BIS MANAGERS

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If awards were given for the most fascinating subject of the year, somewhere near the bottom of the list I'm sure we would find "developing a business strategy." And yet, business strategy is created by people. And, because it is, it can be, and sometimes is, high drama indeed.

There are heights and depths of emotion, flashes of intellectual brilliance, and displays of ignorance and stupidity. If there is a message at all in what I have to say today, it is this: Business strategy is first and last something which deals -- not with abstractions such as "competitors," "products," and "markets" -- but rather with people -- their ideas, their dreams, and their struggles against each other and for each other. And so it is an adventure.

My story begins July 1, 1965. Control Data Corporation is eight years old, a daring innovator and a sometime darling of
Wall Street. It has grown from nothing to $161 million in revenues in the fiscal year which has just ended the day before. Its stock, issued at a dollar a share, has already split three for one, then three for two. A share of stock bought for the equivalent, then, of a little over 22 cents has sold for as high as $140. There are that day 9,744 people working at Control Data, the average age is 29, and no executive in the company is over 45 except for W. C. Norris, its founder and leader.

Control Data's people — Bill Norris, Frank Mullaney, Bob Kisch, Seymour Cray, Bill Keye, Chuck Casale, and a handful of others saw the opportunity. Control Data became an eminently successful small company, building better, big computers and more of them per year than the world had thought it would ever need just a few years before. Conventional wisdom in the early fifties had it that half a dozen large computers were all mankind would need to solve any of its problems -- forever!

But Thursday, July 1, 1965, was a hot and muggy day in Minneapolis and Cinderella had a hangover. The year past had been a rocky one, each quarter had seen new problems -- the "surprises" so feared by generals, platoon leaders, explorers -- and managers receiving financial reports. The once high-flying stock closed the day before at 49 7/8. What was wrong?
"Fiddling around with the crap in the industrial group," said Frank. "Selling peripherals to my competitors," said Bob. "Fagen," said Seymour. "Seymour!" said Casale. And so they worried. The possibility of failure was never considered. For Control Data, problems had always been like bugs in a new computer. They could be isolated, analyzed, and fixed. So they formed a task force -- eight people. They isolated, they analyzed, and, not surprisingly, they came up with a solution, because they were intelligent, honest people who had been through a lot together -- who cared for each other and their company. The solution was tough-minded, even-handed, and -- very humanly -- wrong.

In addition to recommending several cost-cutting procedures, the report dealt with strategy. It said the company was dissipating its basic big computer strength by pursuing ancillary markets lacking in potential. And its principal target in this regard was the fledgling data centers division. The object of this scrutiny was a three-and-a-half year old organization of 600 people headed by an ex-teacher named Jim Harris. He had come to control Data as an administrator but yearned to run a business. When the data centers division was formed, Bill Norris, knowing how difficult it would be to get one of his computer people to step out of the mainstream, gave Jim his chance. According to the document which
established the division, its mission was threefold: To sell data processing services, to promote sales of the company's computers, and to gain experience in developing software for specific industries. It was designed to make a profit -- and you can well imagine which of the three objectives was given the greatest priority by which people. However anybody viewed it though, one thing was clear -- it had never yet made a profit. Moreover, the task force estimated the bottom line for the coming fiscal year to be a $2 million loss on revenues of $3 million -- an enormous burden for a fledgling company.

Why such a large loss? Driven by Norris' relentless whip, eleven centers had been opened during those three and one-half years. Driven by the desires of the computer marketing people to help computer sales, the centers housed the company's latest and most advanced computers. Driven by its own desires, the division established a sizeable central staff to monitor technical work at the eleven centers. And driven by visions of squandered resources, the task force said, "kill it."

Actually, they didn't quite say that in their report. Knowing it was one of the boss's ideas, and knowing his ideas had an uncanny way of working out, their recommendations were carefully constructed to cut the operation back as far as possible, but not to kill it.
That this unlikely stepchild of an operation should be the kernel of an almost unique business strategy was certainly not evident to the task force, or, for that matter, to most anybody. Its still modest rate of growth certainly didn't indicate it would become a significantly large part of the business -- much less dominate it. As I noted a moment ago, the task force offered numerous recommendations affecting every operation in the company -- including those managed by the people on the task force themselves. Bill Norris praised their efforts and accepted their recommendations -- except for one. No data centers were to be closed. Period!

What Bill Norris understood full well was the precariousness of the systems business viz-a-viz its giant competitors -- and he recognized the need to diversify now rather than later when the danger would be obvious to all.

Corporate strategies -- or at least major changes of direction -- can take years. Anticipation of a need, not reaction to a crisis, is the hallmark of all great strategists -- of whom there are very few. Nor does a strategy rise full blown from the sea foam like venus. It is mostly a matter of choosing a basic direction and then being alert for each and every opportunity to enhance the basic strategic thrust. Strategy evolves. Let me elaborate on that thought for a moment.
In the beginning, the thought behind data services was nothing more than common sense -- try to broaden the available market for large computers by selling them by the hour -- or, to be more precise, by the minute. But, Bill Norris also had more than twenty years experience in applying computers to complex problems and knew full well the enormous value-added of good software and knowledgeable people. So, as mentioned, he planned the idea of industry-specific software in the original mission statement. Meanwhile, experience was teaching the true extent of the difficulty of survival in a monopoly-structured computer industry.

Where to turn? Value-added.....offer more then just the computer.....offer a service using computers.....that meant more front-end investment, more risk than the original strategy.....but it also offered a chance to be different. How far it might go wasn't clear. But what was clear was that if it was to go anywhere, it could not be done by half measures and tentative plans. Cut back? Forget it!

When July first rolled around again in the summer of 1966, the division had closed its books on its first profitable year. The following year brought continued growth -- and at that point investment began in earnest. Acquisitions were made to increase the diversity of offerings: One brought the
beginnings of the time-sharing business and also the company's first service founded on information data bases. Another augmented technical consulting. The acquisitions of 1967 cost some $44 million in terms of the value of stock issued to make them. An additional $10 million in 1967 and 1968 put the company's 6600 supercomputer (Tom Watson's 6600 Nemesis) in all the centers.

Competitively, the 6600's were an excellent addition -- but they were almost the undoing of the division. The pricing strategy underestimated their performance: Customers got four times the work for only twice the price -- and revenues plummeted. Back into the red.

This time, however, the division was protected from any task force threats by improved profitability in the mainstream computer business and growing OEM revenues in computer peripherals. There was no profit improvement task force in 1968. By the end of 1969, the data centers division had struggled back from the '67-'68 problems and broadened its strategy.

Let me interrupt the chronology at this point to discuss another key strategy, the adoption early on of a "value-added" approach to data services. By "value-added" I mean offering software designed to solve specific problems for end users
rather than software tools for computer professionals. Examples are programs which can be used by design engineers working directly through remote terminals or simulation models which can be used by financial analysts. The desirability, in fact the need, for such an approach seems fairly obvious today. But in those days computers were very much the domain of highly-trained professionals who took problems from engineers or analysts and wrote programs to solve them. So most data services companies saw themselves as providers of computer power -- available on a shared basis -- "hourly rental," if you will.

Networks were conceived as analogous to electric power utilities. Individual customers purchased machine time as a tool -- much as they purchased stand-alone computers. Differentiation among data services companies was entirely a matter of coverage (geography), quality (reliability), and cost. Until the middle seventies. This was reinforced by the absence of a significant independent software industry. Perhaps it should have been evident that technology would make the existing criteria for differentiation obsolete -- but it wasn't -- and probably the neanderthal state of applications software clouded the issue.
To be sure, from the beginning some data services companies had made results rather than "power" available to customers. But they did it on a custom basis and that labor intensive approach was to get more than one company into trouble. Far-seeing data services executives of the mid-sixties determined they would avoid that trap if at all possible. But, here and there, some people were already seeking to develop standard application programs -- not tailor-made but made once for use by many. Remember, the charter for the data centers division included a mandate "to gain experience" in developing software for various industries.

In the pell mell expansion of '62, '63, and '64, the division did a lot of the custom-made, labor-intensive variety. By 1964, the search for standard applications had already begun. In 1965 -- under the glare of that infamous task force -- it was intensified. And, in that year, data centers' first application program was acquired from an outside vendor. It was called "Stardyne" -- and it was a very effective program for analyzing the strength of mechanical structures. Because of the program's excellent design, the power of the 6600 computers, and the geographic coverage of the division, its use quickly became widespread. This was in many regards an isolated event but it had an impact on data services management which launched it down a different path from most of the industry.
As already noted, financial woes in 1969 also sent SBC in search of a new approach which culminated in the use of outside vendors was an excellent -- indeed a saving -- strategy. You could get value-added, you could get value-added by using standard, off-the-shelf products rather than custom ones, and you could do it without the burden of heavy front-end development expenses.

It worked. Things now began to unfold very quickly at Control Data. Through 1973, '74, '75, '76, and '77, more and more services turned the corner, revenues grew, independent software suppliers became more plentiful. In short, by 1978, data services revenues had increased five times from their 1973 levels and services in total had grown to some $700 million. And, in spite of continued large investments, significant profits began to flow as well. Before too long, the mature parts of the services business were able to report returns on invested capital superior to any other part of the company. In fact, the results were frequently spectacular. A perennial ugly duckling called Ticketron went from a loss to an operating return on assets of 16 percent in one year as it crossed the critical mass barrier.

So the story is complete. The strategy is successful. The market grows. The business grows. Professional managers replace innovators and entrepreneurs (a euphemism for "wild-eyed optimists) and bring the business into a high state of efficiency and profitability. Right? Wrong!
Strategy stories are never complete -- no more than human stories are complete. By 1978, a new segment of the computer industry had become all the rage in the media -- and, in fact, the marketplace -- the "minicomputer."

Suddenly it seemed there was a technological revolution. "Little" computers had grown much more powerful and less costly as semiconductor technology continued its inexorable increase in power and decrease in size and cost. The minicomputer would make the large mainframe obsolete. And, with the cost of computing tools reduced so dramatically, there would be no need to share large mainframes -- no need for data services. This wave of change had hardly begun to be felt before the industry was hit by another one -- the "micro" or "personal" computer. The "micro," in turn, would make the "mini" obsolete. Every supercomputer would be replaced by an "array" of hundreds or thousands of micros working together. Time-sharing services would dissolve into a micro on every desk. Or so they said.

Believe me, those of us in the computer industry do not have to imagine the days of the '49ers in Angel's camp or the silver boom towns of Aspen and Leadville. We have lived them -- we are living them. No grizzled prospector was ever more a loner than the sandalshod programmer or the eccentric design engineer holed up in his lab. The mining towns and silicon valleys of
our industry ring with cries of new finds -- and everybody is sure that sooner or later they will strike the mother lode. Fortunes are made -- and lost -- and the saloons and brothels are full of celebrants, the paranoid, and the depressed.

Anyway, in the midst of all the hubbub, the basics still apply -- in high technology companies as well as in high mountain mining camps, with respect to a services strategy, minis, micros, maxis and communication networks are merely different delivery vehicles -- not ends in themselves. None of them threaten or circumscribe the business -- all of them enlarge the number of services which can be offered. In short, services customers are concerned with results -- and the results they want are knowledge-enhancing services -- however they are delivered. On the other hand, if you are not sensitive to the potential of new delivery technology, then you can miss the boat as well. And it is interesting to see that generally the data services industry has clung to traditional delivery modes until forced to do otherwise.

Perhaps the acquisition of SBC was as important in this regard as any other. From the beginning, it was obvious that it would be technically difficult and financially unwise to convert SBC's services from IBM to Control Data computers -- so we settled down to become one of IBM's largest (and happiest) customers.
Once and for all, that event cleared our thinking and **focused** our concern only on finding the most cost-effective delivery systems for value-added applications. No concern for color, size, technology or manufacturer **per se** -- just an overwhelming concern with the cost-effectiveness of delivery for a given application.

So, as technology unfolds, there are new problems, new challenges, and new opportunities. But the basic strategy set in motion 20 years ago is as rock solid as ever -- and a lot more visible. By 1981, the million dollar quota data center business of 1962 had grown into a $1.2 billion computer services giant.

Nor is the evolution of this particular strategy by any means complete. And you are here this week among other reasons to discuss specifically BIS in this context. In the interest of time, however, let me try to close this off. Rather than summarize, I'll review what we've covered by emphasizing five key points.

1) **Strategy** -- as opposed to execution -- must be broadly conceived. This does not mean a capability to predict everything at once. Rather, be prepared to learn, grow, and change as events unfold. Above all, lasting strategy must be aimed at fundamental needs.
2) The single greatest threats to strategic excellence is a personal hang-up (and in the 21st century, a personal technological hang-up).

3) Steadfastness and flexibility -- not giving up too soon, yet, peripheral vision to sense different opportunities than those originally envisioned.

4) Conventional wisdom will kill you.

5) And technology will ultimately exist to do anything (and more) than you can conceive. The trick is to know when. Be prepared for a little luck in that regard -- both good and bad.

A basic thread runs through all five of those thoughts -- change and our response to it, both as an organization and as individuals.

[Justice Holmes story]

Where am I going? That's a question for a lot of people caught up in rapid change. It is very easy -- it's probably even unavoidable -- to be philosophical about the subject of change.

"Future shock" -- "jet lag" -- "culture shock" -- those are all elements of our language that reflect not only the presence of change itself, but this increasing rate of change in our world.
And certainly things do change. I'm reminded, for example, that not so many years ago most men who finished a day's work needed rest; now they need exercise.

Another more paradoxical aspect of change regards us as individuals; we change and yet we are still ourselves. Or as someone once put it: "Men are like wine -- age souring the bad -- and improving the good." Change in us as wine is also continuous.

Change results from a conscious effort to carry out a -- "cause and effect" -- chain of events necessary to achieve a desired result. The same kind of conscious effort that typifies the Olympic athlete from ancient times right to the present.

[Kolleen Casey story]

Now obviously we don't change anything simply because we say we are going to. But we have the will to set the force of change to work. It takes time and patience, hard work, and there is occasional despair. But then, slowly, surely, through creative intent.....business will improve and grow.....and it all begins with an active change in thinking, a conscious act, an act of will.
Well -- I've been talking a good deal about change --
perceiving change. And it's possible that I've been giving the
impression that it's a revolutionary theory....some
new-fangled business methodology upon which our future success
depends. Well, I can assure you that it is not. The ability
to move with and take advantage of change is as ancient as the
art of soothsaying.

In Ancient Greece oracles were held in awe because, seemingly,
they had the mysterious ability to foretell the future. And,
in a very real sense, they did. But there was nothing
mysterious about it. The oracle was simply a human data base.
People flocked to them. Rich men, poor men, kings and
slaves -- all leaving behind their bits of knowledge. Using
this vast resource of information, oracles, more often then
not, were truly able to advise people that certain things would
happen unless steps were taken to change them. I might also
add that a fair dose of pizazz and some pretty good acting went
into selling the whole affair as well. So, we should remember
to keep a little of that in our bag as well.

Our mission in Data Services can be viewed as the task of
helping individuals and organizations throughout the world
improve their productivity and the quality of their work -- be
it a management decision or an engineering design.
Surely we cannot expect to fulfill such a mission without productivity and quality in each of us as individuals. Our relative value-added will change -- it may grow -- or it may not. If it is to grow, we have to start someplace, continue, and that plan is here -- that time is now.

For my part, I want you to know that Control Data wants to invest in you as individuals, in BIS as an organization, and in Data Services in total. Even though revenue is forecast to be relatively flat, year to year technical expenditure and selling investments are continuing. Speaking of spending, I'm reminded of a story.

[Dairy Farmer story]

Well, there are no cheap roads to a leading data services business. Data services has been and is the soul of our strategy.

Your interests are my interests because your future is Control Data's future. As I said a moment ago, the time is now to assure that future for all of us.

Thank you.