion with respect to the actual application of the safeguards and the assumption of highly theoretical and impractical conditions. Both of these would easily occur if there were strong emotional biases present against the sale of the CYBER 76, which must have been the case for some of the members.

CONTACT: Why does Control Data believe that the safeguards are valid?

NORRIS: First, we can detect any amount of diverted time. Several unusual additional safeguard features have been devised for the CYBER 76 installation at HYDROMET. (See "Safeguard Summary" page 5.) Any serious attempt to overcome or circumvent these safeguards would require tremendous expenditures of time, money, and spe-

Safeguard Summary

In the export license application for the HYDROMET installation, Control Data proposed a comprehensive safeguard system to minimize the chances for unauthorized use of computer resources and to detect such efforts should they occur. The following is a brief summary of the proposed safeguards:

- 1) Control Data will maintain, fulltime, both a systems analyst and field engineer at the HYDROMET site to implement the safeguard functions.
- 2) Machine locks and split-second time meters installed on the equipment will allow only Control Data personnel to start operation of the computer and will log all time when the machine is on or off.
- 3) The normal operating software code, without which no computer can function, has been modified for the Moscow installation to make it totally unique, and the only copy of the code will be in the hands of the resident Control Data analyst. Any attempt to operate the system with invalid software will halt the system and will be recorded automatically on the System Information File.
- 4) The System Information File provides data on the computer's operation on a per-job basis, including time used, memory and storage usage, type of job performed and identification of all files involved. It cannot be tampered with without detection and can be accessed only through the use of special passwords. Contents of the System Information File will be delivered periodically by Control Data to the U. S. Embassy in Moscow for analysis.
- 5) A special analyzer program will identify and record any attempt to perform a large job by segmenting it into a series of small jobs.
- 6) Selected programs used on the computer, both routine and developmental, will be analyzed by Control Data personnel.
- 7) In the extremely unlikely event of failure of these safeguards, withdrawal of spare parts by Control Data would cause the rapid degradation and ultimately complete closing down of the system.

Below: W. C. Norris

cialized personnel and would have to involve overt physical force. They ould, of course, be detected immediately.

For more than ten years now, Control Data personnel have regularly maintained and monitored computer equipment installed in the Soviet Union with the approval of and under the required surveillance of the U.S. Government. In all of that time, there has not been a single instance of failure by the Soviets to comply with the required procedures.

Second, HYDROMET's performance of its weather assignments alone would fully occupy the capabilities of the CYBER 76 and any neglect of those functions would be evident immediately to other members of the world weather system, including the Washington, D.C. center.

ONTACT: Why was the sale of the CY-BER 76 rejected when just last fall we were given approval on the CYBER 73 and CYBER 172 sales to Russia and China?

NORRIS: The main reason is that the government agencies believe that the safeguards for smaller machines aren't valid for larger machines. This isn't true.

There is no qualitative difference between a small and large computer when the large system is put to its intended use — that is its full power and speed are applied to time-dependent problems. Then the same safeguards are applicable. In any case, the safeguards that we proposed for the HY-DROMET installation were more extensive than the safeguards approved in the previous sales.

We are told, for example, that the interagency committee that recommended against the HYDROMET installation based its decision in part on the allegation that occasional one-tenth-of-a-second burst of unauthorized use could be sneaked, un-



detected, from the CYBER 76 to the detriment of U. S. strategic interests.

The absurdity of such a statement becomes discernable when one considers some of the uses to which the machine is currently dedicated on a *full-time* basis.

- In U.S. Government cryptanalytical work, which requires large blocks of continuous computer running time, the total of Control Data equipment involved constitutes only five percent of the computer power devoted to this task.
- In U. S. Government nuclear work, programs now being run on our STAR 100 computer require 150 hours of running time. On the CYBER 76 they would take 450 hours to run. More importantly, development of these programs required 2,500 hours on the computer and 28 manyears of program development time. It was reported recently that one nuclear laboratory runs a particular program 350 hours per month.
- In one missile tracking program, after several years of totally dedicated work by several CYBER 76s and 77s (dual 76s) and after hundreds of millions of dollars spent on computer hardware and software plus millions of person-hours on software development, the program is as yet only semi-operational.

CYBER 172 Sales to Soviet Bloc Sought

Control Data has applied for export licenses for CYBER 172 computer system sales to the Soviet Union and Czechoslovakia. The sales are subject to approval by the Commerce Department and the Free World Coordinating Committee, which is comprised of Japan and NATO nations, except Iceland.

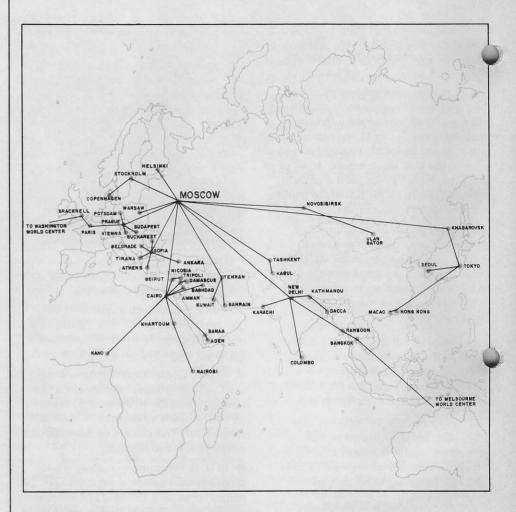
The Soviet Union plans to use the CYBER 172 for a joint Soviet-Japanese oil exploration project on Sakhalin Island off the Soviet North Pacific coast. Last fall Control Data received approval to ship a larger CYBER 73 system to the Soviets for seismic work at the USSR Ministry of Geology in Moscow.

Control Data received the order despite the fact that much of the project is financed by Japanese firms. Robert D. Schmidt, executive vice president, explained, "The Japanese wanted to sell their own equipment. However, the Russians wanted to be consistent with the CYBER system they purchased for the Ministry of Geology in Narofominsk. Besides, they know our equipment is better."

The Czechoslovakian Federal Statistical Office has also signed a contract for a CYBER 172 to tabulate census and trade data. A long-time customer of Control Data, the Statistical Office plans to upgrade their 3300 system.

Schmidt does not anticipate problems in obtaining export licenses for these orders because they fit within the export guidelines and larger systems have already been approved and installed. "I hate to guess when we'll get approval. I would like a decision by September, so we can ship and install them and get the revenue," stated Schmidt. The combined revenue from the two systems is approximately \$12.2 million.

Below: Hydrometeorological World Center in Moscow is a critical link in the network of global weather centers. **Right:** A CYBER 76 system.



The point of all this is two-fold: first, no program of any strategic significance can even be approached on the basis of short, occasional bursts of computer time, and second, the computer time required to work on programs of any significance would be quickly and easily detected.

CONTACT: What was the response from Mr. Schmidt's presentation to the Congressional subcommittee?

NORRIS: Our presentation could not affect the CYBER 76 sale. The subcommittee has responsibility for drafting legis-

lation related to the Export Administration Act, and was using the HYDROMET case as a vehicle for reviewing the process of granting export licenses.

CONTACT: Why is one \$13 million sale so important?

NORRIS: First, there is an important and legitimate need for a computer of the capability of the CYBER 76 to be installed in Moscow. The HYDROMET is a critical link in the World Meteorological Organization (WMO).



To help you understand more precisely the importance of this computer link-up, let me refer to a testimony called "Statement on USSR Computer Requirements in Support of International Meteorologial Programs" prepared by the National Oceanic and Atmospheric Administration (NOAA) of the U.S. Government:

"Significant computational resources are needed to produce meteorological forecasts. The numerical forecasts of the Soviet Union verify consistently poorer than do those of the U.S. primarily because of the lack of a sufficiently larger computer. The computation resources of the Hydrometeorological Center are significantly inferior to the three fourthgeneration computers used in NOAA. (National Oceanic and Atmospheric Administration, Suitland, Md.) It is NOAA's judgment that USSR computer resources, equivalent to or in excess of a fourth generation machine, are required to support near-term international meteorological programs.

"The direct benefits to the U.S. from Soviet acquisition of such a computer include: an improved world weather watch supplying higher quality data for the U.S. forecast models, U.S. reception of greatly improved USSR satellite data

from their two polar-orbiting satellites and their first geostationary satellite, and improvements to U. S. forecast models through comparative evaluation of advanced USSR forecast models."

CONTACT: Besides the benefits to the world weather system, why do you so strongly advocate doing business with the Soviet Union?

NORRIS: This issue is broader than simply the sale of a single computer. It has implications for the agreements entered into in 1972 and 1973 by the United States and the Soviet Union to expand technological cooperation and trade. Maybe you saw President Carter on TV just last week announcing the renewal of those 5-year agreements. He specifically mentioned weather research and forecasting as one area where we should cooperate with the Soviets.

In a CONTACT article early this year (January), I explained why Control Data strongly advocates expanded U.S. business relationships with the Communists. Let me repeat just a few major considerations. The United States needs technological cooperation in achieving more timely solutions to major societal prob-

lems. Additionally, technological innovation is the wellspring of new jobs and solutions to these major problems over time will provide the new jobs that our society so badly needs. Americans generally are uninformed of the vast Soviet resource of available technology that could be used in aiding solutions. The Soviets for some time have been making the largest investments of any nation in the world in terms of money, people and facilities devoted to basic research.

Becently there was an AP newspaper story on U.S. gains from Soviet technology. It briefly reported on progress in the cooperative program between the U.S. and Soviet Union in magnetohydrodynamics, which is a process to improve the efficiency of electrical generating plants that use coal, gas or oil. This is just one example of the West benefiting from Soviet research.

Americans must also realize what the Communist market potential means in terms of jobs. According to Control Data research, the large computer market opportunity for non-Communist suppliers is now about 25 per year with a value of \$75 to \$100 million. This segment will grow. In the ten years ahead, we estimate that the value of the Communist-installed computer base, exclusive of minicompu-

Earnings Up 26% In Second Quarter

ters, will be \$43 billion. This represents an \$8 to \$10 billion market opportunity for U.S. companies over this ten-year period. By 1985, the U.S. could enjoy sales in excess of \$2 billion per year — a level of 100,000 jobs in 1985. By way of comparison, this is about the same number of jobs as in the U.S. semiconductor industry today.

The Communist Bloc has the basic technology to become self-sufficient by 1980 and have significant export capability by 1985. As the Communist computer industry builds this capability and capacity, it will capture an increasing share of the third world market.

In addition to the competition from Communist Bloc countries, the Japanese and German competition is going to be tough during these years in both third world and Communist Bloc markets so we should do everything reasonable now to avoid giving these competitors additional advantages. The decisions being made at this time will largely determine whether or not U. S. computer manufacturers will be able to achieve the potential reasonably available to them.

These combined markets will represent a level of jobs in excess of 200,000 per year by 1985 — 108,000 for the Communist Bloc, 50,000 for the peripheral market and 44,000 for the Third World systems market, for a total of 202,000.

It nets down to meeting the present Communist needs for about two dozen large computers a year and certain peripheral equipment for the next three or four years or losing most of those 200,000 jobs.

CONTACT: Do you think negative publicity from this CYBER 76 sale has damaged the company's credibility?

NORRIS: No. People with common sense and clear, logical thinking will look at both sides of the publicity and under-

stand the political nature of the actions. The small fringe who are violently opposed to any dealings with the Soviets are probably more hostile to our actions, but — I don't think we'll ever convince those people. Our credibility certainly has not been damaged with the customer.

CONTACT: What was the Soviets' reaction?

NORRIS: Bob Schmidt flew to Moscow right after his subcommittee presentation. The customer essentially told Schmidt that they still like Control Data and felt we had done an appropriate job handling the export license application. Of course, they were very disappointed about the impact the rejection had on their role in the international weather projects.

CONTACT: What is Control Data going to do now?

NORRIS: We will plan an alternate configuration for the HYDROMET installation that we hope will be satisfactory to both the Soviet customer and the U.S. Government

CONTACT: In light of the Carter administration's current stance with the Soviets, do you foresee further difficulty in obtaining export licenses?

NORRIS: Since we've gotten approval for the CYBER 73 and 172 systems with accepted safeguards, we anticipate further licenses for those machines.

In an overall sense, we have to expect peaks and valleys in U.S./Soviet relations with resulting effects on the business climate. Right now we appear to be in a valley but hope conditions will improve by the end of this year.

The following was released to the press July 13:

Control Data reported consolidated net earnings of \$14.6 million or 85 cents per share for the three months ended June 30, a 26% gain over the \$11.6 million or 67 cents per share in the same quarter of 1976.

Consolidated net earnings include net earnings of the computer business and Commercial Credit.

Computer business revenues for the second quarter were \$369.8 million, up ten percent from \$335.1 million for the same period in 1976.

For the six months ended June 30, Control Data reported consolidated net earnings of \$26.3 million or \$1.52 per share, a 21% increase over the \$21.7 million half of 1976.

For the six months, Commercial Credit's consolidated net income was \$17.8 million compared to \$18 million for the first half of 1976. The first half results included a \$2.6 million net foreign exchange loss compared to a net foreign exchange gain of \$1.8 million in the prior year.

Six-month computer business revenues reached \$708 million versus \$641.7 million in the first half of 1976.

William C. Norris, chairman, noted that Control Data continues to experience improved business across a broad range of computer related products and services. As a result, he said, second quarter computer business earnings were \$4.8 million versus \$2.8 million for the second quarter a year ago.

Norris said that computer services were a particularly strong contributor to the improved second quarter profit results. In particular, data services revenues, aided by a number of new products, grew by 22% compared to the same quarter a year ago.