

Control Data: Big Success, Big Gamble

Brilliant engineering and managerial boldness have raised little Control Data to the third spot in computer sales and second spot in profits. But Bill Norris can't relax yet.

HARDLY THREE YEARS ago the financial pages were awash with scientific-sounding names of brand-new little companies. In most cases they consisted of little more than a few Ph.D.s working in rented loft space on a bit of a Pentagon subcontract. It didn't matter. Investors bid up their prices. But since the collapse of the new-issue boom in early 1962, scores have gone out of business and many others are just holding their own.

All the more remarkable, therefore, is the tremendous success of Minneapolis' Control Data Corp.* In 1961 it was only four years old, and in name hardly distinguishable from scores of other new science companies.

Control Data, however, was the one in a thousand that had what it takes. It was founded in 1957 by Chairman and President William C. Norris, who had recently quit as general manager of Sperry Rand's Univac division. Norris' whole staff consisted of a half-dozen fellow Univac refugees. Today, CD has over 6,000 employees and has just wound up the first nine months of its 1964 fiscal year with \$83 million in revenues and \$13 million in operating profits (see chart).

Its stock, which traded at 3 1/8 in 1959, hit 52 at the height of the science-stock boom, and in 1963 reached an all-time high of 113 3/8.

Against formidable competition, Norris' Control Data is extremely profitable. In the computer business it is third behind IBM, the uncontested leader, and Sperry Rand's Univac division (see FORBES, Apr. 1, p. 24, for share-of-the-market breakdown). It is ahead of the computer divisions of such giant companies as Radio Corp. of America, Honeywell, and GE. Of the lot, moreover, only two are making real profits: IBM and CD.

Brains, Plus. How can CD make a profit, when its giant rivals cannot? "Brains," says Bill Norris simply. Many of the brains that Norris refers to were once the property of Univac: Control Data has taken at least 50 men from Univac; all five of its vice presidents are ex-Univac men who worked under the 52-year-old Norris at a tiny computer company called Engineering Research Associates. ERA



Quick Riches have been earned by several CD executives who picked up stock, now worth more than \$100 a share, for under 35 cents in 1957. Bill Norris (above) alone holds \$18 million worth.

later became part of Univac. Still in their late thirties and early forties, this team is among the most experienced in the young computer field.

But Norris is oversimplifying when he attributes CD's success entirely to "brains." Control's technical people produce fine equipment. But so do the top technical people of rival companies. What has made a good deal of difference in CD's case is that Bill Norris has turned out to be an extraordinarily competent manager.

From the beginning, Norris used Control Data's limited resources wisely. He nullified the disadvantage of being small by concentrating on a few customers in carefully selected markets. When computer designer Seymour Cray and his crew (see box) designed the 1604, a transistorized computer superior to the old vacuum tube machines in use, Norris threw all the company's resources behind it. This bold decision put Control Data neck-and-neck with the pack, including IBM. Had the 1604 failed, Control Data would have, too.

Slow, Late and Unprofitable? For very specific reasons, Norris displays no fear of his giant competitors, except perhaps IBM. He is almost contemptuous of them. "Control Data and IBM are the only two companies in the computer field making money because they're the only two just in that business," says Norris.

He argues: "In computers the decisions are pretty big and must be made promptly. In big multidivisional companies like RCA, Sperry Rand, Honeywell or GE, top management is engrossed in many things and is not knowledgeable about the problems in the computer division."

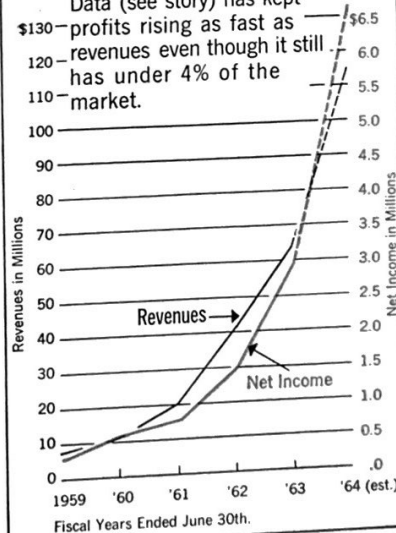
Such "absentee" management, Norris claims, causes some of his famous rivals to hesitate so long before approving a new computer that they reach the market a little late. And in computers, a little late is too late.

Norris also says that rival outfits too often refuse to commit enough funds to produce and push the new product, trying to limit any potential losses by playing it safe.

From the first, since he backed Cray's 1604, Norris, by contrast, has made quick decisions and set a bold course. He has constantly gambled. He has insisted that Control Data must grow into a much bigger company, one able to sell and service

THE SAGA OF CONTROL DATA

EDP is a cash-hungry business; it keeps most companies in the red, even though their computer volume runs into the hundreds of millions of dollars. But Control Data (see story) has kept profits rising as fast as revenues even though it still has under 4% of the market.



*Control Data Corp. Traded NYSE. Recent price: 102 3/4. 1964 Range: 106 3/4-74 1/4. Dividend (fiscal 1963): none. Indicated fiscal 1964: none. Earnings per share (fiscal 1963): 75c. Total assets: \$71 million. Ticker symbol: CDA.

not just computers, but total systems. **Sophisticated Customers.** There is no turning back from this necessity to grow. CD must be a big successful company or a flop. "As a matter of fact," smiles Bill Norris, "a well-thought-out, bold course is least risky. In computers it's those who play it safe who are in danger."

While Norris has been bold, he has also been shrewd. His big rivals have massed their attacks against the business data processing market where financial men do the purchasing. Norris avoids that market like the plague. "IBM has a hammerlock on the business data processing market and we'd be fools if we thought we could get it away from them," says Norris. "You may have better equipment, but you can't get a hearing. Most purchasing men won't take a chance on shifting from IBM. It means their jobs if they're wrong."

So Norris concentrates Control Data

on the scientific (mostly defense) market, where the purchasing agents talk computer language. Here many customers are scientists themselves, sophisticated enough to see advantages in non-IBM equipment and able to take a chance on a new company. Another advantage of this market for a young and growing company: It usually prefers to buy machines rather than rent them. Last year, for example, 64% of CD's revenue was from direct sales. In contrast, Univac and IBM lease about 80% of their equipment because they are oriented toward the lease-minded buyers in the business EDP market.

Desirable Competition. "IBM is a very desirable type of competitor for Control Data to have," says Dr. John Baird, CD's acting research director, who is himself an ex-IBM man. "IBM establishes a firm price policy which allows them good margins and enables us to price under their umbrella. A

more ruthless competitor wouldn't give us this much room."

Even today, CD doesn't have the kind of profit margins IBM has. As Control Data's sales have grown, however, so have its profit margins. Five years ago its operating profit margin was only about 11 cents on the sales dollar. Now it is nearly 30 cents. That's still below IBM's 40 cents but beats those of other competitors.

"The major part of improvement in profit margins," says Baird, "has come because we are making more of our own peripheral equipment. We used to buy it *all* from IBM and others." Today, for example, Control Data makes its own magnetic tape drives, all of its card readers and many of its own card punches. But it has a long way to go toward satisfactory integration and is still IBM's biggest single customer in Minneapolis.

While developing inwardly toward
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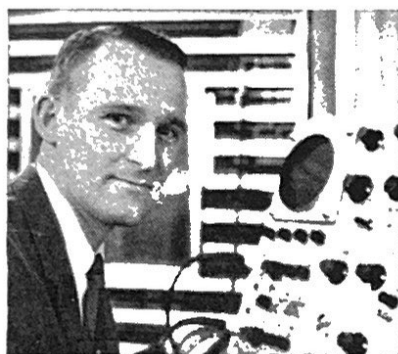
SEYMOUR'S PLACE

IN CHIPPEWA FALLS, Wisc., about 95 miles from Control Data's headquarters in Minneapolis, is a small laboratory. The spot is so rural that deer often drink at the nearby river. Here, at the end of the road with no name, is "Seymour's Place." That is what everyone calls this secluded sanctum of Control Data's creative vice president and director, Seymour R. Cray.

For those who love office and city noises, Seymour's Place is the end of the world. But not to this 37-year-old, city-shunning genius who ranks as one of the country's top computer designers. Says Cray: "I wouldn't mind being out another 20 miles. Still this is far enough to get away from most of the administrative noise."

Frustrating Genius. The Cray legend begins in frustration at Sperry Rand's Univac division. There Cray's ideas were often blocked by internal dissension. Moreover, he found himself out of place in a big company, for he is neither a diplomat nor a good team player. His brilliance proved too dazzling for some subordinates. One capable man, now a Control Data employee (but not on Cray's staff), recalls how Cray stayed home with a cold one day, and to kill time, solved a problem the subordinate had been working on for a month. "I asked for a transfer," says the subordinate. "It's frustrating to work for a guy like that."

When Bill Norris left Univac and



started Control Data, he believed it would take years before tiny CD could actually build a computer. But Cray's group surprised Norris after only several months with a design which gave Control Data its \$1.4-million 1604, one of the first large scale solid-state computers to hit the market. The discovery made Control Data a sudden success and Cray rich. He now owns about \$1.8 million in stock.

Tieless Night Owl. Here in the woods about ten miles from where he was born, Cray spurns the conventions of big business. Owning the only house within walking distance (he had it built himself), Cray reaches the lab about 11 o'clock each morning. Sometimes he is still there after midnight.

A slender man of medium height, Cray avoids ties and usually wears an open-collared sport shirt except when a photographer calls. He relentlessly fights to keep his staff

small. When Control Data started the lab, Cray's staff consisted of 24 men; now it has just 34, including brilliant Chief Engineer James Thornton. "I'm not the extrovert type," Cray explains. "I can't remember too many names and that limits my scope."

Of course, as Control Data gets larger, it depends less on Cray. CD's current bread-and-butter computer, the \$3.2-million 3600, was developed by another group in the company. Meanwhile, Seymour Cray continues to work on the 6600s, Control Data's \$7-million super computer (*see story*). Even IBM's Chairman Thomas Watson Jr. concedes, "The 6600, if it works as it is supposed to work, would be the fastest computer in the world."

Cray is completing plans to ship his first 6600 to the Atomic Energy Commission. An order for a second 6600 has come from CERN, the European Organization for Nuclear Research. Meanwhile, IBM has announced plans to build a machine to displace the 6600 as the world's fastest computer.

This news does not worry Cray who is now working on a new machine—"the next step." Nor does Cray worry that his little band will be unable to surpass the masses of men and money his giant rivals deploy. "There's more than one way to play the game," says he. "You can do a lot with a small group of people who have worked together and agree with each other."

By HAROLD CHUCKE
Chicago Star Staff Writer
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greater integration, Control Data has also been expanding outward toward new fields. Norris still shuns the business office data processing business, but he has moved Control Data into industrial sales—process controls and the like. Norris has done so in typically unconventional and capital-sparing ways. He bought into the field, often picking up other companies' money-losing computer businesses, including the former data processing divisions of Daystrom and Bendix, and General Time's Transactor business. Several of CD's bigger rivals had looked at these operations and turned them down. But Norris thought he could use them—and the prices were right. In fact, since the first of 1963, Norris has made eight acquisitions, which added an estimated \$30 million in revenues for only 193,385 CD shares and some cash. He got so much for so little because CD's stock had a price/earnings ratio in excess of 100.

"With our growth we were desperate for people," says Norris. "Bendix' computer operation alone brought us 500 people, as well as new markets in the industrial area. It also put our foot in the door with customers who had been doing business with Bendix but not with us."

Play It Safe? Most people and most companies accept such gambles in their early days. But once they become comfortable and prosperous they like to cut the risks and play things a bit safer. This time has not yet come for Control Data. It still gambles every single working day.

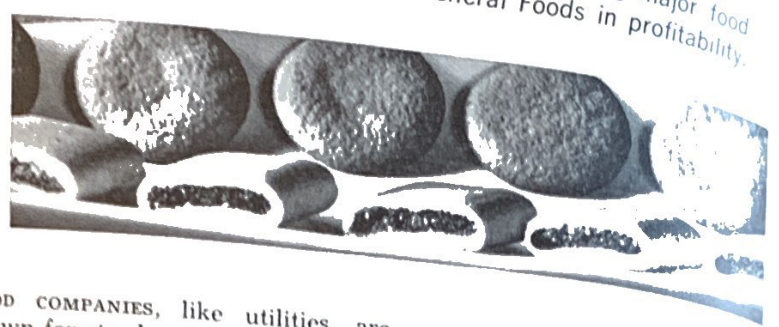
Right now, for example, Norris is making a major gamble. He is manufacturing several of Cray's \$7-million 6600s before the first one is to be delivered this month to the Atomic Energy Commission. If it lives up to its promise, Control Data will have taken another major step forward. But if the customer isn't happy, then Control Data will have taken a beating of a magnitude that a small company cannot easily bear.

Still, as things now stand, Control Data is riding one of those wonderful tides when every decision Bill Norris makes seems to come out just right. Everyone feels the spontaneity of a success which creates more success. Turnover is nonexistent; construction is going on all over the company.

But Norris knows full well that CD doesn't yet have it made. In fact, one watchful competitor claims that the Control Data of today stands where France's Machines Bull stood a few years ago. In spite of early successes, Machines Bull was unable to keep up the pace. To date, Control Data is still piling success on success. But Bill Norris has little margin for error. ■

Smart Cookie

That's the National Biscuit Co., which, among major food companies, is second only to General Foods in profitability.



FOOD COMPANIES, like utilities, are known for steady growth of sales and earnings. But there the resemblance ends. Utilities grow by selling more and more of the same product. Food companies must not only sell more of what they already make, but also must come up with many new products. Only thus can they maintain their growth and their profitability.

This is no easy matter. The number of new products which flop every year is staggering. And so is the total of the investment that has gone down the drain. You don't simply bring out a new kind of Corn Cracklies: It takes bright packages, intensive marketing studies, a marketing organization of great strength, as well as a product that tastes good.

Right Recipe. Lately, the National Biscuit Co.* has been finding the right combination of these (and other) ingredients. Last year sales rose 6% to \$578 million. Net rose 11% to a record \$2.47 a share. In 1961 Nabisco earned only \$1.98; in 1958, only \$1.59.

Last year Nabisco brought out Tang-O Chips (with a "hearty beef taste"), Marshmallow Twirls, Striped Peanut Logs, Oatmeal Raisin Cookies, Old World Breads, Spoon Size Nabisco Shredded Wheat and a Vanilla Fudge Sandwich, among others. Says President Lee S. Bickmore (above), "We look at between 700 and 800 possibilities a year, and put only 15 to 25 on the market."

To keep the new products flowing, Nabisco has a New Products Staff, set up in 1957. While the company's divisions must still come up with variations and improvements on established products, the New Products Staff is responsible for new ideas and their development.



Buying In. Nabisco acquires products as well as invents them. Last year Nabisco bought the James O. Welch Co., whose candy sales run to \$20 million. It also acquired a French biscuit manufacturer. And Nabisco went into frozen foods by obtaining the distribution rights for a line of imported Danish pastries.

All this seems to make the consumer happy, and so the consumer makes Nabisco happy. Last year, the company brought down to net nearly 6% of every sales dollar, and earned 16.6% on stockholders' equity vs. only 12.4% in 1958. That rate of profitability put Nabisco within shooting distance of General Foods, the most profitable major food company. In fiscal 1963, GF netted 6.5% on sales, earned 17.9% on equity, up only a point in five years.

Corn Products netted close to 6% on sales, but less than Nabisco on equity (16%). Campbell Soup netted more than Nabisco on sales (nearly 7%), but far less on equity (12.4%).

In its own field, Nabisco is by far the leader. Sunshine Biscuits, second to Nabisco with sales of \$200 million, nets not quite 4% on sales, only 10% on equity.

Nabisco has over one-third of the U.S. market for biscuits, crackers and cookies. To these, it adds cereals (e.g., Cream of Wheat), pretzels, ice cream cones and dog biscuits. It will back them all up with \$40 million in advertising this year. Nabisco can afford TV and use it extensively.

Says Bickmore, "It's hard to find a store in America without Nabisco products." He adds, slowly and precisely, as is his wont, "Our estimate is less than one-half of 1%."

Mrs. C. As is also his wont, Bickmore personifies the public as "Mrs. Consumer." Says he: "She is boss in this business. 'We start and finish with her. 'If she's happy, so are we.' ■

*National Biscuit Co. Traded NYSE.
Recent price: 60%. 1964 Range: 61 1/4-56 1/4.
Dividend (1963): \$1.57 1/2. Indicated 1964: \$1.70.
Earnings per share (1963): \$2.47.
Total assets: \$311 million.
Ticker symbol: BI.