AWARDS WERE GIVEN FOR THE MOST FASCINATING SUBJECT OF THE YEAR.

SOMEBODY NEAR THE BOTTOM OF THE LIST

I'M SURE WE'D 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.

(Lewis and Clark story)
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 WAS OVER 45

EXCEPT FOR W. C. NORRIS, ITS FOUNDER AND LEADER.
During the late 1950s, the small company had accomplished a breakthrough in the building of large computers -- a breakthrough which had eluded others such as IBM, Burroughs, and Ford.

Yes, Ford was once in the computer business, after acquiring an old-line electrical company named Philco.

At Philco, a small engineering team built the first large-scale transistorized computer -- the first of the second generation computers.

But the Philco-Ford story is a tragedy in about ten acts and not my subject today.

Control Data had succeeded despite attracting the wrath of Tom Watson, who wrote to his IBM subordinates:

(Quote Watson letter).
REPRODUCTION

MEMORANDUM

August 28, 1963

Memorandum TO: Messrs. A. L. Williams
T. V. Learson
H. W. Miller, Jr.
E. R. Piore
O. M. Scott
M. B. Smith
A. K. Watson

LAST WEEK CDC HAD A PRESS CONFERENCE DURING WHICH THEY
OFFICIALLY ANNOUNCED THEIR 6600 SYSTEM. I UNDERSTAND THAT IN
THE LABORATORY DEVELOPING THIS SYSTEM THERE ARE ONLY 34 PEOPLE,
"INCLUDING THE JANITOR." OF THESE, 14 ARE ENGINEERS AND 4 ARE
PROGRAMMERS, AND ONLY ONE PERSON HAS A PH.D., A RELATIVELY
JUNIOR PROGRAMMER. TO THE OUTSIDER, THE LABORATORY APPEARED TO
BE COST CONSCIOUS, HARD WORKING AND HIGHLY MOTIVATED.

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. AT JENNY LAKE, I THINK TOP
PRIORITY SHOULD BE GIVEN TO A DISCUSSION AS TO WHAT WE ARE
DOING WRONG AND HOW WE SHOULD GO ABOUT CHANGING IT IMMEDIATELY.

T J Watson, Jr.

TJW,Jr:jmc

cc: Mr. W. B. McWhirter
CONTROL DATA HAD AN OPENING CREATED FOR IT

BECAUSE THE TIDE OF EVENTS IN THE LATE FIFTIES AND EARLY SIXTIES

WAS ALREADY SWEEPING THE WORLD TOWARD A NEED

FOR THE LARGEST INFORMATION-HANDLING DEVICES CONCEIVABLE --

LARGE ENOUGH TO DEAL WITH THE COMPLEXITY

OF LATE TWENTIETH CENTURY LIFE

AND ITS WIDENING GAPS IN JOB CREATION,

POVERTY, PRODUCTIVITY

AND ENERGY SHORTAGE.

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 that 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 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 ALSO 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 FLEDDLING COMPANY.
WHY SUCH A LARGE LOSS?

DRIVEN BY NORRIS' RELENTLESS WHIP.

ELEVEN CENTERS HAD BEEN OPENED DURING THOSE 3-1/2 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 HAD BEEN ASSEMBLED 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!
BILL NORRIS UNDERSTOOD FULL WELL 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 PLANTED 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 THAN 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 SUPER COMPUTER

(TOM WATSON'S 6600 NEMISIS)

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.

NO LONGER A SIMPLE COLLECTION

OF GEOGRAPHICALLY INDEPENDENT DATA CENTERS,

IT WAS NOW A NATIONWIDE NETWORK

LINKED BY HIGH SPEED COMMUNICATIONS

AND HAD A NEW NAME: "CYBERNET".

REVENUES HAD GROWN TO A FAIRLY IMPRESSIVE $30M --

BUT THE BOTTOM LINE WAS STILL A DECIDEDLY IMPRESSIVE $8M LOSS.
MEANWHILE, IN ANOTHER PART OF THE COMPUTER WORLD,

ANOTHER DATA CENTERS DIVISION

HAD BEEN UNDERGOING A DIFFERENT KIND OF STRATEGIC DEVELOPMENT.

THE SERVICE BUREAU COMPANY HAD BEEN FOUNDED BY IBM IN 1931

AS A MEANS OF ENTICING CUSTOMERS

INTO THE USE AND SUBSEQUENT PURCHASE

OF IBM'S TABLUATING EQUIPMENT.

NO QUESTIONS HERE BY ANYBODY ABOUT ITS MISSION --

HELP SELL IRON.

FREELY SUBSIDIZED,

IT UNDERCUT COMPETITION IN THE TABULATING BUSINESS SO BADLY

THAT IN 1956

A GOVERNMENT ANTI-TRUST ACTION FORCED A CONSENT RESOLUTION

WHICH ESTABLISHED AN ARMS-LENGTH

(BUT WHOLLY-OWNED) SUBSIDIARY OF IBM -- THE SERVICE BUREAU COMPANY.

AND BY NOW, IN 1969,

SBC HAD GROWN TO A 100-MILLION-DOLLAR BUSINESS -

A GIANT IN THE STILL INFANT DATA SERVICES INDUSTRY.
BUT IT WAS ALSO FOUNDERING

IN A SEA OF LABOR INTENSIVE CUSTOM WORK.

AS SUCH, IT WAS ALREADY SUBJECT

TO THE KIND OF RAGING INFLATION

THAT WOULD PLAGUE THE U.S. IN THE '70S.

AS A PERCENTAGE OF THE TOTAL IBM JUGGERNAUT, IT WAS PEANUTS --

BUT AS A LOSING OPERATION

IT WAS ANATHEMA TO IBM'S MANAGEMENT.

THE WORD WENT OUT -- "FIX IT" --

AND A MASSIVE EFFORT BEGAN

TO STANDARDIZE ITS BATCH PROCESSING SERVICES

AND TO INTRODUCE NEW TIME-SHARING SERVICES.

FOR ONE OF THE FEW TIMES IN ITS FORTY-YEAR HISTORY,

THE PARENT ASSIGNED TOP TALENT.
ONE OF THOSE PEOPLE

WAS A 46 YEAR-OLD IBM EXECUTIVE NAMED HENRY J. WHITE.

A PIONEER IN THE EARLIEST REAL-TIME APPLICATIONS OF COMPUTERS,

A TROUBLE-SHOOTER WITH A PROVEN TRACK RECORD

IN IBM'S FEDERAL SYSTEMS DIVISION.

HE WAS JUST THE MEDICINE SBC NEEDED.

SO HANK WHITE -- A TWENTY-YEAR VETERAN OF THE HARDWARE WARS --

WENT INTO THE SERVICES BUSINESS --

AND, EVENTUALLY, MUCH, MUCH MORE.

MEANWHILE, CONTROL DATA

HAD BEEN GRAPPLING WITH INCREASING DIFFICULTIES

AND IN 1968 WAS THE "WHITE KNIGHT"

IN THE ACQUISITION OF A FINANCIAL SERVICES COMPANY.

COMMERCIAL CREDIT.
0 THIS ACQUISITION POSSIBILITY
0 WAS DISCOVERED, ANALYZED, AND COMPLETED IN EIGHT DAYS --
0 THE 746-MILLION DOLLAR DEAL
0 WAS INTENDED TO HELP SOLVE THE EVER-PRESENT CASH DRAIN
0 INHERENT IN LEASING THE COMPANY'S LARGE COMPUTERS.
0 BUT IN LATE 1969
0 CASH WAS ONLY ONE OF THE BASIC PROBLEMS PLAGUING THE COMPANY --
0 AND NOT THE WORST ONE.
0 DESPITE ITS MOVES INTO SERVICES AND PERIPHERALS,
0 THE LIFE-BLOOD OF THE COMPANY
0 WAS STILL ITS LARGE-SCALE COMPUTERS.
0 AND THE U.S. MARKET FOR THOSE COMPUTERS
0 WAS STILL LIMITED LARGELY TO SCIENTIFIC RESEARCH FOR THE GOVERNMENT,
0 MUCH OF IT DEFENSE RELATED.
0 UNIVERSITIES REPRESENTED THE LARGEST COMMERCIAL MARKET --
0 THEY TOO WERE MOSTLY DEPENDENT ON PUBLIC FUNDING.
FROM 1966 TO 1969, MANAGEMENT HAD STRUGGLED TO DIVERSIFY ITS BASIC COMPUTER BUSINESS INTO ENGINEERING RELATED INDUSTRIES: AUTOMOTIVE, AEROSPACE, PETROLEUM EXPLORATION AND CONSTRUCTION ENGINEERING.

BUT ATTACKING THOSE NEW MARKETS WAS EXPENSIVE -- AND ALWAYS THERE WAS THE SMOTHERING, FRUSTRATING, DOMINATING PRESENCE OF IBM.

FINALLY, IN 1968, IN AN ATTEMPT TO GET SOME BREATHING ROOM, BILL NORRIS MADE THE STRATEGIC DECISION TO SUE IBM. I SAY STRATEGIC BECAUSE THERE WAS MORE IN THE "PLEA FOR RELIEF" THAN THE TACTICAL OBJECTIVE OF COMPENSATION FOR PAST WRONGS.

AT THIS POINT, IT'S NECESSARY TO DIGRESS MOMENTARILY TO EXPLAIN A PRACTICE CALLED "BUNDLING" AND ITS EFFECT ON THE COMPETITIVE STRUCTURE OF THE COMPUTER INDUSTRY IN ITS EARLY DAYS.
I have already mentioned the key role of software in making effective use of computers. Also, customer education in the use and management of the computer is crucially important. As is on-going technical consulting and support. A key factor in IBM's success had been its practice of offering these services "free" to its customers. Obviously, there is no such thing -- basic equipment rental price was set to cover the cost of these services. Or, in other words, they were "bundled" with the hardware costs. The marketing advantages of such an approach are several, not the least of which is the flexibility it offers a dominant supplier in fighting off competition.
SINCE PRICE CUTTING TO FIGHT COMPETITION IS A SURE WAY TO INCUR THE WRATH OF THE ANTI-TRUST PEOPLE,
ONE SIMPLY INVERTS THE IDEA -- THAT IS, YOU MAINTAIN ABSOLUTE PRICE INTEGRITY,
BUT THE "BUNDLE" OF FREE SERVICES IS VARIED AS NECESSARY TO WIN AND MAINTAIN CUSTOMERS.
MOREOVER, BECAUSE SOFTWARE IS "FREE"
UNDER A BUNDLED APPROACH,
THERE IS NO MARKET -- THERE ARE NO INDEPENDENT SUPPLIERS --
AND THE MANUFACTURER MAINTAINS IRON-CLAD ACCOUNT CONTROL.
ALSO, BECAUSE SOFTWARE HAD NO RECOGNIZED MARKET VALUE,
THE GROWTH OF COMPUTER SERVICES (WHICH RESTS IN LARGE PART ON THE VERY RECOGNITION OF SOFTWARE'S VALUE)
WAS RETARDED.
CONTROL DATA'S SUIT SPECIFICALLY CHALLENGED

IBM'S PRACTICE OF BUNDLING

AND WENT ON TO SEEK ASSURANCES

THAT RELATED MARKETS SUCH AS SERVICES

COULD DEVELOP UNENCUMBERED.

SO, IN THIS REGARD,

THE SUIT WAS NOT DEFENSIVE OR VINDICTIVE -- BUT STRATEGIC.

THE ESSENCE OF LEADERSHIP, OF COURSE,

IS TO GALVANIZE OTHERWISE DISPARATE ELEMENTS INTO CONCERTED ACTION.

THE U.S. DEPARTMENT OF JUSTICE

HAD BEEN STRUGGLING, PROCRASTINATING,

PUZZLING, BACKING

AND SIDLING UP TO THE IBM PROBLEM FOR YEARS.

NOW ITS LAWYERS WERE SENT TO STUDY THE CONTROL DATA CASE

AND, THEREBY EMBOLDENED, FILED SUIT IN JANUARY 1970.

IN AN ATTEMPT TO DEFUSE THESE GATHERING LEGAL TROUBLES,

IBM HAD ANNOUNCED THAT EFFECTIVE JANUARY 1, 1970,

IT WOULD UNBUNDLE SOFTWARE AND TECHNICAL SUPPORT SERVICES.
THE FIRST FRUITS OF THE LAWSUIT WERE ALREADY IN HAND --

NOW, FOR THE FIRST TIME,

THERE EXISTED A TRUE MARKET FOR SOFTWARE,

FOR TECHNICAL EXPERTISE -- FOR SERVICES.

A VALUE COULD BE ESTABLISHED FOR SOLUTIONS.

THE KEY INGREDIENT FOR AN ENTIRELY NEW PART OF THE COMPUTER INDUSTRY WAS NOW IN PLACE.

FROM THIS POINT ON

GROWTH OF THE COMPUTER SERVICES INDUSTRY WOULD ACCELERATE.

MEANWHILE CONTROL DATA SAILED ON --

INVESTING A MILLION DOLLARS A YEAR

TWO PERCENT OF ITS $53 MILLION PRE-TAX PROFIT

IN THE MASSIVE LAWSUIT,

INVESTING TO BREAK INTO NEW COMPUTER MARKETS,

INVESTING TO GROW ITS SERVICES.

INVESTING TO DEVELOP INTERNATIONAL MARKETS --

WHICH MARKETS WERE HARDEST HIT BY THAT RECESSION?

AUTOMOTIVE AND AEROSPACE.

AS THE BUFFETING BEGAN,

A NEW TASK FORCE OF TOP EXECUTIVES BEGAN TO LOOK FOR ANSWERS.

THIS TASK FORCE --

PERHAPS HAVING OBSERVED THE PREVIOUS EXPERIENCE --

PERHAPS JUST BECAUSE THEY WERE DIFFERENT PEOPLE --

DID NOT CONCERN ITSELF

WITH WHICH PRODUCTS AND SERVICES LOOKED LIKE WINNERS

AND WHICH LOOKED LIKE LOSERS.

RATHER THEY FELT SURE THE PROBLEM

WAS ONE OF STRUCTURE AND OPERATION OF THE ORGANIZATION.

AS IT HAPPENED, THE DOMINANT MEMBERS OF THE GROUP

WERE THE TOP EXECUTIVES FROM THE HARDWARE PRODUCT DIVISIONS.

THERE WERE NONE FROM THE CENTRALIZED SALES ORGANIZATION

WHICH SOLD THE PRODUCT LINES.

WITH UNERRING CERTAINTY, HUMAN NATURE ASSERTED ITSELF.
AFTER EXTENSIVE STUDY, THE GROUP DECIDED THE PROBLEM COULD BE SOLVED BY PLACING DIRECT CONTROL OF MARKETING IN THE PRODUCT DIVISIONS. THIS IS NOT TO BE DEROGATORY OR DISPARAGING OF THOSE INVOLVED.

GIVEN THE CIRCUMSTANCES, THE OUTCOME WOULD BE THE SAME 9 OUT OF 10 TIMES IN ANY ORGANIZATION. ORGANIZATION CHANGE IS THE SIREN SONG OF CORPORATE PROBLEM SOLVERS EVERYWHERE.

BUT, AS YOU WILL SEE, THE EPISODE IS IMPORTANT BECAUSE IT ILLUSTRATES ANOTHER POINT: STRATEGICALLY ORIENTED EXECUTIVES ARE CONSTANTLY ON THE ALERT FOR OPPORTUNITIES TO ADVANCE LONG-TERM OBJECTIVES -- FOR FREQUENTLY THEY ARISE WHEN LEAST EXPECTED.
At Control Data in early 1970 there was an internal barrier to full development of a corporate level services strategy. Major services organizations — data services, consulting, education, and engineering — had been developed within several different groups. They were fractionated and almost impossible to strategize on an integrated basis.

The time had come to bring them together as a separate and distinct corporate level operating group. I'm sure I don't need to belabor the point that such "giving up" on the one hand and creation of new "peerages" on the other is difficult. But here was an opportunity to channel a self-generated desire for organization change — and it wasn't missed.
THE REORGANIZATION EFFORTS, DEFTLY GUIDED FROM ABOVE, RESULTED IN THE NEEDED CORPORATE LEVEL SERVICES GROUP.

THE CORPORATION WAS NOW STRUCTURED TO MOVE EVEN MORE AGGRESSIVELY IN DEVELOPMENT OF ITS SERVICES STRATEGY.

THE NEWLY FORMED SERVICES GROUP HAD $150M IN REVENUE, MORE THAN HALF OF WHICH CAME FROM TRADITIONAL SERVICES ASSOCIATED WITH MAINTENANCE OF COMPUTERS, AND THE BOTTOM LINE FOR THE GROUP IN 1970 WAS JUST BREAK EVEN.

ORGANIZATION STRUCTURE PER SE COULDN'T CHANGE THE UNDERLYING LACK OF CRITICAL MASS AND CONSEQUENT LACK OF PROFITABILITY, BUT THE NEW ORGANIZATION COULD MOVE MORE QUICKLY WITH INTERNAL GROWTH AND THROUGH ACQUISITIONS.
DURING 1971 AND 1972 IT DID JUST THAT.

MAINTENANCE SERVICES MADE TWO ACQUISITIONS AND QUICKLY BECAME CAPABLE OF SERVICING COMPUTING EQUIPMENT FOR OTHER MANUFACTURERS: THIS NOT ONLY GENERATED ADDITIONAL EXTERNAL REVENUE, BUT ALSO PROVIDED A SOON-TO-BE-NEEDED CAPABILITY FOR DATA SERVICES. UNBUNDLING FUELED THE GROWTH OF TECHNICAL CONSULTING SERVICES: REVENUE GREW LITERALLY FROM NOTHING TO $15M FOR THE YEAR 1972 -- THE PROFESSIONAL SERVICES DIVISION WHICH PERFORMED THE TECHNICAL CONSULTING GREW TO SOME 1,028 PEOPLE BY THE END OF THE YEAR. IN EDUCATION SERVICES, THE THIRTY CONTROL DATA INSTITUTES HAD STRUGGLED FOR SEVEN LONG YEARS SINCE THEIR FORMATION IN 1965 WITHOUT MAKING A PROFIT.
REVENUES STOOD AT $14 MILLION.

PRACTICAL COMPUTER-BASED EDUCATION WAS STILL A GLEAM AND A DREAM IN DON BITZER'S LABORATORY IN CHAMPAIGN-URBANA --

AFTER TEN YEARS OF RESEARCH, IT WAS STILL THREE YEARS FROM MARKET.


THE HEART OF DATA SERVICES -- U.S. CYBERNET -- REACHED SOME $35M IN REVENUES IN 1972 AND ONCE AGAIN BECAME PROFITABLE.

BUT IN A CORPORATION WITH REVENUES OF $1.1 BILLION, IT WAS STILL A RELATIVELY MINOR FORCE.

NOW TEN YEARS IN THE MAKING, THE "SERVICES" STRATEGY AND ITS CENTERPIECE, DATA SERVICES, WAS REGARDED OUTSIDE THE COMPANY WITH INDIFFERENCE BY MOST AND HOSTILITY BY THE REST.
THE INVESTMENT COMMUNITY WAS PARTICULARLY DISENCHANTED.

THEY HAD BELIEVED IN THE SUPER COMPUTER CINDERELLA.

AS THE TROUBLES HAD MOUNTED,

THEIR FASCINATION TURNED TO DISDAIN.

MOST REGARDED THE WHOLE SERVICES IDEA AS A SMOKE SCREEN —

AS THE PRELUDE TO A SWAN SONG.

(SIC TRANSIT GLORIA WALL STREET.)

BUT OPPORTUNITY WAS AT HAND.

BY THE END OF 1971,

THE IBM LAWSUIT WAS THREE YEARS OLD AND STILL IN THE DATA GATHERING, OR DEPOSITION, PHASE —

BUT IT WAS CLEAR WHERE THE TRAIL WAS HEADING.

BY EARLY 1971 THE FIRST SETTLEMENT FEELERS CAME OUT OF ARMONK.

IN FITS AND STARTS, WITH LONG SILENCES.

MESSAGES WENT BACK AND FORTH.

FINALLY, SOME FACE-TO-FACE DISCUSSIONS.

SOME PROPOSALS, SOME COUNTER-PROPOSALS.
TWO POSSIBILITIES WERE ON THE TABLE:

ONE IN DATA SERVICES (THE SERVICE BUREAU COMPANY)

AND ONE IN EDUCATION (SCIENCE RESEARCH ASSOCIATES).

BILL NORRIS AND BOB PRICE HAD LUNCH ONE DAY --

JULY 1, 1972.

WHICH SHOULD IT BE?

IN ONE STROKE,

SBC COULD INCREASE DATA SERVICES REVENUES BY 280 PERCENT.

ITS COMMERCIAL MARKETS

NEATLY COMPLEMENTED CYBERNET'S SCIENTIFIC AND ENGINEERING MARKETS.

BUT SBC HAD BEEN THROUGH THE WRINGER.

IT WAS JUST TURNING PROFITABLE AGAIN.

BUT MAYBE IT WAS ALL DONE WITH MIRRORS.

MAYBE IT HAD ONLY BEEN CLEANED UP ENOUGH TO MAKE IT SALEABLE.
SRA LOOKED BETTER FINANCIALLY.

COULD IT HELP CBE?

CBE WASN'T BORN YET.

BUT WOULDN'T IT HAVE BEEN NICE

TO HAVE HAD SUCH A STARTING BOOST FOR DATA SERVICES IN 1962

AS SRA SEEMED TO OFFER FOR CBE?

WHAT TO DO?

WELL TRY FOR BOTH -- BUT TAKE SBC.

AND ON JANUARY 15, 1973, IT WAS DONE.

THERE IS NO NEED TO BELABOR

ALL THE FACETS OF THE LAWSUIT AND ITS SETTLEMENT.

ALTHOUGH THAT IN AND OF ITSELF IT'S A FASCINATING STORY.

THE POINT HERE IS THAT A MAJOR STRATEGIC UNDERTAKING,

THE LEGAL ACTION TO PROTECT THE ENDANGERED COMPUTER BUSINESS

WAS LEVERAGED TO PROVIDE A KEY FACTOR

IN THE SUCCESS OF AN ENTIRELY SEPARATE STRATEGY.
IN RETROSPECT

THIS MAY ALL SEEM VERY OBVIOUS.

BUT BELIEVE ME IT WAS NOT OBVIOUS TO MOST --

EVEN THOSE CLOSE TO THE ACTION.

PERIPHERAL VISION

IS AN ALL-TOO RARE COMMODITY AMONG BUSINESS STRATEGISTS.

THAT IT HAS BEEN A KEY FACTOR

IN THE SUCCESSFUL EVOLUTION

OF CONTROL DATA'S MAJOR BUSINESS STRATEGY

OF PROVIDING COMPUTER SERVICES

IS NO BETTER ILLUSTRATED THAN BY THAT ONE EXAMPLE.

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 ANALAGOUS 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 APPLICATIONS SOFTWARE VENDORS. 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 "mini-computer."
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 mini-computer 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 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.
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, CHANGE AS EVENTS UNFOLD.
- ABOVE ALL, LASTING STRATEGY MUST BE AIMED AT FUNDAMENTAL NEEDS.

2) THE SINGLE GREATEST THREAT TO STRATEGIC EXCELLENCE

- IS A PERSONAL HANG-UP

3) STEADFASTNESS AND FLEXIBILITY --

- NOT GIVING UP TOO SOON.
- YET, PERIPHERAL VISION
- TO SENSE DIFFERENT OPPORTUNITIES THAN THOSE ORIGINALY ENVISIONED.

4) CONVENTIONAL WISDOM WILL KILL YOU --

5) 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.