

December 31, 1968

Mr. Kenneth H. Olsen
President
Digital Equipment Corporation
146 Main Street
Maynard, Massachusetts 01754

Dear Mr. Olsen:

Investment bankers, underwriters, attorneys and senior officers of corporations have consulted us for many years when they are confronted with the necessity of finding a successful "take over" executive to fill a position in a company in which they have an interest.

Xerox, Westinghouse, ITT, Sybron and many other corporations have found our executive search services to be productive of the highest quality of successful executives --- and surprisingly inexpensive.

Won't you suggest a day and time when we can meet in your office, or mine, so that I may show you how we secure top performing, profit oriented executives for many leading growth corporations of our country.

Very truly yours,


Harry Walker

12/31

cc: Ted Johnson
John Long
Ken Larson

Orig to Ron Wilson to answer

UNIVERSITY OF CALIFORNIA

December 27, 1968

LAWRENCE RADIATION LABORATORY
P. O. BOX 808
LIVERMORE, CALIFORNIA

1-6 Sent to Bob McInturff for quote

Digital Equipment Corporation
146 Main Street
Maynard, Massachusetts 01754

RECEIVED

DEC 30 1968

Subject: Lawrence Radiation Laboratory **KENNETH H. OLSEN**
Inquiry No. JPH - 68354 covering an
Automated Badge Reading System

Gentlemen:

The University of California is conducting certain research and development work at the Lawrence Radiation Laboratory (Livermore Site), under Prime Contract W-7405 Eng. 48 with the Atomic Energy Commission. In furtherance of this work the Laboratory is now considering the purchase of an Automated Badge Reading System as generally described in the attached University Specification LES-21393.

Should your firm be interested in possibly supplying the above system, please let us have your reply by January 31, 1969, containing the following information.

Technical

1. Provide a complete discussion and description of the type of Central Processing Unit and peripheral equipment proposed. (See Page 10 of attached Specification LES-21393 for descriptive block diagram of an overall system.)
2. Also provide a description of the type of software offered.

Administrative

1. Please indicate an estimated price covering your proposed system.
2. State realistic delivery from receipt of order.
3. Indicate your company's background in work of this type listing similar systems built for other firms.
4. Indicate your project engineer who would be responsible for this work.

Inquiry No. JPH - 68354
Page 2

Please understand that this Inquiry is not a formal Request for Quotation. Your response to this letter, however, will be used by the University to formulate its future requirements concerning this Automated Badge Reading System.

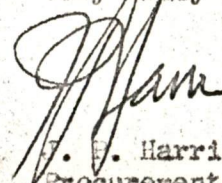
Your reply should be addressed as follows:

University of California
Lawrence Radiation Laboratory
P. O. Box 808
Livermore, California 94550

Attention: Mr. J. P. Harris, L-127
Procurement Department

Questions of an administrative nature should be directed to Mr. J. P. Harris, Area Code 415, phone 447-1100, extension 7864. Technical questions should be directed to Mr. K. K. Kinny, extension 8057.

Very truly yours,



J. P. Harris
Procurement Specialist Group

JPH:kd

Enclosures: Cain System Info.
Specification LES 21393

12-27

c - Nick Mazza
Bob Callin
Gerry Moore

NCR

THE NATIONAL CASH REGISTER COMPANY

DAYTON, OHIO 45409

VICE PRESIDENT

Ken talk w/ Nick

December 21, 1968

Mr. Kenneth H. Olsen
President
Digital Equipment Corporation
Maynard, Massachusetts

Dear Mr. Olsen:

Thank you for the very interesting and informative time that Mr. Carroll and I spent with you and your associates.

I have briefly discussed our visit with several people here at NCR including Mr. R. S. Laing, President, and Mr. C. L. Keenoy with whom you have spoken in the past.

We are all in agreement in that we believe a next step would be for you and any group you would like to bring with you to visit with us here in Dayton. At the conclusion of such a visit, we would both be in a position to see what assistance could be given to complete this proposed retail project.

Sincerely,



O. B. Gardner



Ken Larsen - 12/31

Should we join this org?
Please check with JAT.
KLO

244 EAST OGDEN AVENUE / HINSDALE, ILLINOIS 60521 USA / AMERICAN NUCLEAR SOCIETY

OCTAVE J. DU TEMPLE
EXECUTIVE SECRETARY
TELEPHONE 312 325-1991

December 20, 1968

Mr. Kenneth Olsen, President
Digital Equipment Corp.
146 Main Street
Maynard, Massachusetts 01754

Dear Mr. Olsen:

A few weeks ago Dr. Karl Cohen, President of the American Nuclear Society, asked your organization to consider Organization Membership in the Society in order to help it work more effectively in the areas of public information, education and nuclear standards.

The Society has been working in all these areas. ANS has one man on the staff who spends most of his time working with our 28 Local Sections in order to help each of them to inform the public accurately about nuclear matters.

Another staff man and I work with our 42 Student Branches in the Nuclear Engineering Departments of U.S. universities to encourage students to train for, and work in, the nuclear field. In the area of nuclear standards the Society has over 40 active committees all trying to help the industry formulate practical standards.

You and I know that much of what needs to be done to make the nuclear industry successful can best be done by the American Nuclear Society with the help and cooperation of its 8000 individual members and the resources of organizations like yours.

Please review the enclosed information and help in this program by joining the American Nuclear Society as an Organization Member. An application form is enclosed for your convenience.

If you have any questions, please call.

Sincerely,

Octave J. Du Temple
Octave J. Du Temple

OJDT:aeg
Encl: Appl. form
Add. Information

Canny, Bowen, Howard, Peck & Associates, Inc.
Chrysler Building, 405 Lexington Avenue, New York, N.Y. 10017
Cable Address: Hocambo, New York Telephone (212) 986-7050

December 19, 1968

Dear Ken:

It was good of you to step out of the meeting on Tuesday to give me some of the details in connection with the recent death of Harry Mann.

I have written a letter to Edwina and trust that she is holding up at this most trying time.

I was pleased to learn from you that Harry had developed a fine staff who will be able to carry on a great many of the programs and procedures that he was able to get under way during his tenure at Digital.

I was also pleased to have your enthusiastic expression concerning the job that Pete Kaufmann is doing in the manufacturing area.

With best wishes for the Holiday Season.

Sincerely,



Gordon G. Bowen

Mr. Kenneth H. Olsen
President
Digital Equipment Corp.
146 Main Street
Maynard, Massachusetts 01754

E. A. BUTLER ASSOCIATES, INC.

EXECUTIVE RECRUITING

Management Consultants

RIVERSIDE PLAZA BLDG.
2 NORTH RIVERSIDE PLAZA, CHICAGO, ILLINOIS 60606
312-641-0650

NEW YORK - LOS ANGELES - PHILADELPHIA
CHICAGO - CLEVELAND
LONDON - PARIS

December 19, 1968

PERSONAL & CONFIDENTIAL

Mr. Kenneth H. Olsen-President
Digital Equipment Corporation
146 Main Street
Maynard, Mass. 01754

Dear Mr. Olsen:

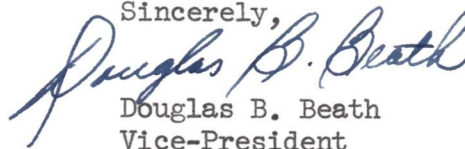
We are engaged by a large nationally known business equipment manufacturer to locate a Vice-President who will assume the Presidency of this firm in two to four years. The individual we are seeking should be strong in Marketing and have had some experience during his career with business equipment or allied fields.

We are writing to you hoping that you may know of someone who might be qualified to fill this position.

The headquarters are in the Midwest. The salary will be in the upper medium five figures.

All information or any recommendation you may offer will be held in strictest confidence.

Sincerely,


Douglas B. Beath
Vice-President

DBB:kms

NEW ENGLAND MERCHANTS NATIONAL BANK



ARTHUR F. F. SNYDER
SENIOR VICE PRESIDENT

December 18, 1968

Mr. Kenneth Olsen, President
Digital Equipment Corporation
Main Street
Maynard, Massachusetts

Dear Ken:

As a direct charge against you for introducing you to one of your customers, I send you a copy of System Technology Associates' investment proposal which came to us. I would be very grateful if, without spending more than five minutes on it, you could tell me whether it made any sense at all. We have turned down the proposal because we were not at all certain whether it could be marketed to the towns, but I would love to be proven wrong.

Thanks very much. I know this is an imposition and the next time you will decline to meet your customers.

Best wishes for a Merry Christmas.

Sincerely,

Arthur F. F. Snyder

AFFS/jeh

SYSTEM TECHNOLOGY ASSOCIATES, INC.

14 Concord Lane
Cambridge, Massachusetts 02138

Investment Proposal

Cost

400 shares of common stock representing 20% of outstanding voting securities

\$20,000

A Put Option entitling NEECC to sell 400 shares of common stock to the company at the original purchase price after 5 years from the date of the note and expiring after 10 years from the date of the note.

-0-

The company projects an additional cash requirement of \$80,000 to accomplish its objectives. The company would borrow the additional funds from NEECC in accordance with the schedule outlined in Exhibit A.

Business

System Technology Associates, Inc., a Massachusetts company incorporated in July, 1967, is a computer software house developing proprietary computer simulation systems for military, municipal, and corporate organizations.

Since incorporation, the company has obtained consulting contracts from prime military contractors such as Sanders Associates and Raytheon Company. During the past year the company has submitted nine sole source study contracts to Navy and Air Force agencies, and informal notification has been received to proceed on studies totaling \$97,000 in fiscal 1969. The technology of computer simulation systems which the company developed for military projects will be applied to the development of a municipal government simulation system, Management and Planning for Towns and Cities Simulator (MAPTACS).

MAPTACS, a computer simulation system, will aid town administrators in predicting municipal growth patterns. This simulator, described in Exhibit B, will provide the nucleus for a planning and data collection service which will be installed in the town of Concord and Andover, Massachusetts, in fiscal 1969 as pilot projects. MAPTACS is designed to be a management planning tool and does not perform data processing accounting functions such as payroll and tax billings.

The company has been using the town records of Concord, Massachusetts, to develop a mechanical model. Paul J. Flynn, Town Manager, has been working closely with the company, and it is his opinion that town administrators could operate more efficiently and economically with a simulator such as MAPTACS. The Town Manager of Andover, Mr. Bowen, was very impressed with the simulator and the concepts comprising the system. Mr. Bowen stated that MAPTACS provided planning flexibility which is not available to town administrators now, and, in his opinion, there is a tremendous market for the system.

Mr. Lyman Zeigler of the Massachusetts Taxpayers Federation felt that towns had a definite need for a system such as MAPTACS, but he was skeptical concerning the probability of success. Mr. Zeigler believed that such a project should be launched by a government agency or a public foundation.

Exhibit C graphically describes the development of a three phase, five-year program for full MAPTACS development. In the first year the company expects to test the simulator on two pilot towns. In the second year MAPTACS will offer a batch processing mode. In the final phase beginning in the fourth year a conversational mode will give municipal personnel the opportunity to converse with their program and the data bank.

Exhibit D provides the cost and revenue estimates from the development of the MAPTACS program. A projected Profit and Loss Statement based on Exhibit C follows:

Year Ending	Revenues (000)	Expenses (000)	Earnings (000)	Cumulative Earnings
9/1/69	10	100	(90)	(90)
9/1/70	110	86	24	(66)
9/1/71	225	93	132	66
9/1/72	365	137	228	294
9/1/73	560	175	385	679
9/1/74	820	223	597	1276

Recent Operating Record

FYE Year Ended 12/31	Net Sales (000)	Direct Labor (000)	Indirect Labor (000)	Net Income (000)
1967 (6 mos. operations)	19.2	12.6	3.6	2.3 before taxes
6/30/68	18.5	12.3	4.6	1.5
9/30/68	27.4	17.5	7.8	2.1

Financial Position (000)

	FYE 12/31/67	9/30/68
Cash	1.9	2.9
Receivables	9.2	5.9
Prepaid Expenses	.1	.1
Current Assets	11.2	8.9
Current Liabilities	7.8	6.8
Net Working Capital	3.4	2.1
Equipment	---	3.3
Total Assets	11.2	12.2
Common Stock and Surplus	3.4	5.4
Common Shares Outstanding	1,600	1,600
Common Shares Authorized	150,000	150,000

Comments

The company has presented an outline of the MAPTACS program to four town managers. Administrators agree that conceptually the system is well designed; however, the company has not done any programming due to the lack of capital. The NEECC investment would be used to finance the initial programming requirements.

MAPTAC's marketability is unknown. Concord and Andover are to be pilot towns and have included the system's costs in the town budgets for fiscal 1969. Future sales will be contingent upon the successful development of the pilot programs.

If the pilot programs are successful, towns could apply for Federal Funds under a program sponsored by the Department of Housing and Urban Development. There are many government agencies actively pursuing the problems of cities and towns, and town costs may be subsidized by State and Federal agencies.

The company estimates that a cash deficit of \$100,000 will be incurred to develop MAPTACS. Exhibit A projects the cash requirements and NEECC would be requested to advance funds on a 5 year promissory note basis as the company completes each program stage. By December 31, 1969, the company's marketing success will be known, and NEECC total exposure will be \$64,000.

Management

Arthur W. Dickson, President and Treasurer. Mr. Dickson received a B.S.E.E. summa cum laude from Tufts University. He has been employed in various engineering capacities by MIT, E. I. DuPont, General Electronics Laboratory, Feedback Controls, Inc., and Detroit Controls. Prior to organizing System Technology Associates, Inc., Mr. Dickson was the manager of the Advanced Weapons Systems for Raytheon Company.

Jean Claude de Verrier, Vice President. Mr. de Verrier graduated from M. I. T. and the Alfred P. Sloan School of Management. Prior to joining System Technology Associates, Inc., Mr. de Verrier was an operations analyst for the Missile Systems Division of Raytheon Company.

Ownership and Marketability

The common stock is closely held.

	<u>Shares</u>
Arthur W. Dickson	1300
Jean de Verrier	300
NEECC	<u>400</u>
Total outstanding shares	2000

The NEECC common stock would be investment letter stock.

Richard W. Swett

CASH FLOW SCHEDULE

<u>PROGRAM STAGE</u>	<u>DATE</u>	<u>EXPENDITURES</u>	<u>RECEIPTS</u>	<u>CUMULATIVE EXPENDITURES</u>
1. Programming completed;	3/31/69	\$18,800	---	\$18,800
2. Concord Data Assimilated	6/30/69	\$19,000	---	\$37,800
3. Runs Completed for Concord; Andover Data Assimilated	9/30/69	\$19,000	---	\$56,800
4. Runs Completed for Andover; 5 towns committed for 1970	12/31/69	\$19,000	(Concord) \$11,800	\$64,000
5. Finance Committee Approval for 5 towns	3/30/70	\$19,000	(Andover) \$15,800	\$67,200
6. Data Assimilated for 5 towns	6/30/70	\$29,200	---	\$96,400
7.	9/30/70	\$29,200	(5 towns) 41.5	\$84,100
3. Runs Completed for 5 towns; 7 towns committed for 1971	12/31/70	\$29,200	(5 towns) \$71,500	\$41,800

SYSTEM TECHNOLOGY
ASSOCIATES INC.

14 CONCORD LANE
CAMBRIDGE, MASS. 02138

MAPTACS

Management And Planning for Towns and Cities Simulator

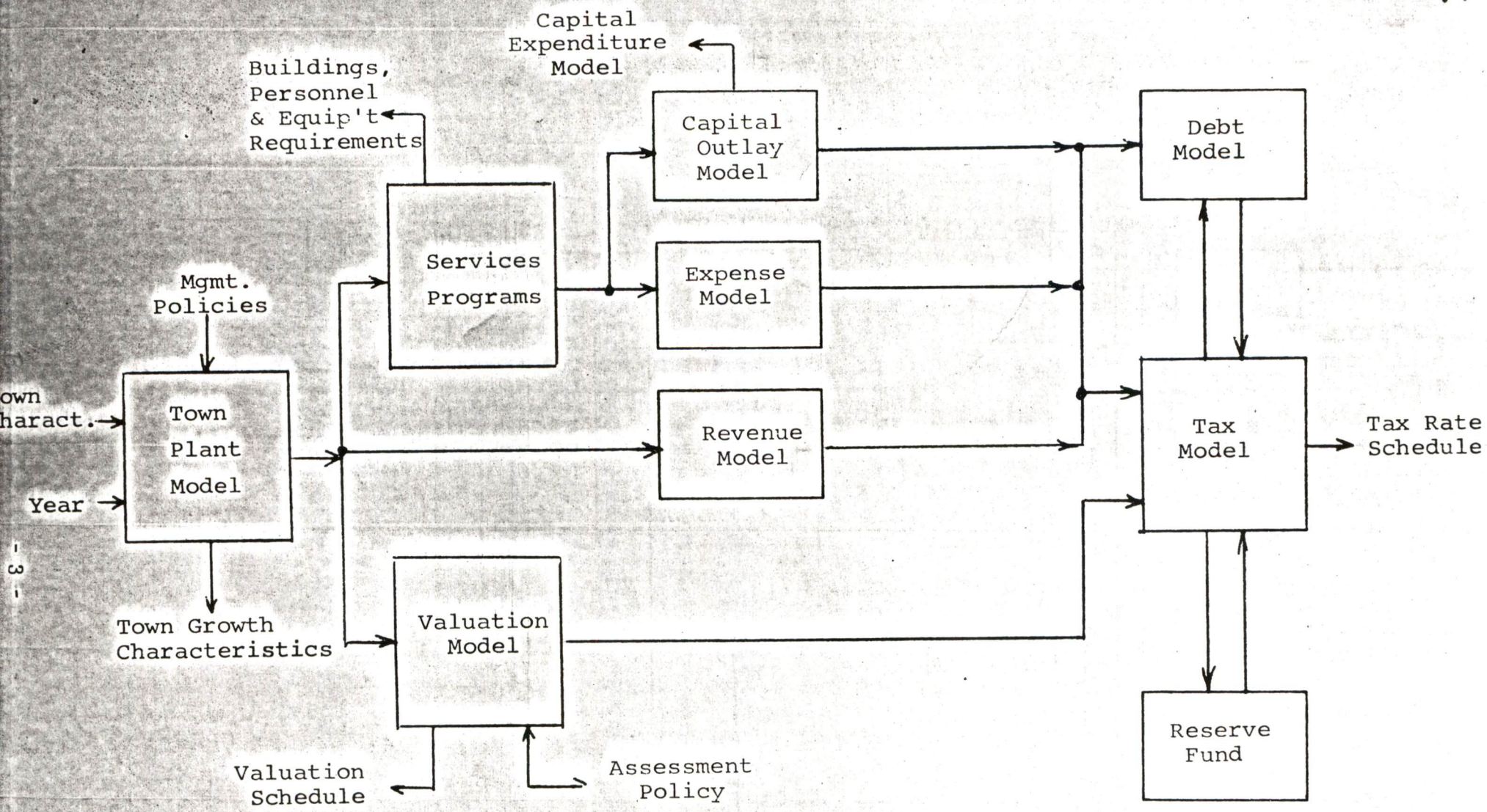
MAPTACS is a computer simulation of a municipality designed to aid town administrators in projecting:

- . Future requirements for building, personnel and public services
- . Capital outlay schedule
- . Debt policy
- . Tax rate
- . Real estate and personal property valuations
- . Influence of legislation, regulation and policy on growth and future expenses.

Although the program has a generalized format, its inputs and outputs can be chosen to fit the particular needs of a city or town. Using MAPTACS, managers can forecast new municipal growth patterns, anticipate significant capital expansion requirements, and locate sources of additional revenues. Finance committees can investigate the total fiscal implications of town, state or federal management decisions. Planning boards can anticipate the results of new plans and policies.

MAPTACS is a unique computer simulator because it stores and updates town descriptive information, management policies and processes and fiscal data. This information is internally analyzed and correlated to primary driving functions representing town growth factors. Projections of future revenues and expenditures are then calculated from the growth patterns of the municipality. Management policies as well as national trends and indices may be altered to test their influence on a variety of important factors including:

- . Tax rate versus years
- . Public school attendance, facility requirements, and instructional expenditures
- . Personnel and equipment requirements for public safety
- . Capital improvement expenditures for public works
- . Interest and maturing debt schedule
- . Health and recreational provisions



General Flow Diagram of MAPTACS

Figure 1

EXISTING TOWN PARAMETERS

. of Accepted Streets (mi.)
 . of Intersections
 . of Miles of Maintained Brooks
 . of Bridges
 res of Maintained Lawns
 . of Tree-lines Streets (mi.)
 res of Recreation Areas
 res of Parks
 s. of Consummable Rubbish/Res
 s. of Non-Consummable Rubbish/Res
 les of Sewers (Trunk, Laterals)
 les of Sewer Connections (mi.)
 les of Sidewalks
 les of Curb/Miles of Streets
 les of Electric Lines or Conduits
 . of Street Lights/Mile of Streets
 llons of Water Required/Resident
 . of Wells and Reservoirs and Cap
 . of Pumping Stations
 . of Hydrants
 s of Water Mains
 . of Residence

NORMAL D.P.W. FUNCTIONS

Maintain Accepted Streets
 Maintain Street Signs
 Maintain Drains and Brooks
 Maintain Bridges
 Maintain Trees and Lawns
 Maintain Recreation Areas
 Maintain Parks
 Maintain Disposal Areas
 Maintain Sewers
 Maintain Sidewalks and Curbs
 Maintain Reservoirs and Wells
 Maintain Hydrants
 Maintain Water Mains
 Maint. & Operate Incinerator
 Maint. & Operate Electrical Power Lines
 Maint. & Operate Structures, Equipment & Meters
 Maint. & Operate Pumping Stations, Structures, Equipment & Meters
 Winter Street Maintenance
 Purchase & Transmit Electric Power
 Distribute Electric Power
 Light Streets
 Produce Water
 Purchase Water
 Collect Rubbish and Garbage
 Collect Revenue for Elect. and Water

Expected Work Requirements by Functions



TOWN GROWTH CHARACTERISTIC

ew Residences by Type
 ew Commercial Concerns
 ew Industrial Firms
 ew Research Centers
 nage in Population Distribution
 nage in Income Distribution
 ncome

D.P.W. EXPANSION FUNCTIONS

Construct New Streets
 Construct New Bridges, etc.
 Install New Street Lights, Hydrants
 Increase Garbage Collection
 Enlarge Disposal Area
 Expand Elect. & Water Service
 Enlarge Water Supply
 Increase Sewer Connections

Cost of Capital Expansion



TOWN OBSOLESCENT CHARACT.

ewers
 ns
 lectric Lines and Conduits
 tructures and Major Equipment
 ther

D.P.W. REPLACEMENT FUNCTIONS

Replace Existing Sewers, Connections
 Replace Existing Sidewalks, etc
 Replace Existing Water Mains
 Replace Existing Electric Lines, Conduits
 Install New Structures and Major Equipment

Cost of Capital Improvements

Figure 4 - Public Works and Sanitation Department Flow Diagram

The Revenue Model calculates the expected receipts from state personal income taxes and corporation taxes as well as commercial revenues from special assessments, and grants from state and federal sources.

The Capital Outlay Model establishes a distributed capital expenditure schedule by year. It also differentiates between those expenditures required for improvements of existing town services as distinct from those attributed to town expansion.

The Debt Model defines the optimum manner to finance the required capital outlay. Consideration is made of available reserve funds and total borrowing capacity of the town based on its present outstanding debt. Interest rate estimates are made to define a borrowing strategy minimizing the total cost of future debts.

The Tax Model computes the tax rate for the town based on the total charges and credits for the year and the valuation of real estate and personal property. The tax rate schedule is updated and a per taxable dollar cost of each town government department is prepared.

Typical inputs required to exercise the simulation are listed below by major departments:

EDUCATION

Pupil distribution (history)
Pupils/ zone
Area/ pupil/ zone (history)
Teachers/ pupil/ school (history)
Equipment/ pupil/ school (history)
Administrative cost/ pupil
(history)
Maintenance/ school/ pupil
(history)
Transportation/ pupil/ school
(history)
Entrances (history)
Graduates (history)

GENERAL GOVERNMENT

Personnel (history)
Facility cost (history)

PUBLIC WORKS & SANITATION

Water:

Maintenance cost vs. number of
connections and miles of mains
Source investment per gallon
Gallon per capita
Source capacities
Wells, Reservoirs

Highways:

Miles
Traffic densities
Maintenance/ mile
Paving, Snow, Sweeping, other
Construction cost/ mile
Equipment cost/ mile

HEALTH

Inspector costs (history)

Service costs

Nursing

Dental Health

Environmental Sanitation

Nutrition

Laboratory

VETERANS

Cost (history)

Personal Serviced' (history)

Benefits (history)

PUBLIC SAFETY

Police:

No. crimes and type (history)

No. personnel (history)

Equipment cost/ man/ year

Training cost/ man/ year

Fire:

No. fires and type (history)

No. personnel (history)

Equipment cost/ man/ year

Training cost/ man/ year

Hydrants and alarms cost
(history)

Inspectors:

Cost histories

Public Works & Sanitation (cont'd.)

Sewers:

Maintenance cost versus number
of miles and connections

Investment/ plant

Capacity/ plant

Total flow (history)

Equipment (history)

Personnel (history)

No. plants (history)

Refuse Disposal:

Volume (history)

Personnel (history)

Equipment (history)

Garbage Disposal:

Volume (history)

Personnel (history)

RECREATION & LIBRARIES

Recreation:

Personnel (history)

Equipment cost (history)

Training cost (history)

Facility cost (history)

Maintenance cost (history)

Libraries:

No. books purchased (history)

Grants (history)

Personnel (history)

Maintenance (history)

Total books (history)

Loans (history)

Building area (history)

Building evaluation (history)

PROGRAM PLAN

	1968	1969	1970	1971	1972
I. DEVELOPMENT PROGRAMMING SIMULATOR PILOT TOWN PARTICIPATION SIMULATOR EVALUATION AND MOD.					
II. BATCH PROCESSING TOWN PARTICIPATION INT. OF TOWN COMPARISON GUIDE INT. OF TOWN FINANCIAL RATINGS					
III. CONVERSATIONAL MODE REPROGRAMMING LANGUAGE TOWN ADM. INSTRUCTION CENTRAL COMPUTER INSTALLATION TOWN PARTICIPATION					

Cost and Revenue Estimate from Development
and Distribution of MAPTACS Program

I. Expected Number of Town Accounts

	4/1/69	4/1/70	4/1/71	4/1/72	4/1/73	4/1/74
New	1*	5	7	10	14	19
1 yr old		1*	5	7	10	14
2 yr old			1*	5	7	10
3 or more				1*	6	13
Total	1	6	13	23	37	56

- * Pilot model demonstration at special price of \$10,000. per year.
 ** Based on Sale to 5 towns following successful demonstration of program, and projecting a 140% growth factor per year

II. Cost of Development and Sale of MAPTACS

- 1) The salary structure of employees contributing to this venture is defined as follows:

	<u>Total Cost/Year</u>		
	<u>1st</u>	<u>2nd</u>	<u>3rd</u>
President/General Mgr. (GM)	24K	-	-
Senior Engineer/Analyst (EA)	21K	18K	15K
Sales Engineer/Analyst (SA)	17K	15K	15K
Programmer/Analyst (P)	10K	9K	9K

- 2) The expected overhead expense of the Company (50% apportioned to this venture) is listed below:

<u>Monthly Overhead Expense</u>	
1. Secretary	\$600.
2. Ledger/Clerk	400.
3. Accountant (part-time)	250.
4. Office Rental	200.
5. Telephone	50.

6. Office Supplies	50.
7. Teletype Unit	150.
8. Typewriter/Copier etc.	200.
9. Miscellaneous	<u>100.</u>
Total	\$ 2000.
Apportioned to MAPTACS	\$ 1000./month

The overhead adjustment to reflect additional staffing requirements are as follows:

	- TIME -				
	<u>9/1/68</u>	<u>9/1/69</u>	<u>9/1/70</u>	<u>9/1/71</u>	<u>9/1/72</u>
Apportioned Overhead/Year	12K	12K	15K	20K	25K

3) Services rendered per account depend on the number of years that account is served. The breakdown of tasks, and man-months required by each level of staff is shown below.

Services Rendered Per Account

Type Account	Charge Class.	Task Description	Level of Staff	Man-Months	Total* Cost \$
New	LABOR	Analysis of town data	EA	1	3667.
	LABOR	Reprogramming to suit data	EA	½	1833.
	LABOR	Reprogramming to suit data	P	1	1500.
	LABOR	Input of raw data	P	1	1500.
	LABOR	Problem Solving	EA	½	1833.
	LEASE	Computer Program	-	-	5000.
TOTAL:			-	4	\$15333.

Type Account	Charge Class.	Task Description	Level of Staff	Man-Months	Total* Cost \$
1 year old	LABOR	Update Model, Improvement, etc.	EA	½	1833.
	LABOR	Update Model, Improvement, etc.	P	½	750.
	LABOR	Problem Solving	EA	½	1833.
	LABOR	Update data file	P	1	1500.
	LEASE	Computer program	-	-	5000.
TOTAL:			-	2.5	\$10916.
2 year or more	LABOR	Update data file	P	1	1500.
	LABOR	Problem solving	EA	½	1833.
	LEASE	Computer program	-	-	5000.
TOTAL:			-	1.5	\$8333.

* These are costs estimated to customer on the basis of a 100% overhead rate. The addition of a 30% mark-up (15% for G & A; and a 13% profit margin) permits the services per account to be quoted as follows:

New Account	20K per year
1 year account	15K per year
2 or more year account	10K per year

4) The Technical Labor force required to develop and sell the program as per the schedule in 1) above is estimated as follows:

	<u>Labor/Force Account</u>	<u>Level of Staff</u>	<u>Man-Month</u>
1st year		EA	2
1st year		P	2
1 year old		EA	1.0
1 year old		P	1.5
2 or more year old		EA	0.5
2 or more year old		P	1.0

The total force requirement by tasks in man-months.

Task	Level of Staff	Year From				
		9/1/68	9/1/69	9/1/70	9/1/71	9/1/72
Program Development	GM	6	6			
Program Development	EA	10	1			
Program Development	SA	12*				
Program Development	P	22	13	1.5		3
Service New Accounts	EA	2	10	14	20	28
Service New Accounts	P	2	10	14	20	28
Service Old Accounts	EA	-	1	5.5	10	16.5
Service Old Accounts	P	-	1.5	8.5	16.0	28
Sales	SA	-	12	16.5	30	28.5
Total Man-Months		54	54	60	96	132
Total Man-Years		4½	4½	5	8	11

* Initially, the sales analyst will be used to develop the program.

Total force requirement by personnel.

Level of Staff	Year From				
	9/1/68	9/1/69	9/1/70	9/1/71	9/1/72
GM	½	½			
EA	1	1	2	3	4
SA	1	1	1	2	2
P	2	2	2	3	5
TOTAL	4½	4½	5	8	11

From the above it is possible to estimate the total cost of operation given the account schedule in 1) above.

	Year From					
	9/1/68	9/1/69	9/1/70	9/1/71	9/1/72	9/1/73
Direct Labor - GM	12K	12K				
Direct Labor - EA	21K	21K	39K	54K	69K	99K
Direct Labor - SA	17K	17K	17K	32K	32K	32K
Direct Labor - P	19K	19K	19K	28K	46K	64K
Overhead	12K	12K	15K	20K	25K	25K
Direct Computer Charge	10K	5K	3K	3K	3K	3K
Working Capital Surplus	9K					
TOTAL	100K	86K	93K	137K	175K	223K

III. Analysis of Revenues & Profits

The revenues are based on total cost to town as follows:

1st year	\$20K
2nd year	\$15K
all other years	\$10K

The town must also pay for computer time for problem solving. From the town account estimates, the following Revenue Schedule is probable:

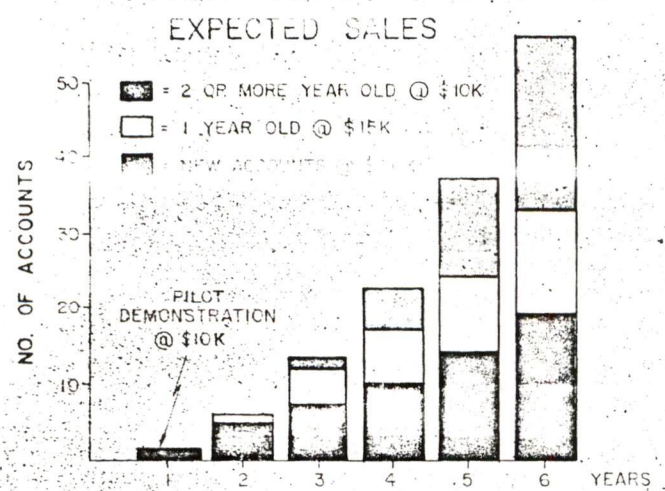
	Year From					
	4/1/69	4/1/70	4/1/71	4/1/72	4/1/73	4/1/74
New Accounts	10K	100K	140K	200K	280K	380K
Old Accounts		10K	85K	165K	280K	440K
TOTAL	10K	110K	225K	365K	560K	820K

At the rates charged above, the following profits before taxes could be realized.

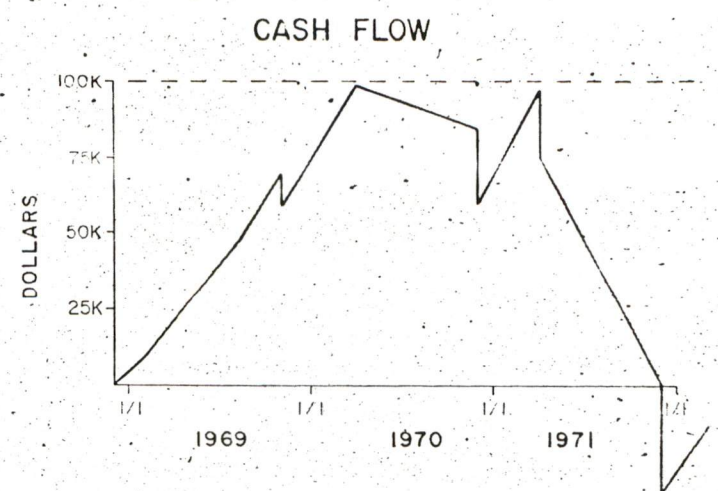
		Earnings	Cumulative
		(\$)	Earnings
			(\$)
Year Ending	9/1/69	(90K)	(90K)
Year Ending	9/1/70	24K	(66K)
Year Ending	9/1/71	132K	66K
Year Ending	9/1/72	228K	294K
Year Ending	9/1/73	385K	679K
Year Ending	9/1/74	597K	1276K

From these conclusions, the following should be mentioned: These profits are conservative since it does not reflect the 1) additional revenues from Military Systems Analysis Contracts, 2) the additional revenues from undertaking the conversion of present billing and payroll procedure of towns to computer batch processing, 3) the development of a conversational mode for this program which would enhance demand for MAPTACS, create additional revenues from leasing and operating a processor, and reduce staffing requirements, 4) the introduction of a town comparison guide, 5) the introduction of a service to generate data for financial ratings to be made.

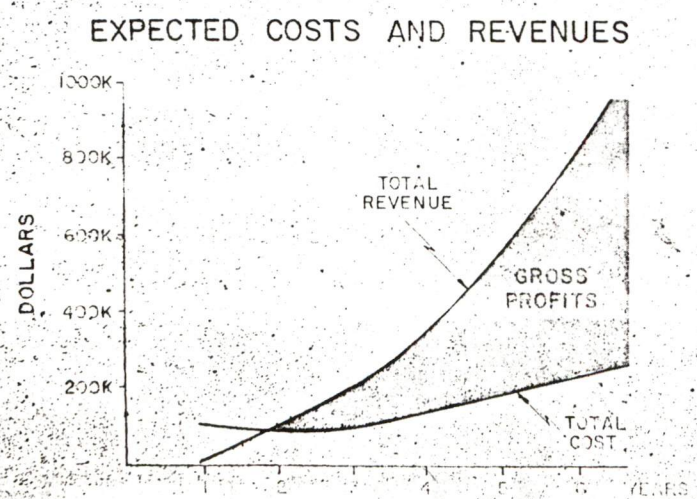
MAPTACS FINANCIAL PLAN



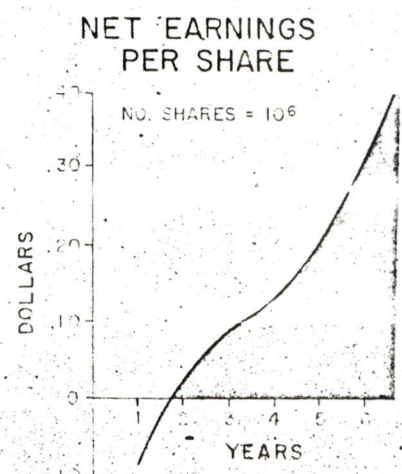
140% NEW ACCOUNT GROWTH = 175% SALES GROWTH



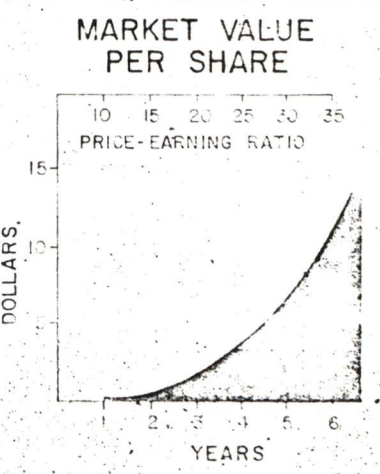
\$100,000 REQUIRED TO DEVELOP MAPTACS



PROFITABLE VENTURE IN 2 YEARS



100% GROWTH RATE IN EARNINGS



100% CAPITAL GAINS PER YEAR

*Enclosure in
Letter Enclosure file*



STANFORD RESEARCH INSTITUTE

MENLO PARK, CALIFORNIA 94025

December 18, 1968

Mr. Kenneth H. Olsen
President
Digital Equipment Corporation
146 Main Street
Maynard, Massachusetts 01754

Dear Mr. Olsen:

Stanford Research Institute has conducted a number of multiclient sponsored research studies of various segments of the electronic industries. We are now planning a comprehensive study, "World Electronic Industries--New Opportunities for Growth and Diversification in the 1970s," which is described in detail in the enclosed Proposal No. IC-68-359.

The electronic industries will experience many changes over the next decade in design, production, marketing, and finance. These changes will include development and greater use of complex integrated circuits (LSI), more complex equipment and systems, more vertical integration and consolidation of production facilities, more construction of foreign production facilities, increased marketing on an international basis, more rapid response to customer demands, and increased financial sophistication in managing assets. The Institute has followed these and other trends in the electronic industries closely for many years and has developed a significant base of information for the conduct of the proposed research.

The multiclient research program described in the proposal permits sponsors to take advantage of the results of a 15 man-year investigation of world electronic industries at a reasonable cost. Since no other study of this breadth and depth is known to exist, we believe that this project will be of sufficient value to justify your company's participation.

We hope that you will approve our new proposal after you have had an opportunity to review it and will decide to participate in the study. Your early acceptance will help to ensure that the work is started promptly. If you have any questions about the new program, we will be pleased to answer them.

We look forward to hearing from you.

Very truly yours,

Merle O. Evers

Merle O. Evers, Director
Electronics and Automation Economics

Enclosure

Enclosure in file "Letter Enclosures"

Elsa sue

**ADVANCED
COMPUTER
TECHNIQUES**
CORPORATION

40 WASHINGTON STREET / WELLESLEY HILLS, MASS. 02181 / (617) 235-0617

ROBERT L. HENGEN

RECEIVED
DEC 30 1968
KENNETH H. OLSEN

December 18, 1968

Mr. Kenneth H. Olsen
President
Digital Equipment Corporation
146 Main Street
Maynard, Massachusetts

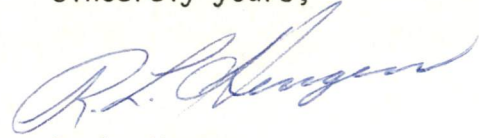
Dear Mr. Olsen:

Enclosed is a brochure which outlines the type of data processing activities Advanced Computer Techniques is engaged in, and presents areas which may be of advantage to Digital Equipment Corporation. Also enclosed is a copy of a "soft sell" brochure which has received some interesting comments.

At your convenience, I would like the opportunity to discuss with you the possibilities of how we may provide services to your organization and to determine if you would have an interest in manufacturing an automated display device which we intend to market.

?

Sincerely yours,



R. L. Hengen
Vice President

RLH/b1
Enclosures



LETHBRIDGE-OWENS & PHILLIPS, INC.

WILLIAM B. MEZICK
EXECUTIVE VICE PRESIDENT

59 MAIDEN LANE
NEW YORK, N. Y. 10038

December 17, 1968

Dear Ken;

You can well imagine the feeling of horror that gripped me when I was confronted with the news of Harry's death upon my return from Europe. I was absolutely stunned.

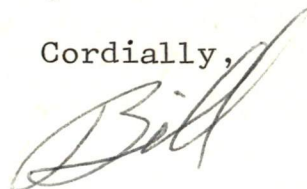
One of the last things that happened the day I left for Europe, was a message from him, confirming action to be taken, by me, in London. I went away believing that while he was dreadfully uncomfortable, all would eventually be well.

This tragic news never caught up to me in Europe, as the cable sent by my associates arrived after I had left London and was not forwarded on to me.

I grieve for the loss of a good friend and am aware of the extent of this loss to you.

With warmest regards.

Cordially,



WBM/lk

12/23
c - Bob Laven

digital

December 16, 1968

Dear Ken:

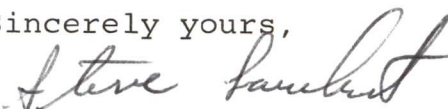
This letter serves to inform you that I hereby give my notice of employment termination as of January 17, 1969. I have accepted an opportunity with substantially more monetary returns involving management responsibility.

This opportunity has been available to me for many months. However, I continued my obligation to see the RF/RS08 disk become a producible product. It is obvious now that we have reached this goal. The past fourteen months have had their ups and downs in the big disk project; yet they have been extremely educational to both me and D.E.C. We have experienced a necessity to upgrade our mechanical capabilities and in addition develop an organizational structure that promotes electro-mechanical design.

Leaving D.E.C., following eight years of experience spanning a majority of the company's life, I find it difficult to express a humble "thank you" when in reality you and others in the past have provided me a development opportunity that generally is not available to many men of my age or educational background. I believe my record of accomplishments have been considerably more profitable to D.E.C. than the average employee. Indirectly, I may still be able to provide D.E.C. with new devices that enhance computer sales.

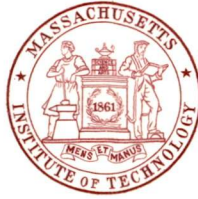
Recalling the past I am sure you remember the fact that I maintained the log and program library of the first prototype PDP-1 produced by D.E.C. I have maintained both the log and programs to this day and respectfully place these items in your care.

Sincerely yours,



Steve Lambert

cc: Joe St. Amour



OFFICE OF
THE CHAIRMAN OF THE CORPORATION

CAMBRIDGE, MASSACHUSETTS 02139

December 16, 1968

Mr. Kenneth H. Olsen
President
Digital Equipment Corporation
Maynard, Massachusetts

Dear Mr. Olsen:

Paul Johnson is, unhappily, at home ill, and his secretary has brought to me your letter of December 10 and the enclosed certificate for 500 shares of Digital Equipment Corporation stock. I want to acknowledge this most warmly and to thank you for this generous addition to your earlier gift in behalf of the Electrical Engineering building.

I can readily understand the attitude of the company officers with respect to cash gifts. It has been very helpful to us in the past to have had the equipment donations from the Corporation. One of the things that Joe Snyder and I had on our agenda to talk with you about has to do with ways in which corporations and individuals give stock advantageously.

My associates here join me in thanking you most heartily for your help.

Yours sincerely,



J. R. Killian, Jr.
Chairman

JRK:ep

HOLLINS COLLEGE

Hollins College, Virginia 24020

10/20
cc: *Win Hindle*
Bob Lassen
Jim Davis

DEPARTMENT OF PSYCHOLOGY

December 16, 1968

Mr. Kenneth H. Olsen, President
Digital Equipment Corporation
146 Main Street
Maynard, Massachusetts 01754

Dear Mr. Olsen:

I just finished the Family - 8 programming course in Maynard and want to tell you how impressed I am with Digital as a company. Everybody that I ran into there was as helpful as they possibly could have been and my week was extremely well spent. You have a fine organization.

I particularly want to express my thanks to Mr. Bruce Delagi of your sales department who spent a number of hours with me in instructing me on the AX08 -- he was most effective and generous in his time too. My instructor, Mr. Thomas Mosco, was superior, the personnel of the Decus Library were most helpful to me, and Miss Betsy Noakes, secretary in the training unit, was helpful beyond the call of duty.

My thanks to you and your organization.

Sincerely,



F. J. McGuigan
Chairman
Department of Psychology

fjm/cc

cc: Mr. Bruce Delagi
Mr. Thomas Mosco
Miss Betsy Noakes
Decus Library

Dec. 13, 1968

If we have not received a satisfactory
payment of this account within
five (5) days, our attorney will
contact the Dept of Labor, Washington, D.C.

Dear Sir,

Remitted on 12-12

It has been two weeks since I sent a letter requesting payment of my husband's expense account, for a requested job interview to your company, that was submitted to your company late August.

We did not press for the money due us before because we felt it might have been an oversight and that eventually it would be discovered in Bookkeeping, evidently this is not true, since we have not even received a reply to our request for reimbursement.

I am wondering if my accompanying my husband on this trip has figured in not paying my husband for his expenses. We paid for all expenses incurred in my accompanying him, because I was unsure of wanting to live in the Boston area. We found it a delightful area, and felt badly when my husband was not accepted for the job with your Company.

We are at a loss as to why our expense account that you ask us to submit for my husband's expenses (none were not included) has not been paid in nearly four months. My husband has gone on several interviews since and never has he met with such flagrant disregard of submitted expense accounts. Sincerely
Mrs. C.R. Johnson
8128 5th W. Bingham City, Utah

December 13, 1968
335 Lagonia
Newport Beach, Calif. 92660
714 6450948

EXHIBIT
COTTON CONTENT

Mr. K. H. Olsen, President
Digital Equipment Corporation
146 Main
Maynard, Mass. 01754

Dear Mr. Olsen:

I received a letter of December 9 from Mr. T. G. Johnson saying he was not interested in my experiences.

Not wishing to beg the issue, but you will remember from our phone conversation this summer, which started all this, that my objective was an executive position in corporate development and planning, not sales.

That is why I understood you were interested in talking with me in your office, although I did not know exactly what you had in mind. Is not this interpretation correct?

Thank you and best wishes for the holiday season.

Sincerely,

Charles F. Peterson

*Called
Nancy to
see if she
was sick or
something*

*Ken said
to file + fgt
see*

December 9, 1968

Mr. Charles F. Peterson
335 Lugonia
Newport Beach, California 92660

Dear Mr. Peterson:

Thank you for your resume and follow-up letter of November 23. After considering your interesting experience and qualifications, I do not feel that we have a position here which is appropriate. I am sorry that it has taken this much time to consider your interest in Digital Equipment Corporation.

Sincerely,

Theodore G. Johnson
Vice President, Sales

TGJ:mr

cc: Mr. K. H. Olsen

October 29, 1968
335 Lugonia
Newport Beach, Calif. 92660
714 6450948

Mr. T. G. Johnson, Vice President
Digital Equipment Corporation
146 Main
Maynard, Mass. 01754

Dear Mr. Johnson:

Thank you for your October 22 letter and interesting Annual Report. I will be happy to brief you on my background.

Since 1964, when I decided to into business here rather than transfer to New York for W. R. Grace, I have been making private studies in various marketing and planning aspects of corporate development and profitability such as:

1. Economic feasibility analysis: determination of market size, one's reasonable share, forecasted profitability; analyze competition; examine line marketing structure; evaluate proper distribution methods.
2. New Market planning: identify current R&D capability factors, along with new ventures, that could provide substance for profitable corporate growth.
3. Acquisition exploration and appraisal: evaluate top management and whether it will stay; examine corporate relationships with major customers, suppliers and competitors; estimate growthpotential in terms of return on investment.

My work has been done mostly for eastern companies interested in west coast growth potential and conducted largely on a confidential basis. Some industries studied include electronic components, plastics, chemicals, metals, office equipment, ladies apparel, aerospace, materials handling, transportation, communication, building and construction, instrumentation, appliances, etc.

Previously, I have strong records of business attainment in marketing management with W. R. Grace (1958-64) increasing return on investment 9%, return on sales 25% while doubling sales volume; with General Electric (1945-58) with national marketing responsibility for a \$40 million profit center. Also at Grace I wrote a 5 year plan of action setting up goals for west coast expansion through selective market planning and acquisition studies, while at GE, I was part of a management team putting together a 10 year long range planning program.

Academically, I am an honor BS graduate in Marketing and Business, minor in Chemistry, some Spanish, German and French, University of Michigan, attended Law School there and have an MBA from Hamilton College. I am in excellent health and appearance, live in Los Angeles, happily married with no children, honorably discharged from the Army and have no objection to travel here or abroad.

I am a firm believer in the correlation of corporate development and planning to the marketing function and to this end can make the following contributions:

1. Render strong motivation and leadership to associates and customers.
2. Establish effective lines of communication with other functions resulting in timely and accurate recommendations to top management including emphasis on long range planning.
3. Get along well with most all types of people.
4. Develop meaningful corporate plan of action involving selective market planning, new venture analysis, internal development and divestment.

*May
get me to dictate this week.*

October 22, 1968

Mr. Charles F. Peterson
20471 A Seven Seas Lane
Huntington Beach, California 92646

Dear Mr. Peterson:

Your letters to Mr. K. H. Olsen have been forwarded to me for reply.

I would very much like to receive a copy of your detailed resume and when I have had an opportunity to study this, I would be happy to arrange a meeting at some mutually convenient time.

As you requested, I am enclosing a copy of our Annual Report.

Please accept my apologies for the delay in responding to your interest in Digital Equipment Corporation. I look forward to reviewing your resume.

Sincerely,

Theodore G. Johnson
Vice President, Sales

TGJ:mr

Enclosure: Annual Report

cc: Mr. K. H. Olsen

Original letter was sent to Ed for reply.

October 3, 1968
20471 A Seven Seas Lane
Huntington Beach, Calif. 92646
714 5361961

Mr. K. H. Olsen, President
Digital Equipment Corporation
Maynard, Mass.

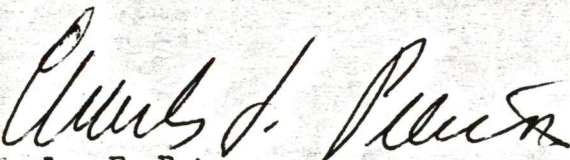
Dear Mr. Olsen:

May I please ask to hear from you regarding my September 11 letter, along with an Annual Report? You asked me to contact you about a meeting. I am sure the letter must have been received by your office as it was not returned by the post office.

Also, yesterday, the people who referred me to you asked what had developed.

Many thanks.

Sincerely,


Charles F. Peterson

CC Mr. R. W. Farnsworth

Ted
K. H. OLSEN

9/30/68

Marg:

This should have been taken care of sooner. It came in while I was on vacation, and I just came across it this morning.

Ken doesn't remember a telephone conversation (or anything) with this man, so would like Ted to take care of it for him. It's funny he didn't send in his resume to refresh Ken's memory.

Elsa

P. S.

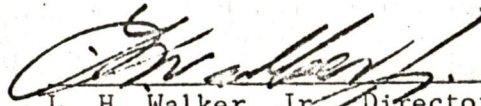
Please send me a copy of all correspondence for file.
DIGITAL EQUIPMENT CORPORATION

12-24
Original to Norm Daelling

QUESTIONS AND ANSWERS PERTAINING TO
RFP FOR COMPUTER SYSTEMS FOR
PENNSYLVANIA STATE COLLEGES

Addendum No. 1
December 13, 1968

1. Page 8, Paragraph III - 6 of RFP - BASIC
Page 5, Question and Answer No. 25 of Q and A Basic
 - Q. Is BASIC language developed by the Dartmouth College in its interactive form a requirement? It is doubtful that any manufacturer has a BASIC compiler available at this time for general sale.
 - A. The Commonwealth waives BASIC language as a requirement for RFP. However, a BASIC compiler or a similar simplified problem language compiler is desirable.
2. Page 10, Paragraph IV - 3.a. Software Manuals.
 - Q. Is a separate set of manuals required for each of the ten copies of the proposal?
 - A. No. One set of manuals is sufficient.
3. Page 6, Paragraph III - 5 - Equipment
 - Q. Would it be possible to substitute "Hardware Mult/Divide Floating Point Feature" for the Mult/Divide Circuitry called for in the RFP? Would this substitution, if allowed, have to be marked as an exception, as it really contains Multi/Divide Circuitry?
 - A. This feature is acceptable only if it is a part of the physical circuitry that performs Mult/Divide Operations without the addition of sub-routines to carry out the instructions.



L. H. Walker, Jr., Director
Bureau of Management Information Systems

Original to Ed Schwartz 12/18
(ans. not necessary)

CASE LEGISLATIVE REPORTS
P. O. Box 1174
Santa Fe, New Mexico

87501

december 12, 1968

Digital Equipment Corporation
146 Main Street
Maynard, Massachusetts

Gentlemen:

We have been reporting the New Mexico Legislature since 1947. The Case Legislative Report has three parts. First, a daily report when the Legislature is in session, which provides an analysis of each bill introduced that day, all amendments adopted by the Legislature, and the actions of each house and each committee as reported in either house.

The second part of the service starts near the middle of the session when we begin a twice a week locator which, toward the end, is speeded up to every other day, showing the exact location of every bill in the Legislature as of that date. This is followed up after the Governor has completed signing bills by a complete report on the disposition of each bill.

The third feature is furnishing a complete set of printed bills.

Our charge for the complete service for the session is \$300.00 per subscriber, which includes airmailing our reports, if that is faster, but contemplates regular mail for the printed bills. Should you desire the printed bills by airmail, you will be charged the actual additional airmail cost.

If you do not desire the printed bills or the locator, we will send you the daily reports for \$185.00 for the entire session.

The report virtually eliminates the necessity for follow-up service on specific bills. However, should you wish telephone or telegraph service, we can arrange that at a nominal additional cost.

We shall be happy to answer any further questions, and we certainly hope that we may be able to serve you during the coming session.

Very truly yours,
Paul Case
Paul Case

SHARP & OUGHTON
Management Consultants

512 GREEN BAY ROAD
KENILWORTH, ILLINOIS 60043
(312) 256-1500

December 2, 1968


Gentlemen:

Our office is in need of more complete information about your company's microfilm products and services.

Our consulting programs bring us into close contact with every kind of industry participant. This current study of "The Data Filming Market" is an excellent case in point. Keeping us up to date on details regarding your company's offerings can only result in mutual benefit. We are asking, therefore, for the kind of information found in price lists, cost comparisons, application case histories, manuals, and statements of customer policy. We would also like to have the name of your nearby representative.

Thank you very much for your cooperation.

Very truly yours,



SHARP & OUGHTON, Inc.

W. J. Kearley/m

12/10 Originals and Enclosure to Bob Callinger

SHARP & OUGHTON

Management Consultants

512 GREEN BAY ROAD
KENILWORTH, ILLINOIS 60043
(312) 256-1500

December 6, 1968

Mr. Kenneth H. Olsen
President
Digital Equipment Corporation
146 Main Street
Maynard, Maryland 01754

Dear Mr. Olson:

Your interest in the enclosed proposal is especially appropriate and timely.

This proposal describes a vital business planning study in the field of computer-generated microfilm. Sharp & Oughton is making this study available on a co-sponsored basis. The study places major emphasis upon the measurement of demand in the emerging markets. It will also include an examination of the profit potential for properly equipped service centers.

The program content and design is such that it will satisfy the needs of several kinds of participants: in-house systems planners, printing and composing shops, and EDP and film processing service organizations. Manufacturing suppliers like yourself are also showing great interest in this program. They very likely see in it a well-timed, thorough, yet inexpensive measure of a growth market with active new-product efforts and changing competitive trends.

Sharp & Oughton has earned an excellent name in studies of this kind. We are confident that you, as a participating co-sponsor, will find in "The Data Filming Market" our traditional thoroughness, objectivity and decision orientation.

We invite your company's participation in this timely program, and we welcome the opportunity to discuss any of its aspects with you and your personnel.

Very truly yours,


SHARP & OUGHTON, Inc.

W. J. Kearley/m
Enclosure

dec**INTEROFFICE
MEMORANDUM**

DATE 5th December, 1968.

SUBJECT

TO Ken Olsen *↳ TO*
Harry Mann
Win Hindle
Stan Olsen
Nick Mazzaresse
Pete Kaufmann
Ted Johnson

FROM J - C Peterschmitt

You will be approached for information by a Mr. Williams, Managing Director of Computer Consultants (actually a one man show) who is publishing Computer Installation Reports. He may also be using this information for many other purposes (legal or illegal). He enjoys a bad reputation in Europe. Please make sure that no information is given to him; as we refused to give him information he said that he would approach our top Management in the States.

John - Olande

C - Ed Johnson
Nick Mazzarese

ASEA

ALLMÄNNNA SVENSKA ELEKTRISKA AKTIEBOLAGET

Västerås, December 5, 1968

Copy for

Mr. Kenneth H. Olsen
President
Digital Equipment Corporation

MAYNARD Mass. U.S.A.

RECEIVED
DEC 9 - 1968
KENNETH H. OLSEN

Your reference

Our reference
FC

Dealt with by
Mr. H. Wallgren

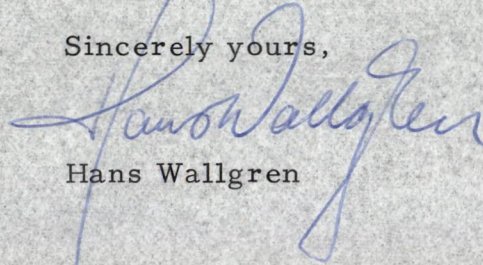
Dear Mr. Olsen,

Thank you very much for the visit Åke Rullgård and I paid to your company last week. I hope you will convey our regards to Messrs. Johnson, Massarez and Danzig.

Thank you also for your letter of November 27th. You are of course very welcome to see us when you visit Scandinavia next time. Please let me know in advance.

Merry Christmas and a Happy New Year.

Sincerely yours,



Hans Wallgren

Bl. 828 a 3.68 20 000 80510

THE HEAD OFFICE Västerås Sweden

Postal address ASEA S-721 83 VÄSTERÅS Codes Western Union and Private
Telegraphic address ASEA, Västerås

Telephone Västerås (021) 11 00 00

Telex 4720 (asea, vstraas)

2 copies of letter and resume sent to SCO

WEH
NIM

CAMCO

COMPUTER SYSTEMS
DIVISION

INCORPORATED

December 2, 1968

RECEIVED

DEC 4 - 1968

KENNETH H. OLSEN

Mr. Kenneth Olsen
Digital Equipment Corporation
Maynard, Massachusetts 01754

Dear Ken:

My Computer Systems Division was cut-up and absorbed into the Camco organization two weeks ago, before changes I had made could entirely correct the bad loss situation. I have many achievements to show, but my position as Division Manager here is gone, so I will be relocating as soon as possible.

Ken, we have never discussed a position at Digital, but as I carefully review my career objectives in the light of all past experience and goals for the future, it becomes obvious that we should at least explore the possibility now.

If you are willing, I would appreciate the opportunity to discuss how I might contribute. A resume is enclosed to bring you up-to-date on my experience, achievements and career objectives.

You will be interested to hear the story of Camco's digital computer development for oil field applications. I look forward to seeing you.

Sincerely,



William H. Seaver
711 Bison Drive (home)
Houston, Texas 77024
713/497-4997

WHS/sw

Enclosure

MASSACHUSETTS INVESTORS TRUST

200 BERKELEY STREET

BOSTON, MASSACHUSETTS 02116

TRUSTEES

KENNETH L. ISAACS, CHAIRMAN
WILLIAM B. MOSES, JR., VICE CHAIRMAN
JOHN L. COOPER
GEORGE K. WHITNEY
HARRISON F. CONDON, JR.

ADVISORY BOARD

THOMAS D. CABOT
GEORGE E. BATES
JOHN L. GARDNER
JOHN LOWELL
DWIGHT P. ROBINSON, JR.

November 29, 1968

Mr. Harry S. Mann, Treasurer
Digital Equipment Corporation
146 Main Street
Maynard, Massachusetts 01754

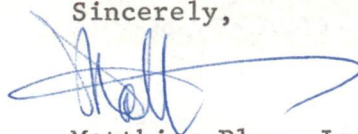
Dear Harry:

This will confirm the arrangements for Dick Williams, Chairman, and Bill Schaub, Financial Vice President, of Scope Incorporated to meet with you and Mr. Olsen on January 16th at your offices in Maynard. I think you will find Dick to be an extremely able and unusually competent individual in translating mathematical principles to electronics, and I hope that this visit will be of mutual interest.

I am taking the liberty of enclosing a copy of the most recent prospectus of Scope so that you may form a more definite impression of that company's competences.

Look forward to seeing you then, In the interim, my best wishes for the Holiday Season.

Sincerely,



Matthias Plum, Jr.

RECEIVED
HARRY S. MANN'S OFFICE
DATE 12-2-68
ACTION _____
INFORMATION
OTHER _____

12-2-68
asked Elson
if meeting will
still be held.

Enc.



12/4 Ed Schwartz - "Should we be interested in this?"

SECTION ON LAW AND COMPUTER TECHNOLOGY

KHO



THE WORLD PEACE THROUGH LAW CENTER

LE CENTRE DE LA PAIX MONDIALE PAR LE DROIT
EL CENTRO PARA LA PAZ MUNDIAL MEDIANTE EL DERECHO

400 HILL BUILDING, WASHINGTON, D. C. 20006 U.S.A.

TELEPHONE: (202) 347-7992

November 29, 1968

Mr. K. H. Olsen
Digital Equipment Corporation
146 Main Street
Maynard, Massachusetts 01754

Dear Mr. Olsen:

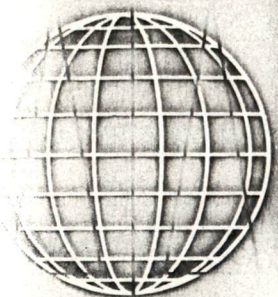
The World Peace Through Law Center will, at the Bangkok World Conference on World Peace Through Law, September 7-12, 1969, introduce members of the legal profession from 127 nations to the application of the computer to government and to law.

At the Geneva World Conference on World Peace Through Law in 1967, over 3,000 eminent lawyers, jurists, law professors and judges attended the first World Exhibit on Computers and the Law. The interest generated at Geneva resulted in the creation of the Section on Law and Computer Technology of the Center, which brings together those interested in law, the computer and government worldwide. The Section publishes the monthly journal, Law and Computer Technology a copy of which is enclosed.

The 1969 Bangkok World Conference will bring together leaders in EDP for Government from nations, states and municipalities in the United States and from provincial, local and national governments throughout the world, to meet with lawyers and judges interested in computers and all aspects of governmental operation.

At Bangkok, the Center will present a second computer hardware exhibit. Participation by over 25 exhibitors at Geneva is indicative of the interest of the EDP community in this endeavor.

I would like to invite Digital Equipment Corporation to arrange a presentation or exhibit for the Bangkok World Conference.



ORBIS EX JURIS

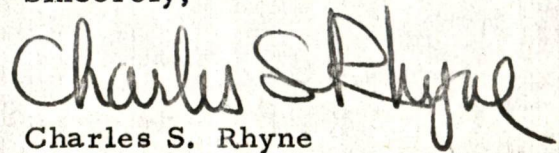
- Robert Brunois
Chairman
France
- Stephen J. Skelly
Vice Chairman
Canada
- David
Vice Chairman
France
- Carlos A. Dunshee de Abranches
Vice Chairman
Brazil
- Sam S. Rhyne
Secretary
- Council Members:
 - Alida M. Bos
Netherlands
 - Henry C. Carnegie
Switzerland
 - Jan Hellner
Sweden
 - Edouard Houtart
Belgium
 - Louis Pettiti
France
 - Madeleine W. Losee
United States
 - Stephen E. Doyle
United States

K. H. Olsen
Page Two
November 29, 1968

The interest of Center members, of the legal profession both in the United States and abroad, and of the EDP community in the application of computer technology to government should be convincing evidence of the value of participation in this Exhibit.

If I can provide further information, please let me know.

Sincerely,


Charles S. Rhyne

cjh

Enclosure

FIRST
MANHATTAN
CO.

MEMBERS NEW YORK STOCK EXCHANGE 30 WALL STREET, NEW YORK, N. Y. 10005 TELEPHONE: 344-2525

November 27, 1968

*Invited
to Security
Analyst Meeting
on 1-29-69*

Mr. Kenneth Olsen, President
Digital Equipment Co.
146 Main Street
Maynard, Massachusetts

Dear Mr. Olsen:

I would like to introduce myself to you. My name is Irwin Lieber and I am a research analyst for First Manhattan Co., 30 Wall Street, New York, New York. My field of specialization is electronic and computer securities. Prior to being employed by First Manhattan, I was employed by Honeywell EDP for 5 years as a section manager in charge of memory development.

As you may know, our firm's research effort concentrates on doing thorough analysis of companies primarily for institutional customers. I would like to do a detailed study on Digital Equipment in the near future. To accomplish this, it would be greatly appreciated if you could arrange for me to visit with you for a short period of time to go over Digital Equipment's whole corporate picture. Also, I would appreciate if you could arrange for me to visit with you and some of your key people.

I realize that this is not a normal request but if you could accomodate us it would be very helpful.

I am enclosing two copies of reports that I have written on companies with which you are familiar.

Sincerely,

Irwin Lieber

Irwin Liëber

IL:vd
Enclosures

July 19, 1968

ELECTRONIC MEMORIES

Price	\$40 Bid
1969 Est. Earn.	\$1.85-\$2.00*
1968 Est. Earn.	\$1.15*
1967 Earnings	\$1.02
Dividend	None

* After 10% surcharge. 1968 estimate excludes any contribution from Caelus. However, 1969 estimate includes contribution from Caelus.

Capitalization (12/31/67)

	(mil)	%
4 3/4% Convertible Debt	\$ 2.3*	23
Equity	7.8**	77
	<u>\$10.1</u>	<u>100%</u>

* Convertible into 59,313 shares at \$39.03 per share.

** Represented by 1,155,173 shares.

Summary and Recommendation

We regard Electronic Memories as an attractive speculation for the following reasons:

1. Its basic computer memory business remains strong. Net income from this business has grown at a 20% rate since 1964. Core memory prices have stabilized in the past two years. The company has developed plated wire which we believe is the next step along with core memories in computer memory development. Large Scale Integration and thin film memories, we think, are at least five years away and even at that time, their impact on larger computer memories is questionable.

2. With the sale of the Pace Communications division of Wems earlier this year, profit margins for that division appear to be stabilizing at

© Copyright by First Manhattan Co. 1968

higher levels. The development of thin film hybrid circuitry at Wems could favorably affect revenues and earnings. Most of its government contracts are long-term in nature and not dependent on the Vietnam war.

3. EM should share in the disc pack market through its investment in Caelus Memories. Since Caelus has total in-house capability and the disc pack production process is highly automated, this business should be a high margin operation. Even with pressure on disc pack prices, we estimate Caelus could contribute as much as \$.65 per share (after surtax) to Electronic Memories' earnings in 1969.

4. Through a subsidiary, Anadex, and a recent investment in Zehntel, EM has longer-term exposure in the growing industrial process control market. Also, EM has made two small acquisitions in 1968 which appear to complement existing operations. Management is interested in pursuing additional acquisitions which might add to earnings per share.

5. Our study indicates a very sharp gain in earnings in 1969, largely reflecting a successful entry into the disc pack market. Longer run, we believe Electronic Memories is engaged in businesses which, combined with a capable management team, should allow the company to record above-average growth.

Electronic Memories (43)

(I. Lieber)

The Company announced it has acquired Midwest Circuits Inc. for an undisclosed amount of stock. Midwest is a printed and multi-layer circuit board manufacturer which reported net sales for the year ending March 31, 1968 in excess of \$3,000,000. Management believes that Midwest will make a modest contribution to per share earnings in 1968. Our estimate for Electronic Memories earnings continues to be \$1.15 per share for 1968 and \$1.85-\$2.00 per share for 1969.

The Company has granted a non-exclusive license to Scientific Controls Corporation, Dallas, covering the use of EM proprietary core memory system design techniques in the SCC Model 4700 computer and future general purpose computers. At the same time, Scientific Control has given Electronic Memories a contract in excess of \$2 1/2 million for core memory stacks to be delivered by EM over a three-year period.

EM plans to make the same license and product agreement available to other customers and discussions toward this end are currently in process.

We continue to regard Electronic Memories as an attractive speculation.

Operations

(1) Electronic Memories

The parent company accounted for about 60% of total revenues in 1967, equivalent to \$12.5 million.

The memories that the company develops and builds are used for the majority of digital computer applications because of their speed, versatility, reliability and low cost. Products consist of cores, core memory stacks, core memory systems and a most recent development, plated wire. Marketing efforts are directed at the sale of core memory stacks and systems, high margin businesses for EM. Core memories have been a very profitable area for Electronic Memories even though some other companies in this field have had difficulties. We believe that this has been due to good management control and greater engineering capabilities than other manufacturers (major competitors are Fabritek, Ferroxcube, Indiana General, Ampex Computer Products and Lockheed Electronics.) Recently, the sales staff has been successful in penetrating new markets in both the commercial and military fields of data processing. Two managers from Honeywell's Computer Control Division have been recently hired as Vice President of Commercial Memory Operations and Marketing Manager of Commercial Memory Operations. These men have excellent past records at Honeywell and IBM and are believed to have already contributed to EM's progress, in part by allowing top management to spend more time on other important developments.

The company has developed plated wire which we believe will be the next step in memories in conjunction with core memories for the non-IBM computer manufacturer. Interest has been expressed by the military and several major computer manufacturers.

(a) Effect of Thin Films and Integrated Circuits on Memory Technology

Thin films have been hailed as an ideal memory component for the last ten years. Thus far it has not been feasible to successfully build large memories using thin films due to high costs, interconnection problems and poor reliability. We do not expect any significant breakthrough in this regard over the next couple of years.

We doubt that integrated circuits will be used as memories (known as LSI) in quantity during the next five years. The use of LSI in scratch pad memories, buffer memories and read only memories in the near future is likely. However, this area is very low volume compared to large main memories. Some of the problems that LSI has in its use as a large main memory are:

1. The basic memory module is relatively small (4000 to 32000 bits) compared to core memories causing interconnection problems (combining all the modules together to form a large memory).

2. Integrated circuits suffer from volatility. Power can't be removed from portions of the circuit which are not active. No one can afford to lose a million bits of data due to a power failure. This requires either back up memory or standby power which increases power dissipation, cost and physical size requirements for LSI memories.

Another advertised advantage that LSI memories have over core memories is speed of operation. But as shown in the design of the IBM 360/85 computer, efficient use of buffer memories in conjunction with main core memories through the use of software techniques increases the effective operating speed of the main core memory. The buffer memory (integrated circuits) in the Model 85 is about 12 times faster than the main core memory. The buffer is designed to take advantage of the fact that the central processor of a computer usually seeks data stored in memory locations adjacent to each other. Frequently it will request the same data many times in succession. In the Model 85, each time the central processor calls for data from core storage, it asks for at least one and up to 16 sections of information. Core storage, however, anticipating the central processors future needs, always sends a block of 64 sections of information. These 64 sections of information content are sent to the buffer storage where it is stored. The central processor then can work directly with the data in the buffer memory instead of having to go to slower main core storage. This has the effect of speeding up the information flow out of core memory by a factor of ten which puts it in the speed region that LSI memories operate.

Major present customers for Electronic Memories in this area are R. C. A. (Spectra 70 computers), Digital Equipment Corporation (PDP computers), Honeywell (4200 and 8200 computers), and the Department of Defense (systems used in satellites and various airborne computers). It is doubtful that these OEM's will further integrate vertically to produce core memories. Core memory manufacturers have been able to reduce prices substantially enough to make it uneconomical for them to do so.

During the second quarter of 1968 the company acquired the core division of Pentronix Inc. This division was made up of ex-Univac people skilled in the manufacturing process of producing cores. This acquisition was made to add to the present production capability of cores to satisfy the large demand for memory stacks and systems that Electronic Memories is experiencing.

As can be seen from the past revenues and earnings growth shown below, management has achieved a good record in the memory business.

Income Statement (Electronic Memories Inc. only)

Years ended December:

	<u>1967E</u>	<u>1966</u>	<u>1965</u>	<u>1964</u>	<u>1963</u>
Sales (000)	\$12,500	\$9,245	\$6,702	\$4,606	\$2,369
Pre Tax Income (000)	1,440	1,074	874	782	322
Margin	11.5%	11.6%	13.0%	17.0%	13.6%
Net Income (000)	\$ 778	540	454	388	156

The steady decline in profit margins since 1964 was due to pressure on prices of memory products and increased costs in other areas. The desire to achieve a faster growth rate was a prime factor in management's decision to diversify. As mentioned above, prices have now stabilized on core memories and are low enough to make it unattractive for any additional OEM's to integrate vertically. Therefore, based on the projected growth of the total computer industry and the fact that new computers are using a greater number of larger memories, we believe that the parent company can grow at a 20% rate with pre tax margins in the range of 10-12%. Possibly higher margins can be obtained through (1) the use of more automated manufacturing techniques and (2) wide spread use of plated wire as a memory device. (Labor costs associated with the production of memory stacks are reduced with the use of plated wire rather than cores.)

(2) WEMS

WEMS was acquired by Electronic Memories in December, 1967 and has established the company as the leading producer of electronic welded modules and a producer of hybrid circuitry. WEMS modules, known for their reliability under severe environmental conditions, are used in a broad range of military and aerospace programs such as Apollo, Polaris, F-111 and the X-15. It is now bidding for the Poseidon program. WEMS engages in potting and encapsulation of

modules and integrated circuits which are also used in military applications. (It is necessary for circuitry used in military and space applications to be encapsulated due to the severe environmental conditions it encounters. This is true whether the circuits are integrated or not.)

A potentially important growth area could be in thin film hybrid circuits where WEMS is active. The market for hybrid circuitry has substantial growth potential in advanced military, industrial and commercial products. This development could have great significance for the memory divisions of EM. Due to the high power and high speed requirements of memory circuits, hybrids rather than integrated circuits are necessary in this application. This would then give EM's core memory divisions internal capabilities that now are vendor supplied.

Last March, WEMS sold its Pace Communications division which did not fit with the company's product lines and moreover was marginally profitable.

Based on present in-house contracts which are long-term in nature, we believe this division can grow at a 15% rate for the next several years. Profit margins which recovered in 1967 should improve as a result of the sale of the Pace Communications division.

(3) Caelus Memories

Caelus develops, manufactures and markets disc packs. In the summer of 1967, Electronic Memories executed an agreement with Caelus Memories Inc. for the purchase of \$1,800,000 of Caelus convertible secured notes due December 31, 1972. The notes are convertible in whole or in part prior to maturity. Conversion of the entire issue would result in EM owning 66 2/3% of Caelus outstanding capital stock. Additional agreements enable EM to acquire another 13 1/3% of the stock between March 31, 1972 and February 28, 1973.

(a) General Discussion of the Disc Pack Market

Demand for six high disc packs is growing month by month as is shown in increased shipments by companies like Caelus and Memorex. However, we do not believe that present IBM users are short of packs. We believe that delivery of packs by additional manufacturers partly explains IBM's reduction of delivery time from nine months to two weeks. Another factor may be that many users are waiting for the eleven high disc pack to be developed and marketed. Therefore, we believe that IBM's previously publicized backlog was somewhat misleading.

As more disc drives are delivered to the computer user and as more programmers learn how to effectively use packs, the growth of pack shipments will accelerate. As the time sharing and instantaneous response market grows, the disc pack market will increase simultaneously. Taking into account all of the above, we believe that demand for disc packs will increase rapidly, but that there may well be a lag while greater user experience is acquired.

As far as disc pack prices are concerned, IBM and the rest of the major manufacturers have held their price at approximately \$490 per pack. A small private company has recently announced a price cut to \$300 at the DPMA conference in Washington. While this company may be able to cut its prices, it has not yet been able to deliver any reliable product in quantity. In fact, we do not believe it has the technical capabilities that IBM, Memorex and Caelus possess in disc pack technology. Price cuts like this have occurred in the past by marginal producers of magnetic tape, but such companies failed to deliver in production quantities. We do believe that some price adjusting will take place, but this will have to come from IBM since it controls at least 90% of the disc pack market. Also, there will be price discounts on large volume contracts with OEM's, distributors and leasing companies by the non-IBM producers.

IBM's recent announcement that it would not be responsible for any damage done to the disc drives by other manufacturers' disc packs was welcomed by companies like Memorex and Caelus because of the effect it will have on marginal producers. Packs manufactured by Caelus and Memorex are not known to have caused any damage to IBM disc drives.

Although Electronic Memories' investment in Caelus must be considered a speculative risk, we believe that Caelus will be successful in the disc pack market. The key people at Caelus were important factors at IBM's disc pack manufacturing facility in San Jose. They have the technological and production experience necessary to build a technically reliable disc pack in production quantities. And along with Electronic Memories' management they were able to recognize that the disc pack market would not explode as quickly as some of their competitors thought. Therefore, there isn't very much idle capacity at Caelus. In fact, Caelus is now expanding its existing facility to meet increased demand. Company engineers are also working on next generation production equipment which, if successful, will further increase capacity in 1969.

Reliability of Caelus packs is best illustrated by the shipments of production quantities to R.C.A. Caelus is the only company besides IBM to ship production quantities to an OEM company. We believe that it is selling these packs at a high volume discount of approximately 20% off list on a long-term contract basis. Caelus is also attempting to complete a similar deal with General Electric.

Further, the company is the only one to offer a 3 year warranty on its disc pack.

As far as marketing is concerned, Caelus' organization is data processing oriented. At present, its direct salesmen concentrate on servicing end users and the company's large distributor organization. OEM and private label (Business Supplies Corporation and Tab Products) sales are handled by management. Both the direct sales force and distributor organizations are currently being expanded and the company plans to continue this expansion into 1969.

At present Caelus has its own leasing plan for packs but it is in the final stages of completing a plan with a major leasing company. This plan will allow Caelus to account for its leased packs as direct sales.

Thus far Caelus has delivered only six high disc packs. The next requirement in disc pack technology will be the eleven high pack. The latter have twice the bit packing density that the six high packs have. The coating surface for the eleven high packs is one-half as thick as that for the six high; therefore it is technically more difficult to manufacture. Management has stated that Caelus will be able to deliver reliable production quantities of the eleven high pack this fall. We believe this is probable because substrates have been prepared and prototype quantities of the eleven high pack have been successfully produced.

During the first quarter of 1968, Electronic Memories acquired Acroscope Engineering Inc., a privately held company engaged in precision grinding, lapping and polishing. Acroscope's skill in this field, and in particular the finishing of aluminum substrates used in disc and file memories, adds both vertical and horizontal integration to the company. It gives Caelus total in-house capability for manufacture of its disc packs. Other companies that use Acroscope's capabilities are Librascope, Scientific Data Systems, National Cash Register and Burroughs. As both the disc pack and disc file markets grow, Acroscope's revenues and earnings should grow with them. Management expects this area will progress at a 50-60% rate for the next few years starting from a small base.

We believe Caelus Memories revenues in 1968 will be about \$4-5 million with a minor addition to total Electronic Memories profit. For 1969, assuming a conservative price range for the six high pack between \$300 and \$400, and a significant contribution from the eleven high pack, we estimate revenues at about \$11 million for Caelus. Since it has total in-house capability, and the disc pack production process is highly automated, we believe margins on the order of 20% before taxes can be achieved.

(4) Anadex and Zehntel

Anadex was acquired by the company in September, 1967. It manufactures high quality electronic process control instruments. Our interest in Anadex lies with the vertical integration that it offers Zehntel, a company Electronic Memories has an option to acquire. Under the terms of the option, EM loaned Zehntel \$255,000. EM acquired the right to buy the company after November, 1969 in exchange for stock, the number of shares contingent on Zehntel's profitability.

Zehntel's management is composed of engineering people who originally were with Beckman Instruments. Its business is basically process control by electronic and digital instrumentation. Its concept is not to revolutionize an existing plant but to incorporate digital techniques for measurement accuracy, uniformity, reliability and control. They have built standardized building blocks for such evolutionary systems. This is basically the same technique that was used by Digital Equipment Corp. when it started offering small scientific computers.

Zehntel and Anadex have combined their marketing and certain engineering efforts. Anadex' product line uses integrated circuitry and standard building blocks. Zehntel has sold process control systems using Anadex products this year to several companies including Kaiser Aluminum. The system at Kaiser is used in aluminum can making machines. The combination of Anadex and Zehntel is expected to do about \$2-3 million in sales this year. It is expected to be profitable. Management is optimistic about growth of future sales and the potential of obtaining high profit margins.

Acquisitions

The company is seeking additional acquisitions in the fields of:

- (a) data processing handling and retrieval;
- (b) process control (includes medical electronics as well as industrial controls).

Financial1) Earnings estimates

	(millions)		
	<u>1967</u>	<u>1968E</u>	<u>1969E</u>
<u>Sales</u>			
Electronic Memories	\$12	\$15	\$18
WEMS and Anadex	9	11	13
	<u>\$21</u>	<u>\$26</u>	<u>\$31</u>
Pre Tax Margin	10%	11%	11%
Pre Tax Income	\$2.1	\$2.9	\$3.4
Tax Rate	46%	52%	52%
Net Income	\$1.2	\$1.4	\$1.6
Earnings per share without Caelus	\$1.02	\$1.15	\$1.35
Caelus Memory Sales	-	\$5	\$11
Net Income	-	#	\$1.1
EM Portion	-	#	\$0.7
Per EM Share	-	#	\$.60
Total Consolidated Earnings Per Share	\$1.02	\$1.15	\$1.95
Assuming Conversion of Debentures	\$1.02	\$1.14	\$1.90

In 1965, we assume Caelus will earn a minor profit. However, its management has not yet determined whether it will consolidate Caelus by converting its debenture investment.

2) Working Capital -- 12/31/67 (millions)

Current Assets	\$11.4 (includes cash items of \$2.6)
Current Liabilities	<u>(4.3)*</u>
Working Capital	\$ 7.1

* Includes notes payable of \$0.6

3) Long Debt -- 12/31/67

Convertible Debt \$ 2.3 million*

* Convertible at \$39.03. At a time when Electronic Memories is earning \$2.00 per share, full conversion would reduce per share earnings by about 2%.

4) Statement of Funds

(millions)

	<u>1967</u>	<u>1968E</u>
Net Income	\$1.2	\$1.4
Depre. & Amort.	<u>0.6</u>	<u>0.7</u>
Cash flow	1.8	2.1
Increased Debt	2.3	
Increased Common	<u>0.6</u>	
	4.7	
Capital Expenditures	(0.7)	(0.7)
Investment Loans	<u>(1.4)</u>	<u>(0.6)</u>
Change in Working Capital	+2.6	+0.8

Note: The above estimate does not assume consolidation of Caelus.

IRWIN LIEBER

12/5
c - Lowell Henize
Nick Mazzarese



THE NATIONAL CASH REGISTER COMPANY

DAYTON, OHIO 45409

November 26, 1968

RECEIVED

DEC 5 - 1968

KENNETH H. OLSEN

Mr. Kenneth H. Olsen, President
Digital Equipment Corporation
146 Main Street
Maynard, Massachusetts 01754

Dear Mr. Olsen:

We know that you share our disappointment that our proposed purchase of PDP-8L Computers did not materialize as anticipated.

As you know, we selected the PDP-8L as the new processor for our Series 500 in order to strengthen and increase the marketable life of this product line. Our preliminary cost studies and market forecasts indicated that this plan would enable us to meet our objectives.

However, after all phases of the venture were carefully evaluated from a cost standpoint, it was determined that the corporate profit would not materialize until the end of the time frame designated as the marketable life of the Series 500. On this basis, we had no logical alternative but to continue with the existing processor.

We are very appreciative of the time, effort, and cooperation which we received from your people in all phases of this project. Those at NCR who were assigned to this project were particularly impressed by the high professional caliber and competence of all your staff. Particular thanks to Mr. Lowell Henize of your Dayton branch for his fine cooperation.

May we look forward to the continuance of the fine relations established between Digital and NCR, and hope that in the future we may find an area of mutual profitability for both corporations.

Very truly yours,

C. L. Keenoy
Vice President
and Group Executive
Domestic Marketing

Y. L. H. Olsen

K. H. OLSEN

12/19/68

Larry:

If you feel a reply is necessary, please answer this letter for Ken, and send me a file copy. Thanks for your help.

Elsa

R. PYLE *A*

Any interest?

Larry

NO. \$7500 seems a little steep
DIGITAL EQUIPMENT CORPORATION
to learn about how we spend our money. Pyle

*Enclosure in file marked
"Letter Enclosure"*



INTERNATIONAL DATA CORPORATION
60 AUSTIN STREET
NEWTONVILLE, MASSACHUSETTS
02160 □ 617-969-4020
November 25, 1968

Mr. Kenneth Olsen, President
Digital Equipment Corporation
146 Main Street
Maynard, Massachusetts 01754

Dear Mr. Olsen:

A recent issue of EDP Industry Report, the computer industry newsletter published by International Data Corporation, estimated that U.S. computer users spent nearly \$4 billion for software during 1967. This expenditure is primarily for programmers' salaries and associative overhead, but does include the money spent for proprietary software packages and outside programming service organizations. The total spent for software, EDP/IR projects, will roughly double by 1972, with the total amount paid to independent suppliers growing at an even faster pace.

Checking into these outside expenditures for software, IDC conducted a survey showing that, since 1967, users of proprietary software packages have doubled in number. This segment of the software marketplace is expected to account for \$350 million to \$450 million in business during 1972.

How is this money being spent? On what? By whom? To answer these and many other associated questions, the International Data Corporation announces an extensive market research survey designed to develop a specific yet broad data base which describes current computer applications, planned applications, the programming effort represented by these applications, and the types of equipment directly related to specific applications.

In carrying out this survey, IDC will utilize the techniques that proved so successful in our recent survey of the data communications terminal equipment marketplace. During this survey, we obtained detailed questionnaire responses from over 2500 computer users throughout the United States.

As was the case with the DCT survey, the applications survey now being announced is designed around a well-researched, quantitative information data base as its keystone. All sponsors of this survey will receive not only a narrative analysis of our findings; they will also be provided with a processable file of statistical information on magnetic tape. With this information, each sponsor can conduct his own evaluation and

analysis, weighing the factors which he feels are most important to his individual development and expansion plans in the applications/programming aspects of the computer marketplace.

With the statistical and detailed data base we have described, each sponsor will be able to analyze -- independently -- such areas as:

- + the relationship of applications to specific types or configurations of computers;
- + applications within industries;
- + computer utilization within types of applications;
- + relationships of applications to programming languages;
- + future development of new application areas within specific industries;
- + the extent of in-house programming capabilities for class of computer and/or by industry;
- + amount of interest in purchasing software in a pure form;
- + determination of support requirements for new product lines;
- + possible relationships of equipment with particular applications within particular industries.

Once you have reviewed the attached proposal, I am confident you will agree that the cost of sponsorship for this project is extraordinarily reasonable in view of the extensive information which will become available to Digital Equipment. A sponsorship application is enclosed for your signature and return. Naturally, if there are any questions which I might answer about this proposal, or if there are any clarifications which I can provide, please do not hesitate to give me a collect call.

Sincerely yours,



M.F. Eveleth, Jr.
Vice President-Marketing

cc: Ken Lill

12/19 Orig. to Harry Portner
(reply not necessary)



INTERNATIONAL DATA CORPORATION
60 AUSTIN STREET
NEWTONVILLE, MASSACHUSETTS
02160 ☐ 617-969-4020

November 25, 1968

Mr. Kenneth Olsen, President
Digital Equipment Corporation
146 Main Street
Maynard, Massachusetts 01754

Dear Mr. Olsen:

A recent issue of EDP Industry Report, the computer industry newsletter published by International Data Corporation, estimated that U.S. computer users spent nearly \$4 billion for software during 1967. This expenditure is primarily for programmers' salaries and associative overhead, but does include the money spent for proprietary software packages and outside programming service organizations. The total spent for software, EDP/IR projects, will roughly double by 1972, with the total amount paid to independent suppliers growing at an even faster pace.

Checking into these outside expenditures for software, IDC conducted a survey showing that, since 1967, users of proprietary software packages have doubled in number. This segment of the software marketplace is expected to account for \$350 million to \$450 million in business during 1972.

How is this money being spent? On what? By whom? To answer these and many other associated questions, the International Data Corporation announces an extensive market research survey designed to develop a specific yet broad data base which describes current computer applications, planned applications, the programming effort represented by these applications, and the types of equipment directly related to specific applications.

In carrying out this survey, IDC will utilize the techniques that proved so successful in our recent survey of the data communications terminal equipment marketplace. During this survey, we obtained detailed questionnaire responses from over 2500 computer users throughout the United States.

As was the case with the DCT survey, the applications survey now being announced is designed around a well-researched, quantitative information data base as its keystone. All sponsors of this survey will receive not only a narrative analysis of our findings; they will also be provided with a processable file of statistical information on magnetic tape. With this information, each sponsor can conduct his own evaluation and

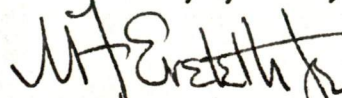
analysis, weighing the factors which he feels are most important to his individual development and expansion plans in the applications/programming aspects of the computer marketplace.

With the statistical and detailed data base we have described, each sponsor will be able to analyze -- independently -- such areas as:

- + the relationship of applications to specific types or configurations of computers;
- + applications within industries;
- + computer utilization within types of applications;
- + relationships of applications to programming languages;
- + future development of new application areas within specific industries;
- + the extent of in-house programming capabilities for class of computer and/or by industry;
- + amount of interest in purchasing software in a pure form;
- + determination of support requirements for new product lines;
- + possible relationships of equipment with particular applications within particular industries.

Once you have reviewed the attached proposal, I am confident you will agree that the cost of sponsorship for this project is extraordinarily reasonable in view of the extensive information which will become available to Digital Equipment. A sponsorship application is enclosed for your signature and return. Naturally, if there are any questions which I might answer about this proposal, or if there are any clarifications which I can provide, please do not hesitate to give me a collect call.

Sincerely yours,



M.F. Eveleth, Jr.
Vice President-Marketing

cc: Ken Lill

Kew Olsen

THE GERBER SCIENTIFIC INSTRUMENT COMPANY

November 25, 1968

Mr. Richard Merrill
Digital Equipment Corporation
Maynard, Mass.

Dear Mr. Merrill:

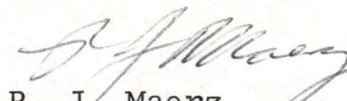
We have reviewed the tentative specifications dated 9-26-68 which you were kind enough to forward to us for review. The equipment described was of great interest to us but, unfortunately, the development program involving the use of this type of equipment has progressed to the point where it would not be possible to reconfigure the computer area.

We appreciate your interest in our company, and look forward to being kept abreast of further developments at DEC for possible use in future GSI programs.

Please express my thanks to Mr. Olsen for his interest in this area.

Very truly yours,

GERBER SCIENTIFIC INSTRUMENT COMPANY



R. J. Maerz
Vice President - Operations

RJM/dw
Enclosure



P. O. BOX 305
HARTFORD, CONN. 06101
TEL. (203) 644-1551
TWX (710) 427-2218



THE BLUE RIDGE CHEMIST

The Blue Ridge Chemist since 1947 The Official Local Section Publication of the
Virginia Blue Ridge Section American Chemical Society



1114 Dandridge Drive,
Lynchburg, Va. 24501
November 21, 1968

DIGITAL EQUIPMENT CORPORATION,
146 Main Street,
Maynard, Massachusetts 01754

Dear Sir:

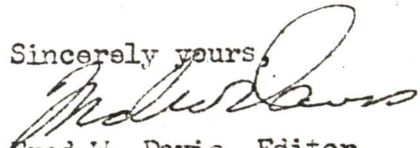
The Blue Ridge Section of the American Chemical Society is having a meeting on December 14 at which Dr. R. E. Dessy of Virginia Polytechnic Institute will discuss his use of small computers in the chemistry laboratory. I believe that he has used one of your computers and associated software. It has occurred to me that, after the meeting, there will be a demand for information about the equipment. Would you be interested in supplying such material for distribution or even display. If you have a representative for the area and near enough to attend the meeting, we would be happy to have him as guest of the Section for the meeting and the dinner that follows it.

Average attendance at such a meeting is about seventy five, representing the colleges and industries of our area. At the December meeting this number may be exceeded, since there is such a great interest in computers and their uses. I wouldn't want to suggest that literature be handed out to everyone attending, just to the representatives of the approximately forty colleges and industries. Any undistributed material would be returned.

If you do send anything for use at the meeting, it should be sent to the meeting chairman and marked For Use at the Blue Ridge Section December Meeting. The chairman is Dr. Charles W. Bondurant, Dept. of Chemistry, Roanoke College, Salem, Va. 24153.

On the other hand, if your representative is able to attend the meeting, it is to be at the Andrew Lewis High School, College and Fourth Streets, Salem, Virginia. This is easy to reach from the main highway, US 460/11, through Salem. The meeting will start at 5:00 PM and will be, as I indicated previously, on Saturday, December 14.

Sincerely yours,


Fred W. Davis, Editor
THE BLUE RIDGE CHEMIST

AMPEX COMPUTER PRODUCTS DIVISION



CHARLES E. PRIDDY
Marketing Manager
Northeast Zone

34 Bear Hill Road, Waltham, Mass. 02154
Phone: (617) 899-2040 TWX: (710) 324-6944

AMPEX CORPORATION

Computer Products Division

9937 WEST JEFFERSON • CULVER CITY, CALIFORNIA 90230
(AREA CODE 213) 836-5000 • TWX: 213-836-0401

November 20, 1968

RECEIVED

NOV 23 1968

KENNETH H. OLSEN

Mr. Kenneth H. Olsen, President
Digital Equipment Corporation
146 Main Street
Maynard, Massachusetts 01754

Dear Mr. Olsen:

I am writing this letter to introduce Ampex and myself to you. I know that Mr. Charles (Chuck) Priddy, our Northeastern Sales Manager, has been working closely with your people on current stack procurements, as well as possible core memory requirements.

We, at Ampex, have made great strides during the past three years in introducing advanced tape and core products at competitive prices. We are dedicated towards providing our customers with the best products and best service that is available in the market today.

I understand that you are currently considering adding a bulk core memory system to your PDP-10 product line. We are proposing our Model RGS memory for this purpose. It is part of a series of memory systems which operate at speeds from 650 nanoseconds to 2.2 microseconds. All models employ essentially the same hardware, and the versatile system design permits significant cost decreases when memory speed is reduced. This has enabled Ampex to offer, in a price-competitive mass memory, the small physical size and modularity normally found only in higher speed, state-of-the-art memories. At the same time, RGS employs the same "hands-off" maintenance philosophy as its higher-speed counterparts. No field adjustments are required in sense threshold and timing electronics -- even when sub-assemblies are replaced.

The RGS has achieved wide market acceptance with users of time-sharing systems such as the PDP-10 and others. We have already booked orders totaling close to 2 million dollars and project a market considerably larger. It is our intention to vigorously penetrate this market, either through sales to computer OEM's or direct sales to computer users.

AMPEX

Mr. Kenneth H. Olsen, President

November 20, 1968

Page 2

You undoubtedly have many questions concerning the Model RGS memory and our program which must be answered before you can reach a decision. I would like to suggest a meeting at your earliest convenience; either in Maynard, Culver City or at the Fall Joint Computer Conference in San Francisco for the purpose of meeting you personally and answering any of your questions. We can make top technical and program management people available, and will demonstrate working hardware very similar to the RGS.

We are very enthusiastic at the prospect of working with you on this important program, and are ready to commit maximum efforts to your needs.

Very truly yours,

COMPUTER PRODUCTS DIVISION



E. E. Prince

Vice President - General Manager

EEP:ja

AMPEX

DIRECTIONS TO AMPEX, CULVER CITY:

Address - 9937 Jefferson Blvd
Culver City, California
Telephone (213) 836-5000
Lobby - Building 2

From Northbound San Diego Freeway, take Sepulveda Blvd North approximately 1.5 miles. At a large shopping center on the right, the street forks with Sepulveda Blvd turning left and Jefferson Blvd continuing straight ahead. From that point, Ampex is approximately two miles ahead on the left side of Jefferson.

Win to have someone answer

MARSHFIELD CLINIC

MARSHFIELD, WIS. 54449

DEPARTMENT OF ADMINISTRATION

Floyd R. Deteri
Bradley D. Larsen
James D. Lube
William C. Matthews
William R. Murray

November 13, 1968

RECEIVED

NOV 13 1968

W. R. MURRAY

President
Digital Equipment Corp.
Maynard, Mass. 01754

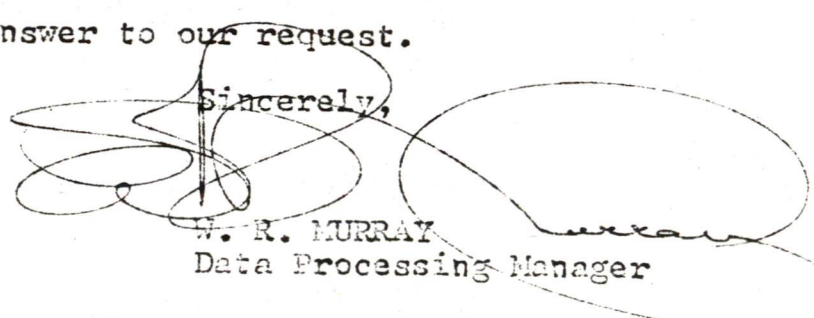
Dear Sir:

Reference is made to the attached correspondence dating from March 29, 1968 requesting programming information for the 60 HZ Real Time Clock we have in our Linc-8-102.

None of our inquiries have been acknowledged.

I would appreciate an answer to our request.

Sincerely,



W. R. MURRAY
Data Processing Manager

WRM:dh

Enclosures

c + memo to Jack Shields

(617) 894-8444

SYLVANIA
SYLVANIA ELECTRIC PRODUCTS INC.

SYLVANIA ELECTRONIC SYSTEMS

APPLIED RESEARCH LABORATORY
40 Sylvan Road
Waltham, Mass. 02154

13 November 1968

Mr. Ken Olsen, President
Digital Equipment Corporation
Maynard, Massachusetts

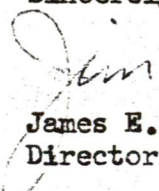
Dear Ken:

I want to thank you for your help in solving the problems with our PDP-9 system.

I am enclosing a copy of our most recent internal memo on the subject. As you can see, we have been able to make a successful delivery.

Thank you again for your help in this matter.

Sincerely,



James E. Storer
Director

JES/jlc
Enclosure

12/12/68

Copy and enclosures
sent to Mort Redeman

November 7, 1968

Mr. Kenneth Olson, President
Digital Equipment Corporation
146 Main Street
Maynard, Massachusetts

Dear Ken:

It was good to talk to you briefly on the phone the other day. I had not realized how long it had been since your visit.

In view of the many recent developments at MSI, let me repeat my invitation to you to come visit us again.

In order to give you an idea as to what some of the developments have been, I am enclosing some of our most recent sales literature.

I look forward to hearing from you.

Sincerely,

MEDIDATA SCIENCES, INC.

Ed

Edward B. Rawson
Vice President - Technical Director

EBR/jml:

cc: auto John Holzer
Visited DEC in 12/4/68

The Ingersoll Milling Machine Company

Rockford, Illinois 61101

November 7, 1968

Mr. Kenneth H. Olsen
President
Digital Equipment Corporation
146 Main Street
Maynard, Massachusetts 01754

Dear Mr. Olsen:

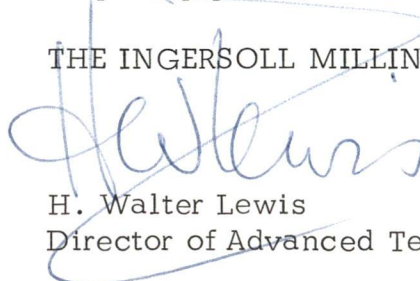
I believe this matter is important enough to contact you personally.

About three months ago, your Messrs. John Holzer and Dave Cioni called on us, almost by accident. At that time, we were in the midst of developing computer control for automotive transfer lines. We were so favorably impressed by the competence of John and Dave that we shifted the emphasis of our work toward using your equipment. We are now about to receive orders for several such systems.

Unfortunately, a sour note has crept into our relationship. Without any prior warning, I find that your company offered employment to Jim Mason, our Project Engineer, and completed all negotiations with him without giving us any indication. We frequently have people employed by our customers approach us; in every case, we insist that they first notify their supervisor and obtain some sort of a release before we enter into any negotiations. We believe that this is the only fair arrangement and are disturbed that you did not show us the same courtesy.

Very truly yours,

THE INGERSOLL MILLING MACHINE COMPANY



H. Walter Lewis
Director of Advanced Technical Planning

HWL:ja



Save

TEXAS INSTRUMENTS

I N C O R P O R A T E D

13500 NORTH CENTRAL EXPRESSWAY • DALLAS, TEXAS

COMPONENTS GROUP

November 6, 1968

Mr. Ken Olsen
President
Digital Equipment Corporation
146 Main Street
Maynard, Massachusetts

Dear Mr. Olsen:

Howie Cohen has informed me of your interest in visiting with us in Dallas. It would please us very much to have the opportunity to spend a day with you discussing our technologies and programs. We would like to review for you our programs in IC's, Complex Functions, MSI, LSI, Active Element Memories, MOS, Opto-electronics, and Diode Arrays.

In addition, we would like to explain our Custom Engineering Center, under the management of Jack Kilby. I feel we could assist you in retaining your 47.4% growth and 51% profit growth through transfusion of our capabilities to your operation via this mechanism. Of course, we would like to show off our facilities and our best asset -- our people.

We certainly recognize DEC as a major customer and appreciate the growth of our business of over three times (1967-1968) with you.

Would it be possible for you to spend the 26th or 27th with us in Dallas?

Sincerely,

Glenn E. Penisten
Vice President

GEP:dk



11-11-68
John Jones
cto 10/4

244 EAST OGDEN AVENUE / HINSDALE, ILLINOIS 60521 USA / AMERICAN NUCLEAR SOCIETY

PRESIDENT
KARL P. COHEN
ADVANCED PRODUCTS OPERATION
GENERAL ELECTRIC COMPANY
310 DE GUIGNE DRIVE
SUNNYVALE, CALIFORNIA 94086

November 6, 1968

Mr. Kenneth Olsen, President
Digital Equipment Corporation
146 Main Street
Maynard, Massachusetts 91754

Dear Mr. Olsen:

As President of the American Nuclear Society I wish to extend to your organization a cordial invitation to become an Organizational Member of the Society, which will help it continue to expand its activities in the areas of education, public information, nuclear standards and associated activities.

Recently the Board of Directors authorized the establishment of Organizational Member. This new category of membership is open to industries, universities, governmental agencies, laboratories and other organizations vitally interested in the development of the nuclear industry and in the education of the public in the benefits of nuclear science and engineering.

Up to now, the 7500 individual members of the American Nuclear Society have been subsidizing some 1200 university student members; in addition they have been developing nuclear standards and educating the public and the scientific and engineering community on the benefits of nuclear energy. Greater effort, however, must be put into these activities if the nuclear industry is to continue its current growth and be ready for the promise of an even greater rate of growth in future years.

I am pleased, as I hope you will be, that the Society has taken this increased interest in the promotion of education, public information and nuclear standards. As an educational, scientific and professional society, the American Nuclear Society provides an authoritative and experienced organization which the public and the professional scientists and engineers will respect.

Your sincere consideration of Organizational Membership in the Society will be greatly appreciated. Within the next two weeks you will receive detailed information on this new membership category from Mr. Octave J. Du Temple, the Executive Secretary of the Society. In the meantime, if you have any further questions or suggestions, I would be pleased to hear from you.

Yours very truly,

Karl P. Cohen

Karl P. Cohen
President, American Nuclear Society

aeg
cc:OJDT

"1" Pete Kaufmann -
REFLECTONE, INC.

ck'd 12/4

Referred to Dick King
and he decided it
didn't warrant an ax.

October 30, 1968

Digital Equipment Corporation
146 Main Street
Maynard, Massachusetts

Attention: Mr. Kenneth H. Olsen, President

Gentlemen:

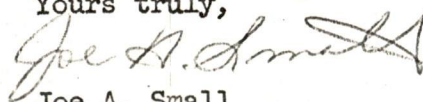
Just a note to inform you that I am working on the staff of Reflectone, Inc., as a technical consultant and also as the Western Region Representative for the products manufactured at Reflectone's Western Production Department, 924 South Lyon Street, Santa Ana, California 92705.

The work in Santa Ana is defined as fabrication, assembly and testing of fine quality electrical harnesses and coaxial cables that require precise handling, close tolerances, special materials with unique processes produced for integration in U. S. Navy Missiles.

The Reflectone production facility is a modern attractive, four year old building with 14,000 square feet of manufacturing and office space expertly designed for efficient, clean operation. It is conveniently located in southeast Santa Ana, within five minutes driving time from intersections of the Garden Grove, Newport and Santa Ana freeways.

I will consider it a personal privilege to drop by your office at a convenient time for you and explain how Reflectone's unique capabilities can provide real advantages in cost savings, quality, production augmentation, etc., to your subcontract operations. Will you give me this opportunity?

Yours truly,



Joe A. Small

Western Region Representative

JAS/ESB

10/30
nick to handle



NEW YORK UNIVERSITY MEDICAL CENTER

550 FIRST AVENUE, NEW YORK, N.Y. 10016
AREA 212 679-3200 x 3538
CABLE ADDRESS: NYUMEDIC

Department of Biochemistry

October 28, 1968

Digital Equipment Corporation
146 Main Street
Maynard, Mass. 01754

Dear Sirs:

I am writing you in regard to a DEC PDP-8 table fitting to our computer console, M 35044, which to this date has not been picked-up by you. This table was to be returned to you because it did not fit our PDP-8, Serial No. 697, properly. It has been replaced by another table which we are keeping.

I mentioned several times (since 1967) to Mr. Zlotnick of your Parsippany office that we wanted the table removed. He informed me that he was taking care of it. Recently, Mr. Dorsett also from your Parsippany office was in our lab. At this time, I spoke to him regarding the removal of this table.

To date, the table is still here taking-up valuable laboratory space. I would appreciate your cooperation on this matter as soon as possible.

Sincerely,

Dr. A.K. Kleinschmidt

AKK/mr

P.S. If we do not hear from you soon, we will assume that you do not want the table.

HARVARD UNIVERSITY

PIERCE HALL, CAMBRIDGE, MASSACHUSETTS 02138

DIVISION OF ENGINEERING AND APPLIED PHYSICS

HOWARD W. EMMONS

ABBOTT AND JAMES LAWRENCE PROFESSOR OF ENGINEERING AND
GORDON MC KAY PROFESSOR OF MECHANICAL ENGINEERING

868-7600 x 2847

October 28, 1968

Mr. Kenneth Olsen, President
Digital Equipment Corporation
Maynard, Mass. 07154

Dear Mr. Olsen:

I am writing to invite you and about 10 others to a small luncheon discussion at 12:30pm on Monday December 2nd, 1968 which is to be held at:

The MIT Faculty Club
Sloan Building - 6th Floor
50 Memorial Drive
Corner of Wadsworth Street
Cambridge, Mass. 02139

The subject will be a proposal for facilitating the process by which new technological ideas are turned into viable industries of benefit to the economy of Massachusetts. The central question is:

"Is there any wisdom in making available State funds to support the initial development of an idea, from its initiation, to the point where its industrial application can be funded through the usual financial channels?"

This project already has been discussed with some economists and financial people and we now want the opinions of industrialists who have successfully managed this transition.

I am attaching a copy of the invitation list. In addition to several of your fellow industrialists, the participants will be members and associates of a subcommittee on Research of the Governor's Advisory Committee on Science and Technology (GACSAT). It was to GACSAT that this idea was originally proposed and the subcommittee is conducting a study of its merits.

Please let me know if you can join us.

Sincerely yours,



Howard W. Emmons
Chairman of subcommittee

HWE:gb

*Ken -
You will be
Called in Puerto Rico
and said
10/31
Eva*

Invitation List

Mr. Samuel J. Davy, President
EPSCO Corporation
411 Providence Highway
Westwood, Mass. 02090

General Georges Doriot, President
American Research & Development Corporation
200 Berkeley Street
Boston, Mass.

Dr. David I. Kosowsky, President
Damon Engineering Inc.
240 Highland Ave.
Needham, Mass.

Dr. Allen Michaels, President
AMICON Corporation
25 Hartwell Ave.
Lexington, Mass.

Mr. Kenneth Olsen, President
Digital Equipment Corporation
Maynard, Mass. 07154

Dr. Dennis Robinson, President
High Voltage Engineering Corporation
South Bedford Street
Berlinton, Mass.

11/1
Fred Gould to a number

Dan Leonard 2505

5 Palmer
Gorham, N. H.
10-26-68

*3/20/69 Dan had talked
with Mr. Thompson a few
times in order to help him.
No correspondence.*

Digital Equipment Corporation
Maynard, Mass.

Gentlemen:

Would you please advise what modules you would suggest, to solve the following at the lowest cost, and simplest manner possible.

Count pulses to three digits-ie 000 to 999: Read these accumulated pulses into a standard teletype printer using 5 level code, and running at 60 wpm. When the counter has completed it's count, it should trigger the printer, to print out the count, provide a space function, and reset the counter to 000 to receive the next group of pulses. Also provision should be made to provide adjustable carriage return, and a line feed.

Pulses will normally be received from customer supplied meteorological transducers, which provide a number of pulses based on the value of the parameter being read. Each sensor will be read into the counter in turn, through a stepping switch. The printer will print pulses in engineering units. ie-028, 222, 003, etc. The counter reset function of your equipment should also be able to advance the stepping switch one position.

I hope I have provided sufficient information, but if there are any questions, please contact me.

Yours very truly,

N.K. Thompson
N.K. Thompson

Instrument Engineer

STANDARD PRUDENTIAL UNITED

CORPORATION



277 Park Avenue
New York, N. Y. 10017
Telephone: 922-4660

LOUIS J. CAPPELLI
Vice President

October 25, 1968

Digital Equipment Corp.
146 Main Street
Maynard, Mass. 01754

Re: MERGER

Dear Mr. President:

We were very interested to see your name appearing in Computer Industry Annual. Since we have worked together successfully with firms in the computer field, you may be equally interested in seeing the enclosed data on our company.

Starting with one of the nation's largest independent commercial finance companies, Standard Prudential has grown into a multi-product, diversified industrial company. We are engaged in finance, leasing, engineering, mining, manufacturing, construction and fur marketing. Our working capital is approximately \$60 million, total shareholders' equity exceeds \$22 million and our shares are traded on the New York Stock Exchange.

SPUC is committed to growth internally and through acquisition. Each company offers new horizons and challenges, adding to the base from which further growth springs forth. Each endeavor complements and cross-feeds other areas. We have had thousands of clients whose activities could be improved by the various services offered by your company.

Your company's growth could be measurably enhanced with realization of full sales and financial potential by affiliation with us. Won't you please call or write to arrange for an appointment? It may very well be an important step toward faster growth for your company.

Cordially,

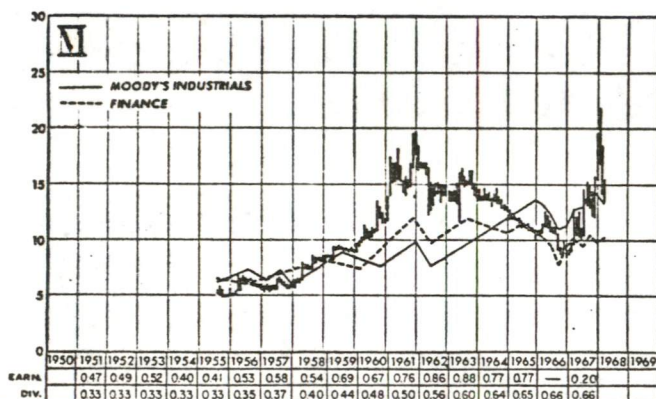
Louis J. Cappelli
Louis J. Cappelli
Vice President

LJC/KA
Encl.

STANDARD PRUDENTIAL UNITED CORPORATION

<u>LISTED</u> NYSE	<u>SYMBOL</u> SPU	<u>INDICATED DIV.</u> \$0.66	<u>RECENT PRICE</u> 15	<u>PRICE RANGE (1968)</u> 21 ⁷ - 13 ³	<u>YIELD</u> 4.4%
-----------------------	----------------------	---------------------------------	---------------------------	--	----------------------

A RELATIVELY SMALL COMPANY, BUT RAPIDLY EXPANDING BY MEANS OF ACQUISITION OF SMALL INDUSTRIAL COMPANIES. THE SPECULATIVE STOCK PROVIDES A HIGH CURRENT YIELD.



<u>CAPITALIZATION:</u>		(9/30/67)
	(000)	(%)
Debt	\$57,674	70.9
Minority Int.	268	0.3
Subs. Pfd.	6,000	7.4
Com. & Surp.	17,391	21.4
Total	\$81,331	100.0%

<u>Shs. (\$1-3,451,573)</u>				
<u>INTERIM EARNINGS:</u>				
Qu.	3/31	6/30	9/30	12/31
66	0.20	0.20	N.C.	N.C.
Qu.	9/30	12/31	3/31	6/30
67	0.21	0.03	0.06	0.10
68	0.12			

<u>DIVIDENDS:</u>		
	Record	Payable
0.165Q	3/15/67	3/31/67
0.165Q	6/15	6/30
0.165Q	9/15	9/30
0.165Q	12/15	12/31
0.165Q	3/15/68	3/31/68

BACKGROUND:

Incorporated on May 6, 1966 the company is a holding company of Standard Financial (over 98% owned) and Standard Prudential (100%), the former dating back to 1932. Standard Financial Corp. is engaged in financing sales obligations, receivables and inventories of manufacturers, jobbers, and individuals; it also makes consumer loans. Since 1954 an active policy of acquisition has been pursued which accounts

for a large part of its growth. In 1964 it formed Standard Prudential whose function was to acquire successful and growing industrial companies. In 1964 Prudential acquired Fabrics by Joyce, Inc. and in 1965 purchased Templeton Spinning Mills Inc. In 1967 Southland Mower Co. and United Communication Inc. were acquired.

RECENT DEVELOPMENTS:

In the first quarter of fiscal 1968, ended 9/30, volume of the finance companies declined 7.6% to \$64.4 million and net sales of the industrial companies rose 3.0% to \$12.8 million. The combined gross income declined 18.5% to \$4.7 million and though all categories of expenses were reduced,

net income declined sharply. Too, preferred dividend requirements were higher as was the minority interest and per share earnings dropped 42.9% to \$0.12. All categories of loan receivables declined and the total was \$92.4 million vs. \$121.3 million a year earlier.

PROSPECTS:

The majority of earnings for the holding company have been from the finance operations of Standard Financial. These earnings are likely to become less important as the company is rapidly acquiring industrial firms. Too, the finance operation has been reducing its volume. The manu-

facturing operation of Standard Prudential is expected to enjoy good growth and it is expected that this area will gain in importance. Though fiscal 1967 was disappointing, the aggressive acquisition policy aided by funds generated by reduced loan volume adds hope.

STATISTICS

YEAR	GROSS REVS. (\$ MILL.)	INTEREST CHARGES (\$ MILL.)	OPER PROFIT MARGIN %	NET INCOME (\$ MILL.)	LOANS (\$ MILL.)	SHARES (\$ MILL.)	EARN. PER SH. \$	DIV. PER SH. \$	DIV. PAY. %	PRICE RANGE	PRICE EARNINGS RATIO	AVERAGE YIELD %
56	2.2	688	42.9	633	18.8	1,147	0.53	0.35	65	6 ⁸ - 4 ⁷	11.0	5.9
57	2.7	851	42.8	697	21.1	1,159	0.58	0.37	64	6 ⁸ - 5 ³	10.2	6.2
58	4.2	1,189	36.9	827	33.3	1,471	0.54	0.40	74	8 ⁴ - 5 ⁸	13.2	5.6
59	5.5	1,590	39.2	1,102	37.9	1,565	0.69	0.44	64	9 ⁴ - 8 ¹	12.8	5.0
60	8.3	2,640	31.8	1,266	62.1	1,860	0.67	0.48	72	13 ⁴ - 8 ¹	16.7	4.3
61	11.8	3,872	30.7	1,708	94.6	2,088	0.76	0.50	66	19 ² - 11 ⁸	20.6	3.2
b62	14.8	4,775	27.1	2,075	115.9	2,150	0.86	0.56	66	18 ² - 12 ³	17.8	3.7
63	16.7	5,301	28.6	2,378	115.4	2,383	0.88	0.60	68	16 ⁴ - 11 ³	16.0	4.3
64	15.2	4,752	25.4	2,106	111.9	2,423	0.77	0.64	83	14 ⁸ - 12 ⁴	17.7	4.7
65	16.2	5,009	22.5	2,246	116.3	2,558	0.77	0.65	84	12 ⁸ - 10 ⁸	15.3	5.5
67	N.A.	5,968	N.A.	690	90.7	3,451	0.20	0.66	330	19 ⁴ - 8 ¹	70.6	4.7

Note: All figures are for Standard Financial through 6/30/66, thereafter for Standard Prudential United on new fiscal year ending 6/30. a-Plus 1/10 sh. Strauss-Duparquet stock worth 2-1/2c. b-Includes Phoenix and Rock for entire year.

INCORPORATED: May 6, 1966 - N.Y.

PRINCIPAL OFFICE: 277 Park Avenue
New York, N.Y. 10017

ANNUAL MEETING: Third Tuesday in April

NO. OF STOCKHOLDERS: 7,069

TRANSFER AGENT: Bankers Trust Co., New York

REGISTRAR: Chase Manhattan Bank, New York

INSTT. HOLDINGS: NO. 11
SHS. 222,990

OFFICERS:

CHAIRMAN:

PRESIDENT: T. H. Silbert

SECRETARY: E. M. Brandriff

TREASURER: A. W. Brown

Bob O'Hagan



AMPHENOL
SPACE AND MISSILE
SYSTEMS

9201 INDEPENDENCE AVENUE • CHATSWORTH, CALIF. 91311 • TEL: 213-341-0710 • TWX 910-494-1211

October 24, 1968

Mr. K. Olsen, President
Digital Equipment Corporation
146 Main Street
Maynard, Massachusetts 01754

Dear Mr. Olsen,

Thank you for your recent inquiry in response to our advertisement. The enclosed booklet, "Oceanographic Products Guide," will give you a brief description of some of the products for this expanding market. Because of the newness of the market and its special applications, we invite you to discuss your special requirements with us. Also enclosed is our pamphlet, "Creative Capabilities in Interconnection Systems;" it should provide some insight to our capability.

Our speciality is to understand and solve your electrical interconnection problems; and to this end, we have complete manufacturing facilities to manufacture what we design.

We appreciate your interest in Amphenol Space and Missile Systems and we look forward to serving you in the very near future.

Very truly yours,

AMPHENOL CONNECTOR DIVISION

Bennett W. Brachman

Bennett W. Brachman
Marketing Manager
Space and Missile Systems

BWB:vjj

Enclosures

10/26
c - John Jones

HYDROSPACE RESEARCH CORPORATION
5541 NICHOLSON LANE
ROCKVILLE, MARYLAND 20852
AREA CODE 301
942-9000

RECEIVED
OCT 25 1968
KENNETH H. OLSEN

23 October 1968

Digital Equipment Corporation
1146 Main Street
Maynard, Massachusetts 01754

ATTENTION: Mr. Kenneth K. Olson
President

SUBJECT: Hydrospace Research Corporation Purchase
Order No. 11110

REFERENCE: HRC letter dated June 19, 1968

Gentlemen:

The reference letter discussed the many problems which our San Diego Division incurred with two PDP-9 computer systems ordered under the subject purchase order. The letter stated that unless said problems were cared for promptly, it would be necessary for us to terminate the subject purchase order for default.

Since the date of the reference letter, DEC has expended considerable efforts to correct the problems in the computer system. As of this date we hereby state that it is no longer our intention to terminate the subject purchase order for default. We will be forwarding, in the near future, a check for 95% payment on the subject purchase order. The 5% will be paid upon completion of some minor items which are still outstanding.

Even though we are releasing payment to you, we want you to know that as a result of the problems with the PDP-9 systems, we have had to delay our delivery date to the Navy. When the systems are finally delivered, they will be

HYDROSPACE RESEARCH CORPORATION

Digital Equipment Corporation
23 October 1968
Page 2

to widely scattered Navy field locations. We trust that in the interest of maintaining good customer relations with the Navy, EG&G, and HRC, DEC will provide adequate and prompt support as and when requested, even after any normal guarantee/warranty period may have formally expired.

Yours very truly,

HYDROSPACE RESEARCH CORPORATION

Edward C. Reading
Edward C. Reading
Director of Administration

ECR:raw

cc: U.S. Navy
REWSON Project Support Office
Code 06R

Mr. Robert Carmichael
DEC
Anaheim, California

Jack Donahue, Esq.
EG&G, Inc.

11/11
Bob O'Hagan to ans.



NORTHWEST CONSULTANT OCEANOGRAPHERS, INC.

459 HAMILTON AVENUE • PALO ALTO, CALIFORNIA 94301

TELEPHONE CODE 415-321-5057

October 21, 1968

Mr. Ken Olson
Digital Equipment Corporation
146 Main Street
Maynard, Massachusetts 01754

Dear Mr. Olson:

Although you may not have traditionally considered the field of oceanics as an area of particular significance in the company's near term future, this rapidly emerging field may hold selected opportunities for DIGITAL EQUIPMENT.

Identification and evaluation of such opportunities requires experience, however, and to this end Northwest Oceanographers is proposing to serve as your ad hoc corporate planning staff and authorities on oceanography. We are enclosing our proposal No. P-804 describing a corporate planning program for oceanography.

Northwest Oceanographers' staff comprises over a dozen doctoral-level oceanographers and other business specialists, and has completed numerous consulting assignments for corporate and government clients.

We feel that the proposed program provides a singular opportunity for a company to avail itself of a vast body of knowledge and experience at a minimum cost. We would appreciate your review of our proposal and qualifications.

Very truly yours,

NORTHWEST CONSULTANT OCEANOGRAPHERS, INC.

Valerio L. Giannini, Vice President

VLG/at

RECEIVED

OCT 21 1968

KENNETH H. OLSEN

372 Central Park West

New York 10025

October 18, 1968

Mr K.H. Olsen
President
Digital Equipment Corp

Dear Mr Olsen,

I have a patent pending on a device for the identification of persons based on the dynamic characteristics of their writing. An example of a dynamic characteristic would be the measurement of pen pressure over time. A person can be uniquely identified through a graph of the pressure that he exerts on a pen during the time period in which he signs his name. Attempts to verify the identity of the signer would require the pressure-time trace to be recorded once, stored, and compared with the pressure-time trace produced during future signatures.

If this device is of interest to your company, please contact me at the above address.

Very truly yours,
Michael E. Balk
Michael E. Balk

Elsa Carlson

October 17, 1968

Mr. Arthur Bushnell, Sales Manager
Alvah Bushnell Company
925 Filbert Street
Philadelphia, Pennsylvania 19107

Dear Mr. Bushnell:

It has just been brought to my attention that your company forwarded to Digital Equipment Corporation, without an invoice, purchase order, or request by Digital Equipment Corporation, one hundred P-514 letter size, 1-3/4" expansion File Pockets at an invoice price of \$31.72.

In view of the fact that our company at no time ordered the aforementioned items, we have retained same at our plant for your disposal. These items may be picked up or we would be most happy to mail them back to you at your expense.

If we do not hear from you as to the disposition of these items, within one week from this date, we shall assume that you have no interest in these items and therefore we shall dispose of them.

Very truly yours,

DIGITAL EQUIPMENT CORPORATION

Edward A. Schwartz
General Counsel

EAS:o

STATEMENT

ALVAH BUSHNELL COMPANY

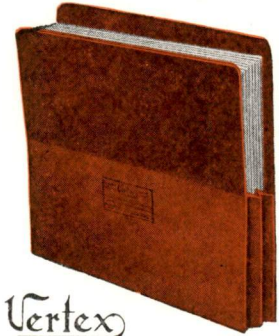
925 Filbert Street • Philadelphia 7, Pa.

Date 10/2/68

Sold to:

Digital Equipment Corp.
146 Main St.
Maynard, Mass. 01754

Our 87th Year making
better Filing Containers



Vertex
OFFICIAL READING



Cordex

Thank You...
For Your Patronage

DATE	REFERENCE	CHARGES	BALANCE
6/17/68	Mrs. Elsa C. Carlson		31.72

The Accounting Dept. decided to keep this order.

Vertex
VERTICAL-EXPANDING

EXPANDING FILE POCKETS



Cordex

EXPANDING PORTFOLIOS

AREA CODE 215 WALNUT 2-3533

Founded 1876

ALVAH BUSHNELL COMPANY

925 FILBERT STREET

PHILADELPHIA, PA. 19107

October 4, 1968

Our 92nd Year

Mrs. Elsa C. Carlson
Digital Equipment Corp.
146 Main St.
Maynard, Mass. 01754

Dear Mrs. Carlson:

Once again we ask you to give your prompt attention to the enclosed statement covering your order for filing containers.

In order to maintain your credit rating for possible future orders on open account, we urge you to send us your check immediately.

You can understand that because of the considerable number of months that have elapsed since the date of our shipment, we are concerned about this long overdue account.

Cordially yours,

Arthur Bushnell : ;

ALVAH BUSHNELL COMPANY

AB/st
enc.

digital

INTEROFFICE MEMORANDUM

DATE: September 26, 1968

SUBJECT: ALVAH BUSHNELL COMPANY

TO: Ed Schwartz

FROM: Ken Olsen

This company sent a sample filing envelope to Elsa several months ago (which she just threw away because she didn't like it), and then sent two boxes of the same envelopes to her without an order or purchase requisition. We kept them in the back room (where a few may have disappeared).

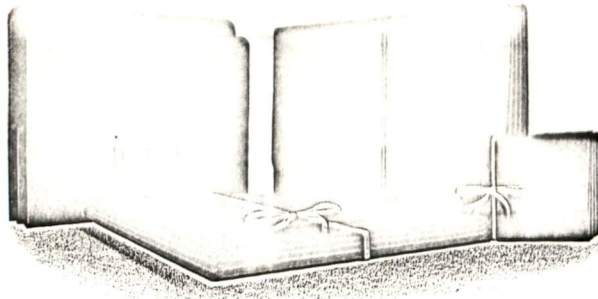
I think this is a fraudulent business, and suggest that we don't pay them, or, at most, send them a letter suggesting that they pick them up at Elsa's office if they would like to. We will not mail them back!

Ken

ecc

Vertex
VERTICAL-EXPANDING

EXPANDING FILE POCKETS



Cordex
EXPANDING PORTFOLIOS

AREA CODE 215 WALNUT 2-3533

Founded 1876

ALVAH BUSHNELL COMPANY

925 FILBERT STREET

PHILADELPHIA, PA. 19107

September 9, 1968

Our 92nd Year

Mrs. Elsa C. Carlson
Digital Equipment Corp.
146 Main St.
Maynard, Mass. 01754

Dear Mrs. Carlson:

We are enclosing a statement covering our shipment of filing envelopes. Because several months have elapsed since the date of shipment, naturally we are most anxious for you to take care of this over-due account. If there has been any dissatisfaction with your order, please let us know promptly.

Please be assured that your business is very much appreciated and we look forward to hearing from you within the next week.

Cordially yours,

ALVAH BUSHNELL COMPANY

Arthur Bushnell

Arthur Bushnell, Sales Manager

AB/bp

enc.

*Called 9/11 Elsa's office, on vacation for 2 week - no information
Sylvia*

STATEMENT

ALVAH BUSHNELL COMPANY

925 Filbert Street • Philadelphia 7, Pa.

Date 8/30/68

Digital Equipment Corp.
146 Main St.
Maynard, Mass. 01754

DIGITAL EQUIP. CORP.
RECEIVED
SEP 11 1968
ACCOUNTS PAYABLE

DATE	REFERENCE	CHARGES	BALANCE
17/68	Mrs. Elsa C. Carlson		31.72

Our 87th Year making
better Filing Containers



Thank You...
For Your Patronage



EXPANDING FILE POCKETS

FOUNDED 1876

ALVAH BUSHNELL COMPANY

925 FILBERT STREET • PHILADELPHIA, PA. 19107 • (215) WALNUT 2-3533

mr
REFER TO
INVOICE NUMBER

68-3477

C	XXX	D
PREPAID	ADD	C.O.D.

SOLD TO
 Digital Equipment Corp.
 146 Main St.
 Maynard, Mass. 01754

SHIP TO

YOUR ORDER NO. Mrs. Elsa C. Carlson

YOUR ORDER NO. F.O.B. PHILADELPHIA

DATE ENTERED	TERR.	SM.	SHIPPED VIA	PIECES	PREPAID	COLLECT	CHARGES	DATE SHIPPED	DATE BILLED
6/12/68	DM		UPS	1			1.97	6/17/68	6/17
QUANTITY	DESCRIPTION							PRICE	AMOUNT
100	VERTEX EXPANDING FILE POCKETS:								
	P- 514 letter size, 1-3/4" expansion								29.75
	P- 524 letter size, 3-1/2" expansion								1.97
	P- 534 letter size, 5-1/4" expansion							UPS	31.72
	P- 516 legal size, 1-3/4" expansion								
	P- 526 legal size, 3-1/2" expansion								
	P- 536 legal size, 5-1/4" expansion								

MANUFACTURERS OF RED ROPE FIBRE ENVELOPES
FLAT AND EXPANDING FOR CARRYING AND FILING PAPERS.

Vertex
VERTICAL - EXPANDING

EXPANDING FILE POCKETS



Cordex

EXPANDING PORTFOLIOS

AREA CODE 215 WALNUT 2-3533

Founded 1876

ALVAH BUSHNELL COMPANY

925 FILBERT STREET

PHILADELPHIA, PA. 19107

This sample Vertex File Pocket you requested marks the beginning of the end of filing drudgery -

The No. 1 enemy of good and efficient filing is overcrowding - beautiful steel cabinets have been built - scientific systems have been designed - but the trouble comes with the use of FLAT - lack of capacity - folders ... You know only too well what then happens: round-bottom, slouching, bulging folders with indexes dropping out of sight with the result that finding papers becomes tedious and difficult.

Vertex Pockets are a simple solution. They expand as papers are added, not taking up any more space than is required. They stand squarely in the file drawer with indexes always at proper height and fully visible. Their use calls for no study on the part of the file clerk - no change whatever in your system - you just put them in and enjoy them.

Important: You can use them right along with flat manila folders - if at first you do not wish to fully equip, but only want to use them where they are a positive MUST for the heavier, overcrowded divisions of your files.

Yes, they are tough and long-wearing. They can be continued in the active files year after year -- and you can then use the cheap, flat folders for transfer.

Save filing time and tempers - Save money - Use the enclosed price-order card. You will be pleased and you will end filing drudgery.

Cordially yours,

Arthur Bushnell

ALVAH BUSHNELL COMPANY

P. S. Note the closed half-height sides. Papers are contained and protected.

ORDER CARD AND PRICE LIST

BUSHNEIL Expanding "VERTEX" File Pockets

SPECIFY QUANTITY, SIZE AND EXPANSION

▶ **LETTER SIZE — 9½ x 11¾** ◀

QUAN.	EXP.	25-499 PER 100 *	500 UP PER 100 *
	1 ¾"	\$29.75	\$24.50
	3 ½"	36.75	29.85
	5 ¼"	44.00	35.60

▶ **LEGAL SIZE — 9½ x 14¾** ◀

QUAN.	EXP.	25-499 PER 100 *	500 UP PER 100 *
	1 ¾"	\$36.50	\$29.60
	3 ½"	42.50	34.50
	5 ¼"	49.75	41.60

ANGULAR METAL TABS

QUAN.	25-499 PER 100 *	500 UP PER 100
	\$7.75	\$6.95

*No Price Increase Since 1958.

F.O.B. Phila.

FIRM

STREET ADDRESS

CITY

STATE

ZIP CODE

NAME AND POSITION OF PERSON ORDERING:

FIRST CLASS
Permit No. 18611
PHILADELPHIA, PA.

BUSINESS REPLY MAIL

No Postage Stamp necessary if mailed in the United States

POSTAGE WILL BE PAID BY —

ALVAH BUSHNELL COMPANY

925 FILBERT STREET

PHILADELPHIA, PA. 19107



Original to Ted Johnson
10/21/68

sensus international

October 17, 1968

Mr. Kenneth H. Olsen
President
Digital Equipment Corporation
146 Main Street
Maynard, Mass. 01754

Dear Mr. Olsen:

As president of one of the major electronics manufacturers in the United States, you should be using Sensus to keep abreast of the electronics industries and markets throughout the world.

The enclosed brochure describes Sensus, its scope and its value.

We look forward to hearing from you.

Sincerely,



C. Gerald Diamond
President

Att.
CGD:ke

CANADIAN ENTERPRISE DEVELOPMENT CORPORATION LIMITED
MONTREAL VANCOUVER

MONTREAL OFFICE: SUN LIFE BUILDING · MONTREAL 2 · P.Q.

AREA CODE 514-868-2764

October 15, 1968.

Kenneth H. Olsen, Esq.,
President,
Digital Equipment Corporation,
146 Main Street,
MAYNARD, Mass. 01754.

Dear Ken:

Just a note to thank you again for your hospitality last Friday to Arden Boland, Peter Smith and Doug Wallace of Central Dynamics, and myself. Needless to say, we were all impressed with both the complexity of the woolen mill and the simplicity of DEC's designs! I hope there will be an opportunity for DEC and Central Dynamics to work together in the future.

Sincerely,


Gerald D. Sutton

GDS:hv

Original to Harry Fortner



SYSTEMS, INC., 76 CAMBRIDGE STREET, BURLINGTON, MASS. 01803 TELEPHONE (617) 272-4417

October 15, 1968

RECEIVED

OCT 16 1968

KENNETH H. OLSEN

Digital Equipment Corporation
150 Main Street
Maynard, Massachusetts

Gentlemen:

This letter will serve to introduce you to Systems, Inc., a consulting and data processing firm headquartered in Providence, Rhode Island, with a recently opened Branch Office at the above address.

The firm was founded almost two years ago by several top systems engineers from IBM Corporation. I recently joined the firm to head up the Boston Regional Office from CEIR, Inc., where I was Manager of Business Systems. At CEIR, I managed a large staff of programmers and systems analysts and conducted seminars on Management Systems throughout the United States.

We are currently serving clients such as Texas Instruments, Acushnet Process Company, Puritan Life Insurance Company and the Cambridge Research Laboratories of the United States Air Force.

We believe that our services are of large benefit to the EDP user as the cost of consulting services can be more than offset by the savings in computer time and can also make operating management more effective.

I would welcome the opportunity to call on you at your convenience to discuss your present information systems program and possibly how we can be of service to you.

Very truly yours,

William R. Moriarty
Boston Regional Manager

WRM/sb

c - Ted Johnson
Roger Handy
Richard Hill

THE PERKIN-ELMER CORPORATION

NORWALK, CONNECTICUT, U.S.A.

CHESTER W. NIMITZ, JR. PRESIDENT

October 15, 1968

Mr. Kenneth Olson, President
Digital Equipment Corporation
146 Main Street
Maynard, Massachusetts 01754

Dear Mr. Olson:

Through the efforts of Richard Hill, your Regional Service Manager for this area, twenty of our service engineers have been trained in the use of your PDP-81 computer. We offer this computer, coupled to an analog interface, with our Model 270 Mass Spectrometer.

From reports I have received, it is clear that Dick's extra curricular training activity, presented as it was with great enthusiasm and competence, will help us to do a better job installing and servicing this system involving Digital Equipment Corporation and Perkin-Elmer equipment.

Thanks for a job well done.

Yours truly,



CWN:hmj

SOUTHWEST BEVERAGE COMPANY
LAKE CHARLES, INC.

WHOLESALE OF

BUDWEISER • BUSCH BAVARIAN • MICHELOB

1225 HODGES ST.
LAKE CHARLES,
LOUISIANA 70601

October 14, 1968

Mr. Kenneth H. Olsen
Digital Equipment Corporation
Maynard, Massachusetts 01754

Dear Mr. Olsen:

I read with interest the article on your Company in a recent edition of Business Week. I was intrigued for a number of reasons, not the least of which was your association with General Doriot whose lectures I had the privilege of attending at the Business School some years ago.

The business purpose of this letter is to inquire as to whether the equipment your organization manufactures has found its way into distribution oriented companies. The ever growing requirement for numbers is driving us wild and we know that, in certain isolated instances, other A/B wholesalers have, in part anyway, broken the back of this problem through the purchase of obsolescent IBM equipment, the cost of which was not sufficiently prohibitive to make the economics a complete shambles. The IBM representatives here, however, have been unable to come up with any feasible plan for the introduction of their equipment into my operation and have lost interest.

Thus, the reason for my query. The needs of our companies are very real but our business volume insufficient to justify expensive high capacity equipment. If you feel some of your equipment might be adaptable to the requirements of a distribution operation, I would most appreciate your informing me of the individual in your Company with whom I should communicate.

Cordially yours,

R. A. Marriner

R. A. Marriner

RAM:jd

Original to Save Sinnerton



State of New Jersey

DEPARTMENT OF COMMUNITY AFFAIRS

POST OFFICE BOX 2768
TRENTON, NEW JERSEY 08625

PAUL N. YLVIKAKER, COMMISSIONER

October 14, 1968

Digital Equipment Corp.
c/o Kenneth Olson, President
Maynard, Mass.

Dear Sir:

You are cordially invited to send one or two representatives to a meeting of responsible government officials and representatives of the computer manufacturing and service industry to discuss the application of computer and data handling technology to local government operations in New Jersey counties and municipalities.

The meeting will be held on Thursday, November 14, 1968 in the Department of Community Affairs Conference Room on the second floor at 363 West State Street in Trenton, New Jersey. It will start at 9:30 A.M., with coffee available then, and continue until 4:30 P.M. There will be no fee for the meeting, and lunch will be on your own to prevent any embarrassments to any of the meeting participants. A tentative agenda is attached, and we would appreciate your advance questions both on the topics planned and those of interest to you which we may have left out. The Thursday date was selected so that Friday continuation of discussion can be scheduled if it seems needed during the Thursday sessions.

The invitation list includes, to the best of our knowledge, all the major manufacturers of computer equipment and all data processing and software firms who are located in New Jersey or who have expressed a desire to do business with New Jersey State and Local Governments. We hope your representatives will be able to attend and participate.

Our purpose in calling this meeting is to discuss the needs of local governments with the industry, to enlist industry aid and cooperation in meeting these needs, and to advise industry of how we are endeavoring to set minimum standards of performance to insure quality computer and data processing services for New Jersey's local governments.

Sincerely,

A handwritten signature in cursive script that reads "Aileen Cavanagh".

Aileen Cavanagh
Chief, Research & Analysis

Enc.

sp

Application of Computer and Data Handling Technology to Local
Government Operations in New Jersey Counties and Municipalities.

Tentative Agenda

November 14, 1968
Dept. of Community Affairs Conference Room
2nd Floor
363 W. State St.
Trenton

9:00-9:30	Coffee
9:30	Introduction to purpose of meeting and briefing on status of application of computer and data handling technology to local government operations in New Jersey Counties and Municipalities. Policy of State, via Division of Local Finance. Resources of State and Local Government. Data Base Concept.
10:00-12 Noon	Panel. Applications discussed will include: Procurement Policies & Quality Control; Courts; Financial Administration; Statistics and Community Information; Real Property Tax Administration; Welfare; Physical Planning; Economic Planning; Social Planning; Transportation Planning; Education Planning; Employment (Manpower Planning); Housing
1:30-2:30	Discussion
2:30-3:00	Summary
3:00-4:00	Small Meetings by Interest
4:00-4:30	Where Do We Go From Here?

10/22 Ted Johnson to answer
Ch'd 10/14

NEW FRONTIER CORPORATION
SEOUL, KOREA

MAILING ADDRESS
SUNG DONG P. O. Box 7

RADIOGRAM ADDRESS
"NEWFRONTIER SEOUL"

October 12, 1968

President
Digital Equipment Corporation
146 Main Maynard
Massachusetts

Dear Sir:

It is with a pleasure forwarding this inquiry to you on your PDP-8 sries computers as hown in the Electronics magazines, January 8, 1968 issue.

We are interested in evaluating of market potentiality of the computers among the industries in Korea. It will be necessary you to forward complete information on this series; characteristics, price, delivery schedule, payment terms and conditions, weight, catalogs and other supplemental information deemed necessary.

Further you may provide other information on your products which you like to market in this country. Receiving your information we will study about the market feasibility of other your products.

We may later discuss about being your distributor or representative when the market potentiality is found in Korea.

Under separate cover copies of the Electronic Industry in Korea Today recently prepared by this Corporation are being sent for your reference. We hope this pamphlet will give you some guide on this industry in this country.

We will be much appreciated if your information be heard at near future.

Sincerely yours,

Eisen D. Jo
Eisen D. Jo
President

EDJ/tc



INTEROFFICE MEMORANDUM

DATE: October 4, 1968

SUBJECT: Resignation

TO: Ken Olsen
Win Hindle
Bob Savell
Pete Koch

FROM: Lee D. Butterworth

It is with regret that I hand in my resignation as of Friday, October 4, 1968. I wish to thank the company for the opportunity given to me over almost 17 years that I have been in association with Digital Equipment Corporation. It has been for the most part a wonderful experience, a good association, and one that I will never forget. Being able to start with the company from its birth and see it grow and be a part of that growth, gives one a feeling of having accomplished a great deal.

I wish to point out some observations that I have made in hopes of their being used as constructive criticisms. I am sure there are others within the company who will fall into these areas of criticism.

One of my criticisms is the manner in which raises, upgrading, and transfers are being made (or not made). A person who has been employed for a number of years loses on average increases, because new employees are brought in at a higher base every year. Why can't a percentage increase be used each year to increase the base or cost of living?

The method of upgrading in DEC is not very clear. The department manager should have the say as to what he wants to pay his people as long as it falls within the prescribed wage range and his budget. A Personnel board should not sit and judge individuals, but should control the wage limits and job descriptions of departments.

Transfers are either upward, downward or lateral, but as no increase in wages is given for a transfer, according to personnel and others, there isn't much incentive for a person to try for a different or higher position. (See "Digital and You" page 26.) Contrary statements. I would like to state my own case as an example of the above.

Having been here a good many years, my base wage is lower than it should be! I was made Manufacturing Manager of the Digital Test Systems group. This was a definite upward move and a significant wage increase should have accompanied the upgrade. It did not, even at regular review time. The department closed and I looked for a lateral transfer. The Personnel Department had no record of my having been anything other than a Staff Engineer. In accepting the position of Administrative Assistant I was led to believe that this was a lateral move and that once in the department, something could be done about making up the wages I should have received as Manufacturing Manager. NOTHING WAS DONE, and in my own opinion, this position is far from being a lateral move.

I decided to look for a position within the company which would utilize my abilities and at the same time benefit the company. I decided on the Traditional Product Line in a design engineering capacity - this job was advertised in the paper. I interviewed for this position through Personnel and was offered the job. I asked them to make an offer. THEY WOULD NOT MAKE AN OFFER, BUT WANTED ME FOR THE JOB ANYWAY.

I had received two outside offers for almost \$3,000 more per year. I reasoned that my worth to DEC in the Traditional Product Line was at least \$1,500 more/year, which was a bargain to the company and of great benefit to me.

In my opinion the last situation should have been avoided. In similar cases, DEC pays more for someone to come in off the street to fill a position, rather than upgrade, (wage-wise) from within.

I have accepted a position with Perkin-Elmer Corp. in Norwalk, Conn., as Senior Production Engineer of a brand-new Digital Branch, within the Instrument Division. I will have the complete responsibility for having their Analytical test equipment interfaced with computers (DEC's included, of which they have at least 2), and additional responsibility in the manufacture of a Laser device and IC tester.

I am looking forward to a very challenging future for myself, and I am sure yours will be also.

Lee P. Butterworth

W H D H

Radio

50 MORRISSEY BOULEVARD · BOSTON, MASSACHUSETTS 02125 · AREA CODE 617 288-5000

copies to Gabe d'Annunzio Television

Win Hindle

Stan Olsen

Nick Mazza

Harry Mann

Pete Kaufman

Jed Johnson

October 1, 1968

Digital Equipment
Mr. Kenneth H. Olsen, President
146 Main Street
Maynard, Massachusetts

Dear Mr. Olsen:

We enjoyed an excellent response to our letter of September 6th to important regional companies. Several have already sent us material which we have been happy to pass on to the public.

Some companies have questioned us as to specific identification procedure. Frankly, we are not set up to make voice print identification; so we would appreciate simply that you send us a letter designating those people authorized to release information to us. This will enable us to insure no unauthorized releases.

We look forward to good news.

Very truly yours,

Howard Reynolds

Howard W. Reynolds

Bob Lemire

Robert A. Lemire

HWR-RAL/spa



Maynard Community Chest

MUNICIPAL BUILDING
MAYNARD, MASSACHUSETTS 01754

30 September 1968

Mr. Kenneth Olsen, President
Digital Equipment Corporation
Maynard Mills
Maynard, Massachusetts 01754

Dear Mr. Olsen:

I, in behalf of the Maynard Community Chest, wish to thank you for appearing as our guest at the first annual "Kick Off" luncheon.

I would also like to express our appreciation to the Digital Equipment Corporation and its employees for the cooperation extended to the Maynard Community Chest in its first annual drive.

Very truly yours,

A handwritten signature in blue ink, which appears to read 'Robert L. Lalli'.

Robert L. Lalli
1969 Campaign Chairman

/eld

10/21
Original and enclosure to Mort Ruderman.
Answer not necessary

James E. Meinhard, Ph. D.
12472 Ranchwood Road
Santa Ana, California 92705

RECEIVED

SEP 23 1968

KENNETH H. OLSEN

September 20, 1968

Mr. Kenneth H. Olsen, President
Digital Equipment Corp.
146 Main Street
Maynard, Mass.

Dear Mr. Olsen:

Your advanced position in the field of instrumentation and electronic systems has prompted me to offer you a promising route of development which should be compatible with your present products and highly profitable. It is a new solid state technology that converts smell directly into an electronic read-out. You are no doubt aware that thus far solid state detectors have been developed for just about everything, except smell. Consequently the market potential of this invention, both commercial and military, should be quite substantial.

Enclosed is a prospectus describing the invention and possible systems embodiments applicable to its use. Also enclosed, and appended thereto, is a list of potential markets suggesting types of systems areas which might be secured by exclusive license. I believe that a modest investment could have a profitable enterprise underway in one to two years depending on the degree of sophistication required.

I would be happy to hear from you further if you have any interest in the exciting possibilities of this new technology.

Respectfully,

J. E. Meinhard

James E. Meinhard

GALLERY GRAPHICS

314 Upper Mountain Avenue
Upper Montclair, N. J.
September 23, 1968

Dear Mr. Olsen:

A number of companies such as Alcoa, the Chase Manhattan Bank, and IBM have formed collections of original works of art. The purpose of these collections could be investment, tax deduction, or public relations, but the dividend comes from the pride and pleasure of members of the organization, as well as from attention and respect from the public.

For starting a collection, the medium most highly recommended by museums and professionals is that of original prints. These are signed, limited-edition etchings, lithographs, woodcuts, serigraphs, large or small, black and white or full color, each one executed by the artist himself. Prints are especially suitable for public buildings because they are decorative, easy to arrange, and difficult to damage. In some firms, employees are invited to borrow from the collection to decorate individual offices.

I sell graphics by established American and European artists and, as a dealer-member of the Print Council of America, I uphold the standards for original prints set by that organization. Prices of these prints, set by the artists themselves, range from \$25 to \$125, making prints the least expensive form of original fine art. Unlike larger galleries, I specialize in very small editions of 1 to 50 impressions and show these in the settings where they will be displayed. Prints also make unusual and thoughtful gifts to customers or patrons, and it is possible to purchase an entire edition, a unique set of prints which can never be duplicated.

I hope that I may have an appointment to show these prints to you.

Sincerely yours,


(Mrs. Marilou Hamer)

9/24 Original and enclosures to Pete Kaufmann


SINGAPORE
INVESTMENT CENTER

745 FIFTH AVENUE • NEW YORK, N. Y. 10022 • 421-2203
WELLS FARGO BLDG. • SAN FRANCISCO, CALIF. 94104 • 391-0756

• HIN-BOCK CHAN, DIRECTOR
• K. C. SHUM, DIRECTOR

CABLE ADDRESS: INPROCEN NEW YORK
CABLE ADDRESS: INPROCEN SAN FRANCISCO

These are the first issues of a Singapore newsletter, which you will be receiving monthly from the Singapore Investment Center. The enclosed folder will permit you to file each issue for quick and convenient reference.

Our aim is to acquaint you--in brief, readable installments--with Singapore: its geography, labor force, economic and political stability, investment incentives, and port facilities.

In the past five years, some 170 foreign companies have invested more than \$100,000,000 in manufacturing and export operations in Singapore. If your firm is interested in selling to the Southeast Asia market of 120,000,000 people, or in establishing a secure export base for markets around the world, Singapore deserves your attention.

You'll like doing business in Singapore--where successful enterprise has been a way of life for 150 years.

Singapore Investment Center
C. B. Chan
Director



INTERFACE MECHANISMS 5503 232nd Street S.W., Mountlake Terrace, Washington 98043 (206) 774-4156

September 19, 1968

Mr. Kenneth Olsen
President
Digital Equipment Corporation
146 Main Street
Maynard, Mass. 01754

Dear Ken:

I very much appreciate the time you were able to spend with Jack Flynn and me talking about our Dual Image Recorder.

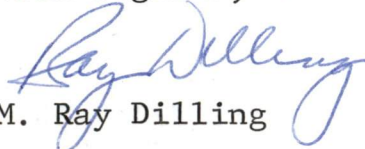
You may have already had a moment to reflect on my question of potential improvement in computer efficiency based on message (unit or record) vs. character-at-a-time processing in a time sharing application where data rates are pushed up to 120 characters per second inbound and 40 characters per second outbound. As you may recall, I expressed frustration at not being able to rationalize various opinions on this concept.

It still seems more efficient to move each different customers' potatoes from the front door to the storage bins handling a bag at a time, than just one potatoe at a time.

I would also like to remind you of our interest in the keyboard information and will look forward to receiving details on whom we should contact.

Again, many thanks for the opportunity to meet and visit with you. I would cordially invite you to stop in and see our operation if you happen to be in the Seattle area.

Warm regards,


M. Ray Dilling

MRD/jj

cc: David Slotnick

DATRON INC.
P.O. BOX 738
FRAMINGHAM, MASS. 01701
TEL. 617-881-3160

September 17, 1968

Mr. Kenneth Olsen, President
Digital Equipment Corporation
145 Main Street
Maynard, Massachusetts 01754

Dear Ken:

As I recently discussed with you on the telephone, I am enclosing a copy of Datron's proposal package submitted in response to Digital Equipment Corporation's specifications dated July 26, 1968.

Within the next two weeks, I plan to advise you and perhaps to arrange a convenient time for you to witness the operation of the basic functions of our printer. In the interim, if there are any questions relative to the proposal, pricing, technical contents, delivery, or other matter, please feel free to contact me.

I look forward to seeing you again soon in the very near future.

Very truly yours,

Seldan A. Lazarow
Seldan A. Lazarow
President

SAL:js

September 17, 1968

Digital Equipment Corporation
145 Main Street
Maynard, Massachusetts 01754

Attention: Mr. William Burns

Dear Mr. Burns:

Datron is pleased to submit the attached Proposal for a low cost Medium Speed Communications/Line Printer in response to your request of July 26, 1968.

Datron's Medium Speed Communications/Line Printer is currently under development and is expressly designed for applications like those of Digital Equipment Corporation. The fact that it can be used as a computer output printer for either computing or communications applications makes it possible to have only one printer in your product line instead of two or more. The small size and desk top mounting of the Datron Printer make it particularly well suited to Digital Equipment Corporation's line of computers. In addition, the inclusion of auxiliary storage within the printer's basic electronics substantially reduces both the required number of signal lines and the buffer/controller electronics.

In keeping with understandings reached during conversations with Mr. Menno Koning, we are proposing a standard Datron printer, including the mechanism and associated basic electronics. No buffer/controller electronics are included in the proposal since they might take any of several forms, depending upon Digital Equipment Corporation's detailed requirements.

The printers proposed will contain 80 active columns, Datron's standard 64 character font, 6 lines per inch, sprocket driven paper feed, and arranged for 115 volts, 60 Hz power. No vertical format control unit will be supplied.

Datron can supply three prototype units for evaluation by Digital Equipment Corporation at a price of \$6,000.00 each. The first of these three prototypes can be delivered in May 1969, with each of the remaining two units deliverable during June and July 1969 respectively. Production units will be available for delivery in the early part of the fourth quarter of calendar 1969. This price and delivery will remain firm for 60 days from this date.

The price for a quantity of 50 to 100 printers per year, as described in the proposal, is expected to be less than \$4500.00 each. In quantities of 250 or more per year, the per unit price should be less than \$4000.00. Within the next few months, Datron will be able to furnish firm prices.

Datron Inc. is a recently formed company engaged in the design, development, and manufacture of computer peripheral equipment. Its principals have collectively some 40 years of experience in the computing and related industries and feel eminently qualified to provide printers for Digital Equipment Corporation's need.

As you will appreciate, this letter and the attached proposal is for Digital Equipment Corporation only and is not to be disclosed outside of Digital Equipment Corporation, or to be duplicated, used or disclosed in whole or in part for any purpose other than to evaluate this proposal.

Datron appreciates the opportunity to submit this proposal and requests that Digital Equipment Corporation feel free to ask any questions about the device at any time. Our plans include having an operational device by mid October 1968, and we cordially invite you and your associates to witness its operation at that time. We will let you know in a few weeks to establish a convenient time for this visit.

Very truly yours,

DATRON INC.

Robert H. Curtiss

Robert H. Curtiss
Vice President

RHC:js

cc: Mr. Kenneth Olsen
Mr. Menno Koning

OWENS-ILLINOIS

GENERAL OFFICES (I) TOLEDO, OHIO 43601

RECEIVED

SEP 18 1968

KENNETH H. OLSEN

EUGENE A. OSTER
Director Engineering Research
CORPORATE RESEARCH

September 16, 1968

Mr. Kenneth H. Olsen, President
Digital Equipment Corporation
146 Main Street
Maynard, Massachusetts 01754

Dear Mr. Olsen:

It was a pleasure to talk to you by telephone this morning and receive an invitation to visit your offices in Maynard at 10:00 a.m. on Friday, September 20, 1968.

As we discussed over the telephone, the purpose of this meeting is for us to make you and your staff aware of the Owens-Illinois program to evolve a plasma panel display product which now is in the early stages of its development. We plan to show you a short 16 millimeter silent color movie showing an early panel operating with a PDP-8S unit. Under proper conditions and assuming progress in development, a few such panels might be available for your testing in a few months should there be interest on the part of your firm. These early samples will have 33 or 40 dots per inch resolution (1000 - 1600 dots per square inch) and an active display area of a four inch square (16 square inches).

We are looking for firms who will develop terminals around our future display panels so that production sales of our component can result. Any early information or technical requirements that you care to give us regarding display panel needs for your developments would be appreciated. Your guidance is generally sought for the use of the panel in the electronic-communication industry.

Accompanying me on this trip are Mr. Larry Hecht and Mr. Jon Klotz from our new products organization. Larry is the project manager for plasma panel business.

OWENS-ILLINOIS

GENERAL OFFICES ① TOLEDO, OHIO 43601

EUGENE A. OSTER
Director Engineering Research
CORPORATE RESEARCH

Mr. Kenneth H. Olsen

September 16, 1968

Page 2

Only if you feel it appropriate, please feel free to invite Dr. Samuel Bodman, Technical Director of American Research and Development Corporation to attend.

Sincerely yours,

Gene Oster

EAO:jh

CC: S. W. Bodman
J. W. Hackett
L. W. Hecht
J. W. Klotz
R. T. Wallace
File P-5a

OWENS-ILLINOIS

GENERAL OFFICES ① TOLEDO, OHIO 43601

RECEIVED

SEP 18 1968

KENNETH H. OLSEN

EUGENE A. OSTER
Director Engineering Research
CORPORATE RESEARCH

September 16, 1968

Dr. Samuel W. Bodman, Technical Director
American Research and Development Corp.
John Hancock Building
Boston, Massachusetts 02116

Dear Dr. Bodman:

Thank you for your letter of September 12 and the descriptive booklets on your organization.

I was able to contact Mr. Kenneth Olsen at D.E.C. and arrange a future visit. Allow me to thank you for your efforts in our behalf.

Also, it would be a pleasure to meet you personally on one of the several times a year that business takes me to Boston. I will attempt to make some mutually satisfactory arrangements in the near future.

Sincerely yours,

EAO:jh

bcc: Mr. Kenneth H. Olsen

Attachment in Letters file

CUNNINGHAM-LIMP COMPANY

CUNNINGHAM-LIMP INTERNATIONAL · CUNNINGHAM-LIMP LIMITED



DESIGNERS ★ ENGINEERS ★ BUILDERS

OFFICES IN PRINCIPAL CITIES

1400 N. WOODWARD AVE.-BIRMINGHAM, MICHIGAN 48011 ★ AREA CODE 313 ★ 647-8600

September 13, 1968

Mr. K. H. Olsen, President
Digital Equipment Corp.
146 Main Street
Maynard, Massachusetts 01754

Dear Mr. Olsen:

We are pleased to enclose your personal copy of our recently published book, "The Comprehensive Approach to Facility Expansion." As a top executive of one of America's leading corporations, we think you will find it helpful in planning for future growth and profits. It would be a pleasure to send a copy to anyone else in your company that you may designate.

Our engineering staff is available for consultation without obligation. May we have the privilege of discussing our facilities and experience with you?

Sincerely,

CUNNINGHAM-LIMP COMPANY

President

MEC: tm
Enclosure

SAN FRANCISCO
LOS ANGELES

9/18/68
Harry Mann

DEAN WITTER & Co.
INCORPORATED

NEW YORK
CHICAGO

MEMBERS NEW YORK STOCK EXCHANGE

45 MONTGOMERY STREET • SAN FRANCISCO, CALIFORNIA 94106

TELEPHONE (415) 392-7211

September 12, 1968

Mr. Kenneth H. Olsen,
President
Digital Equipment Corporation
Maynard, Massachusetts

Dear Mr. Olsen:

Congratulations are in order on the success of your recent New Issue & Registered Secondary Offering of 315,000 shares Digital Equipment Corporation Common Stock. The fine reception of the offering evidences the high regard in which your company and its management are held.

Dean Witter & Co. had a major underwriting position of 8,500 shares and 7,200 shares for retail, which we distributed among our various divisions as follows:

Northern Division (San Francisco)	430 shares
Southern Division (Los Angeles)	50 shares
Eastern Division (New York)	<u>6,720</u> shares
	7,200 shares

While we endeavored to give the issue wide distribution, I know you must be pleased with the heavy institutional demand in the east as indicated above.

We are proud to be identified with this business in a substantial way, and we continue an active interest in the market for your stock. Thank you again for including us among your major underwriters.

With kind regards,

Very truly yours,

Wendell W. Witter
Wendell W. Witter

WWW/hj

UNIVERSITY OF MARYLAND

COLLEGE PARK, MARYLAND
20742

RECEIVED

SEP 13 1968

KENNETH H. OLSEN

COLLEGE OF ARTS AND SCIENCES
DEPARTMENT OF PHYSICS AND ASTRONOMY

September 11, 1968

Mr. K. Olsen, President
Digital Equipment Corporation
146 Main Street
Maynard, Massachusetts 01754

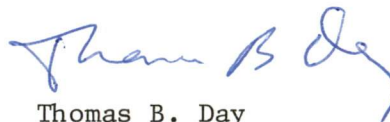
Dear Mr. Olsen:

You once requested that I bring to you any criticisms of DEC products or performance.

The enclosed report contains such criticism of DEC performance. It also contains recommendations whose implementation would alleviate such criticism. Some of these recommendations have not been discussed as fully as they might, either because they involve personnel or because they involve your office too closely. Further discussion is always possible.

I have enjoyed the opportunity to perform this task for DEC. It has been, and remains, my favorite company. Do not hesitate to call if I can be of further assistance.

Sincerely yours,



Thomas B. Day
Professor

UNIVERSITY OF MARYLAND

COLLEGE PARK, MARYLAND
20742

COLLEGE OF ARTS AND SCIENCES
DEPARTMENT OF PHYSICS AND ASTRONOMY

September 11, 1968


Mr. Allan Titcomb
PDP-10 Marketing
Digital Equipment Corporation
146 Main Street
Maynard, Massachusetts 01754

Dear Allan:

Enclosed is my PDP-10 report. I do hope it is not dismissed lightly, but is taken for what it is - the outcry of a dedicated but disillusioned friend of the Corporation.

Please consider this letter of transmittal as an invoice against DEC Purchase Order No. 91714. Anything you can do to expedite payment would be greatly appreciated.

Sincerely yours,


Thomas B. Day
Professor

/vi
cc: (3) Peter L. Waldron

P D P - 10

A Critical Review

T. B. Day

September 1968

Forward

This review came about as the result of a visit to DEC during May, 1968. In a subsequent phone call, it was prescribed to be an informal, first-cut response of a user to some rather broad questions. In fulfillment of that prescription, what is presented is very much informal, and is clearly not a carefully researched document.

The interest of these problems, and much of the background thereto, has been introduced to me over several years in continually enjoyable and challenging contacts with Mr. Robert Lane. To the extent, therefore, that this report contains anything of merit, the credit properly belongs to him. Blameworthy contributions are strictly my own.

Contents

1. Introduction
2. Market
 - A: General
 - B: Physics
3. Product
4. DEC Performance
5. Miscellaneous
6. Conclusion and Summary of Recommendations

1. Introduction

With the PDP-10, the Digital Equipment Corporation has a product which almost sells itself. Almost - but not quite. For no product sells itself to people. Only people sell products to people. And the closer one comes to monopolizing a market - whether with the perfect product, or through negligible completion (i.e. non-existent, or unintelligent) - the more pitiless becomes the spot light of attention of the market on the performance of those selling people, as well as performance of the product. This lesson has been well exemplified over the past century by the cases of the railroads, steel, gas and oil, automobiles, insurance, airlines, communications, IBM. The fruits of that lesson are most carefully applied, at present, by the Telephone Companies, who are most careful of their people to people problems.

Clearly, we are not interested in the anti-trust aspects of these examples. Rather, they are mentioned to recall to mind the qualitatively different attitudinal relationship which exists between these suppliers and their market compared to the supplier who has not yet "arrived".

With the PDP-10, DEC has about arrived. While it has non-negligible competition, it has a product well matched to a strong market. Some interesting problems still remain in identification of market, manufacture of product, costing, delivery, service and support. Still, the most important problems have to do with how to cope with success - and these are qualitatively different from those involved in how to achieve success.

Some of the most interesting problems attendant on success are the major questions facing the Corporation: how big is big, and is it worth it; how to budget (and finance) new technology; how dependent to be on

suppliers; expansion of market frontiers vs. supply problems; how to continually challenge your best people (assuming you can correctly -- identify and attract the best).

While these Corporation problems are recognized as being of prime importance, they are only briefly touched on in passing. Rather, this review concentrates on a single product -- the PDP-10. We will try to consider the market for the product; the product itself; and DEC's performance. We shall find that the market is strong and virtually unexplored: that the product is good, although with some weak points: but that DEC's performance is spotty at best, and reveals some fundamental problems.

The conclusion is that the Corporation is not yet geared to cope with the success which this product will generate; and that it has very little time to settle its internal difficulties while simultaneously trying to consolidate and improve its market position.

2. Market

A. General

The market for the PDP-10 is that staked out in the broad central portion of the spectrum extending from \$100,000 to \$1,000,000. DEC has a firm grip on the lower (below \$100K) end of the purchasing power spectrum, and as time and technology advance, this grip should be consolidated and paralleled by suitable Corporation changes. DEC has shown no interest in pursuing the higher (above \$1M) end of the spectrum, and that single decision accounts for its current success.

The increasing importance of the central portion of the market spectrum will come about from two opposing forces. Firstly, the accumulation of experience with very large systems (e.g. 6600, 1108, /75, etc.) highlights, even to the decision-making committees, that it will be some time before software catches up with hardware; and, also, even when it does, it will not do all jobs. The second force is a resurgent individualism of users, people who need and/or want "their" computers for "their" job.

The combination of these forces is resulting in more money appearing in the central part of the market, and both directions should be considered in selling. On the one hand, monies which have been frozen in anticipation of a big facility can be liquified in favor of a cheaper, working facility. On the other hand, an increasing number of hard-driving individualists can somehow scrape up the where withal to do just a little bit better.

In pursuing these two points of view, the potential markets are everywhere. In the domestic marketplace, the market level is the depart-

ment of a University; the bureau or division of a government Department; the local branch of a large Corporation. In Canada and most of Western Europe, it is individual Universities and companies; departments of the governments. In Eastern Europe, Asia, Africa and South America, it is the largest companies, and the whole government.

It is no accident that of the 20-odd PDP-6's sold, two-thirds were to research-oriented Universities or companies. Of the PDP-10's on order, more than half the customers are this type. They are all characterized by individuals making the decision for a PDP-10, as opposed to a big committee. To the extent that remains true, either because of the individuals' own initiative, or because a bigger committee delegates the decision to a few knowledgeable people, DEC has an entré.

There is a price to be paid, however, for recognizing the PDP-10 market as knowledgeable, decision-making individuals. It is that the Corporate image, its interface with this market, must consist of similar types of people - and not only in sales. But also in research, advertising, product line, service, support - all should be oriented towards handling individual people.

It is not as bad as it sounds, however. Doubling or tripling present PDP-10 sales is still only talking about roughly 100 people - about the number of people that each of these individuals deals with himself all the time. So by temperament, personal experience and reason, these individuals, who collectively make up the PDP-10 market place, are not very sympathetic to a corporation which deliberately, or otherwise, loses sight of their individuality.

We now make a few specific recommendations about identification of the PDP-10 market, and exposure of the product in that market.

The advertising and general sales approaches must go forward on two levels; both, however, pointed towards the same kind of individual. On the one hand, the Fortune trade; on the other, the Scientific Research trade. Campaigns on all levels include advertising, fairs, meetings with working demonstrations, etc. On each level, there is domestic and foreign activity; foreign specifically including the smaller nations like South America, East Europe, Asia, Africa. Within each such market lies government, industry, and education (loosely speaking, including research, etc.)

While none of this is particularly new, and most of it is already evident to some degree in DEC's performance, the additional emphasis on individual identification, contact and follow through should be noted. What it implies is that DEC must give added emphasis to its own individuals in the field - salemen, district sales and service managers, etc. These people must have a degree of confidence and flexibility to match the customer's. Otherwise (the current situation) sales opportunities are lost, local representatives are by passed, and DEC's reputation becomes one of a cumbersome, centralized impersonal production facility.

Many of DEC's current problems in the marketplace are due to duplicated and snarled lines of command and communication. Besides that segment of the market which you can break down and aggressively pursue, there is also a (large) fraction which comes to you, essentially unsolicited. Such costumers will be put off and lost by inept or confused handling. That is the current situation.

Since this is a flaw in Corporation performance, rather than in generation, identification or pursuit of market, we will put off further discussion of it until section 4. We close this part of this section with the comments that selling in any marketplace is a two-way proposition. DEC is blessed with a ready-made market for the PDP-10. The problem is not so much in getting the Corporation message to the market, but of passing on the market's cries of anguish to the corporation.

B: Physics Market

The physics market follows the same breakdown as outlined above. On the domestic scene, there is the government, industrial, and educational market.

The government market can be traced through the budget to national laboratories (AEC and NASA) and bureau and agency support (Applied Physics Lab., weather bureau, NBS, NOL, etc.). Each of these is a potential market individual, or more.

The industrial labs, e.g. Bell, RCA, Aerospace, etc. can probably be approached at several points, either within the same complex, or in different parts of the country.

The educational market includes not only University groups, but should include future concern in elementary and secondary schools. Here the use of time-sharing, CRT serviced stations will blossom.

In the Universities, again one looks for research-directed with enough money, need and drive to get a computer. The sources of money are: local; NSF; AEC; NASA; ARPA.

For NSF, a list of grantee institutions of Centers of Excellence can be pursued as each year is granted. The other major allocations from NSF are in astronomy, and in helping computer centers - both fruitful market points.

In AEC supported research, the annual report which is publicly available gives, particularly, the size of budgets supported. (The same report also deals with national labs.)

Among those University groups sufficiently large to need computing will be cyclotron, high-energy, plasma (thermonuclear).

Most NASA - University money goes to computer centers and to large space physics groups. Finally, ARPA support, which might be markets for PDP-10's, is mainly in the materials research interdisciplinary laboratories.

All of these specifically physics markets are, of course, obvious from the government budget and/or company reports. In total, including government labs, industrial labs and University-based research, there is probably a starting list of 50-100 individuals; among which there should certainly be twenty or more sales if aggressively and intelligently pursued, even in spite of the deteriorating fiscal situation.

The principle need of this physics market is for a reasonably cheap but powerful computer, ready for delivery. Thus, the PDP-10 should have a relatively easy time in this market, where the only real competitor is the Σ -5. DEC starts with a good reputation in the market - one of making computers easily adaptable to physics equipment. The reputation does not include expertise as such in computers, but rather is for personal and honest dealing and service. It is unlikely that any company (except possibly CDC with the 6600) enjoys a reputation as expert in computers; such

a reputation would not be an overly valuable commodity, as it is too easily lost.

DEC should concentrate on delivering on its promises and reputation. This is more important to the individual physicist than any bells and whistles. If the individual physicist who is sufficiently senior to decide to buy a PDP-10 bases a research time schedule on DEC promises, and then has that schedule delayed, that ill will can do more harm than ten times the number of salesmen will repair. The current PDP-10 advertising is quite good (although it should be increased significantly in coverage). But the physics community, like most professional ones, is rather tight knit; decisions involving several hundred thousand dollars get talked about beforehand; and these naturally skeptical people believe their colleagues much sooner than they believe either advertisements or salesmen.

3. Product

We will define as the product that which the customer gets, or can reasonably expect to get, when he decides to purchase a PDP-10 system.

For our purposes, we will break this product up into

- a) contractual negotiations and delivery
- b) central processor and memories
- c) peripherals
- d) software
- e) service and support.

Part a) is really an extension of the customer-DEC market place encounter. As such, there should be, but is not, corporation solidarity of representation. In other words, what the salesmen promise, the lawyers should write up, the engineers should make, and management should deliver.

We repeat: this is not, at present, the case.

Salesmen, when they can be found, are not really up on the product, its technical performance, or availability for delivery. This seems to apply both to salesmen in the field, and people in Maynard who are willing to discuss any of these items. The difficulties are of three kinds:

- 1) lack of people who are really technically qualified to talk to the kind of customer discussed as the market in the previous section - hard-nosed knowledgeable, decisive individualists;
- 2) confused lines of command in DEC;
- 3) delivery (and other) troubles with DEC's sub contractors.

We will return to the first and second problem in the next section. The third problem, sub contractors, is a fundamental problem for the Corporation and will be discussed with c), peripherals.

While difficulties in this part a) of the product might normally be considered to be just part of the hard life in computing, DEC should appreciate how awkward a position this might create between a customer and his source of money. If the source is a Federal agency, the customer might find himself defending DEC's previous bad performance during bidding discussions; or, unexpended Federal funds, due to delivery delays, might prove embarrassing; or DEC finds that in performing badly for one customer, it has crossed itself off that agency's list forever.

The foundations of relationships with individual customers should always be unflinching personal courtesy; precision in discussion and understandings; and trust. It should be the ultimate in Corporation transgression to have to fall back on promises.

For part b) of the product, DEC gets good marks for its own contribution, bad for its sub contractors. The central processor, in fact most of the layout, wiring, etc., of the PDP-10 is very good. There are delivery problems with memories, but presumably they will work out.

In part c), peripherals, DEC again is at the mercy of its sub-contractors. While the devices tend in general to be good, and meet specs, in any individual instance there are problems. This is true of the magnetic tapes, the card readers, the discs. Not only does this middleman position ill befit DEC's independent stature, it may undermine its market position. At a minimum, DEC needs a much better understanding of each sub-contracted item; at a maximum, it should reconsider its resources and its decision to rely on outside suppliers.

Either way, however, DEC should feel the same obligation to stand behind any piece of equipment it sells - whether DEC-tape or disc. It

does not do this now, but tends to wait for the supplier to solve the problem, passing the particular customer on to them.

For item d) of the product, software, DEC is very good. It tends to get ahead of itself in delivering various manuals, etc., but this is a peccadillo when placed next to its achievements.

There are two flaws, however: delivery of documentation; and updating, or incorporating changes from the field. These are flaws particularly irksome to the customer, and should be easy to remedy - given, again, knowledgeable management individuals, sensitive to the customer, with a charter and desire to follow through.

For part e) of the product, service and support, DEC gets poor marks. While its field engineers all seem good, they are quite restricted in individual freedom with their customers. The service contract is misleading (on out of hours service); and manpower is so limited that engineer coverage in case of illness really doesn't exist. Again, all troubles lead to centralized Maynard, with the usual frustrations for all concerned.

One of the principle problems with the PDP-10 service aspect of the product, from the physics community point of view, is the amount of trouble the whole system gives. DEC's reputation in its smaller (DEC-made) computers was trouble free running. The PDP-10 is much larger, and includes non-DEC-made components; it also has more troubles. These may not be cause and effect, but certainly seem to be. It comes, therefore, as some surprise that one cannot expect every day to have a working PDP-10.

One consequence of this should be a heavily stepped up campaign for getting, training and keeping engineers. Another should be to try to

isolate and insure against the major troubles. But most importantly, it is necessary for DEC to adopt the attitude that it will certainly feel responsible for its equipment and service under contract.

Most of the problems with the DEC product PDP-10 are related to DEC personnel and performance, or to its supplier dependency. The former will be taken up again in section 4. The latter is presumably discussed in high Corporation councils periodically, as it depends on fiscal base, expansion plans, etc.

Besides improvement in DEC performance, improvements in the product involve two areas; integrated circuitry to lower the price; and further software support. Of the two, the first should be pushed hardest, i.e. the PDP-10I should be brought out as fast as possible. Making that part of the product cheaper and more standardized may bring some relief in the peripherals problem by loosening some resources.

Emphasis in software support should shift to individual customer support in addition to continued system support. While this is a risky course of action (people might leave) it is relatively cheap and can be a very effective sales point. This is not the same as applications programming - rather it is recruiting DEC programmers to help customers in their own programming. Most physics groups, especially, large enough to have a PDP-10 will include at least one man capable of generating their own applications work. What is really needed for DEC are knowledgeable, willing and company cleared-for-action systems programmers.

4. DEC Performance

In the fundamentals concerning the PDP-10, DEC has performed very well. It has anticipated the market for medium computers and moderate time sharing, and is essentially ready in design for the demand. It starts with a good reputation for its own products and service, and particularly for representatives who "try harder".

In spite of all this, DEC is in real danger of being ruined by success.

The simplest way to dramatize the problems facing the Corporation is to ask the reader to perform a simple exercise. Forget all you know of the company, and place yourself, for a moment, in the position of an average PDP-10 customer. Such a person is an expert in his needs; reasonably aware of what is possible in computers; decisive and certain (possibly wrong) in his judgements of what DEC can and should do for him. To whom does he go to buy a PDP-10? The local salesman; district sales manager; vice-president for sales? To a marketing representative; marketing manager; product line manager? Which of this army of managers will help him with delivery; with service; with systems problems? Whom can he really hold responsible for broken promises, misrepresentation?

The fact of the matter is that at present there are almost as many DEC employees with the title vice president or manager who have to do with the PDP-10, as there are PDP-10 customers. It requires the customer to supply a full-time-equivalent of his own just to communicate with this hydra-headed organization.

If pressed for action, a typical one of these DEC management-level individuals may reply with some asperity that the problem, request or

complaint is really being dealt with at length by the appropriate person (rarely the speaker). The customer is left to ponder with sympathy President Kennedy's occasional wry comments on dealing with his own State Department.

At the moment, DEC's handling of its customers bears a striking resemblance to that of Volkswagen of America: it is cavalier to the point of discourtesy. And the unspoken (occasionally spoken) reason is the same - there are plenty of other customers for this best of all possible products. Presumably the reason this attitude is becoming visible (if not prevalent) in the PDP-10 area of DEC is also paralleled by VW - unit sales are what counts, not customer satisfaction.

While this is an understandable form of control, with a customer list numbering only half a hundred or less, it is very dangerous. Moreover, there is intelligent competition from SDS, IBM, even Hewlett-Packard. If, in fact, DEC recognizes the value of customer satisfaction, it should arrange for control of that commodity at the highest level. Besides re-organizing; and thoroughly relearning how totally uncaring a customer is about DEC's internal machinations or problems; the customer should be represented in the President's office. There might be a special assistant to the President, an ombudsman type, court of last appeal, what have you.

It would be very difficult to find a person for such a position; but the challenges would be great, and the accomplishments attractive. Besides a sense of delicacy for the internal and external anomalies of the job, such a person should have the ability to use (or not use) tact as required. But above all, he must be completely in the confidence of

the customer - understand the problems, speak his language, be completely dedicated to getting and keeping him on the air, know how to do it, and the customer must know it.

At the same time, of course, such an assistant to the President for customer relations must enjoy the complete confidence of the President. He must be a significant member of the important committees, like the Operations Committee. While there are many facets to such a position, it depends completely on the President for its success; so that further discussion here would be pointless. It can be pursued elsewhere.

It might be argued that all DEC employees, and particularly high management personnel, who have to do with PDP-10 (or other) line should naturally be oriented towards customer satisfaction. The burden of this section is that, as desirable as that may be, it simply is not so. And further, as the pressure of increased sales grows, it will become less so unless a separate step is taken by the chief executive officer of the Corporation.

5. Miscellaneous

In this section we collect some additional, disjointed, observations.

a) The general line of DEC advertising has been very nice - particularly the "Teddy Bear" campaign. However, it should be possible to maintain this tone and still raise the level of appeal slightly (at least for its scientist market). Specifically, within this kind of format to push the four main attributes of the PDP-10; low cost; high power; adaptability to special purpose peripheral devices; and really nice software. One possible approach is to highlight comparisons, say with the standard 7094, for execution of jobs.

Another would be to highlight examples. There was some talk of a brochure including uses by current customers. This might be mailed to prospective customers, and excerpted in advertising campaigns.

b) Everyone recognizes the critical shortage of programmers and engineers. It should be possible for a company like DEC to imaginatively combine self-interest with public service in this regard. Why not give free classes: within Universities, and high schools; in depressed areas; etc. Of course it would be a financial drain, but not too large. And if each of, say, fifteen centers in this country, five abroad, returned each year with one or two brilliant engineers and programmers for DEC, what a return! Not to mention the other users turned out, and the publicity benefit.

c) DEC might re-consider its policy of not renting or selling on time. Particularly for Universities or small research/educational groups, the ability to spread purchase over three to five years would be valuable.

d) In approaching potential customers like Physics or Astronomy Departments, or other sub-units within a (usually State) University, DEC will find itself in the middle of a very delicate and complicated three-cornered struggle. On the one hand, the group's computing support money usually comes from Federal sources where computer usage charge policy is not yet settled. On the other hand, there are exactly corresponding unsettled questions within the University, where the magnitude of capital investment needed for a computing center is only just being appreciated. DEC has very little to contribute in the local solutions of these conflicts, and it behooves their representative, to move very circumspectly in advancing the virtues of a PDP-10.

6. Conclusions and Summary of Recommendations

Conclusions

There is a large and growing market for which the PDP-10 system is well conceived and built. Besides the known scientific research customers, other individual customers should be sought in government, business and education. The future demand for PDP-10 will come increasingly from schools, sub units of firms and government, and overseas. To meet that demand, not only should the PDP-10I be pushed, but extra work is needed on such peripherals as smaller and more compact line printers, CRT stations, etc.

Very few, specifically applications programs, should be pursued, but a large effort should be made in supplying particular programmers to help get installation going. This is particularly true of such customers as exist in foreign markets, non-research education (e.g. public school districts), etc. The emphasis here should be on achieving tailor made, self supporting systems.

While the product is good, and the market strong, the sale and delivery by DEC of the PDP-10 is bad. The lines of authority are confused and duplicated. Local field offices do not have sufficient manpower, expertise, freedom or central backing. Too many voices speak for DEC, and they say different things. The Corporation image is deteriorating. Commitment to external suppliers has put the PDP-10 in an uncomfortable delivery situation. Promises are not being kept. In its preoccupation with its growing pains, DEC is losing sight of the customer's schedules and problems.

Recommendations

1) An assistant to the President for customer relations; a court of last appeal; an ombudsman.

2) More knowledgeable, authorized people in the field, both sales and service.

3) The organization chart should be re-worked. Sales and service, marketing, product line, etc. are confused and confusing. The interface with the customer should be simple, comprehensive (and comprehensible) and knowledgeable.

4) Re-orientation of service philosophy, personnel and contracts. The PDP-10 is not just a large PDP-8 or -9. It has more problems, different problems. It is not as reliable as the smaller systems, and perhaps cannot be.

5) The Corporation should review its policy of reliance on other suppliers for peripheral devices. At a minimum, there should be closer identification of DEC with the devices it supplies. After a cheaper, integrated circuit version of the PDP-10, the highest priority should be given to smaller, cheaper, more rugged and reliable peripherals. This should take precedence over advances in core memory.

6) The Corporation should review its time-sale policy, particularly with an eye on the apparently smaller - user market (e.g. high schools).

7) The advertising and sales campaign should give additional weight to comparisons of jobs done, ease of programming and debugging, etc., as well as cost. Such campaigns, and the whole Corporation approach should reach out and convince the individual customer that his needs will be considered and helped best with the Digital Equipment Corporation's PDP-10.

information sciences and technology



AUERBACH
corporation
center profes-
sional building
280 washington
st., brighton
mass. 02135
617-787-1500
cable: auerinfo

September 10, 1968

Mr. Kenneth H. Olsen
President
Digital Equipment Corporation
Maynard, Massachusetts

Dear Mr. Olsen:

Enclosed you will find the literature you requested. The article on Mohawk is quite old, and I'm sure the state of the art has improved.

The Boston Office of AUERBACH has progressed nicely this past year, and we have done some interesting software work locally. If we can be of assistance to you in any areas of software design and implementation please call me.

Very truly yours,

AUERBACH Corporation

Edwin F. Kerr
Manager - Program Development
Boston Office

Enc.

maf

philadelphia
washington
new york
boston
the hague

WHITE, WELD & CO.

125 HIGH STREET
BOSTON, MASSACHUSETTS 02110

September 10, 1968

Mr. Kenneth H. Olsen
Digital Equipment Corporation
Main Maynard
Arlington, Massachusetts

Dear Mr. Olsen:

Mr. Harry S. Mann suggested that we drop you a note outlining our services.

Enclosed is our annual report.

In addition to general brokerage facilities, we are very active underwriters. Of interest to substantial investors are our block trading facilities and private placement capabilities.

We feel our firm is well equipped to offer you some unusual investment ideas.

Very truly yours,

WHITE, WELD & CO.

Frank C. Byrne, Jr.

Frank C. Byrne, Jr.

FCB/fsb

Enclosure

PAINÉ, WEBBER, JACKSON & CURTIS

ESTABLISHED 1879

MEMBERS
PRINCIPAL STOCK AND
COMMODITY EXCHANGES

24 FEDERAL STREET
BOSTON, MASSACHUSETTS 02101

TELEPHONE
(617) 482-9600
CABLE - PAINWEB, N. Y.

*copies to: Labe d'Annunzio
Win Hindle
Sean Olsen
Nick Mazzarese
Harry Mann
Pete Kaufmann
Ted Johnson*

September 6, 1968

Digital Equipment
Mr. Kenneth H. Olsen, President
146 Main Street
Maynard, Massachusetts

Dear Mr. Olsen:

This is to inform you that we broadcast a daily five minute program called Spotlight on Business on WHDH-AM at 6:35 p.m. sponsored by Flying Tiger.

In addition to international and national news coverage we try to focus special attention on timely and significant new developments in local companies.

Should you have important news items, please call us. If you plan to avail yourself of our services, please reply for proper identification. In this way we hope to be of particular service to you and the local economy.

Very truly yours,

Howard W. Reynolds

Robert A. Lemire

HWR-RAL/spa

K. H. OLSEN

10/21/68

Please read and route:

Pete Kaufmann ✓ 10/22/68

Stan Olsen ✓

Nick Mazzaresse hgm - NO

Win Hindle No - mmt

Ted Johnson ✓ NO

✓ Harry Mann (H) - NO

Any interest?

Harry

Ken

STI

10/21

4 emerson drive acton, massachusetts 01720 (617) 263-5383

Routed to: Pete
Stan

Assignment? Nick
Win
Ted
Harry

3 September 1968

Digital Equipment Corporation
146 Main Street
Maynard, Massachusetts 01754

Attn: Kenneth H. Olsen, President

Dear Mr. Olsen:

Please take a moment to consider the new consulting service described in this brochure. It has some important differences:

1. We are specialists in a comprehensive communications engineering service, senior in all aspects. That is hard to find. (I know because I've been in your position and tried.)
2. We take pride in our ability to understand your problem and help define it - you won't have to 'pre-digest' it for us. Also, our output will be in the form you want, understandable and ready for use.
3. STI was formed by people dedicated to the socially constructive potential of engineering. Our profits go to independent R&D programs devoted to the application of technology to human needs.
4. Our work is guaranteed. Any portion of our effort which proves defective in any way will not be billed.

Let me suggest that you try us on a small assignment at no risk to you - if we do not make a valuable contribution there will be no charge. I will call you within the next few days to see if you have any immediate needs. Thank you for your consideration.

David S. Dayton
President



DSD:jls
enc.





4 emerson drive acton, massachusetts 01720 (617) 263-3456

STI CONSULTING SERVICES

- Systems engineering: communications and related disciplines
- Circuit design, breadboarding, and test
- New product development
- Supporting services in marketing, training, writing, and management

STI consultants provide engineering and management skills at a senior level, with the experience and communicative ability necessary to respond efficiently to both analytical and innovative challenges.



STI offers comprehensive system engineering services in communications and related disciplines (e. g., radar, sonar, navigation). The emphasis is on practical applications of communications theory rather than academic extensions of it. The staff has worked effectively in all aspects of the field from broad conceptualization through design detailing and test. This involves skills which are often applicable with equal value to such activities as new product development, technical marketing support, training and writing. Some typical assignments are suggested in the following outline

1. System design and analysis

Operational analysis and modeling, including computer simulation where appropriate

Requirements derivation, performance specification

Synthesis of system design alternatives, applying:

- modulation and coding theory and practices
- synchronization techniques
- propagation theory and data; antenna design
- analysis of interference characteristics, information rates, and error probabilities

Trade-off analysis and selection of system approach

Definition of system elements, including:

- input/output considerations
- interfacing design and compatibility assurance
- compliance with applicable regulations

Development of system test plan and performance predictions

2. Circuit design and component selection, from simple elements through sub-systems such as phase-locked loops, synchronous detectors, and decision logic

3. New product development or product improvement

State of the art surveys; feasibility evaluation

Problem analysis and development of unique solutions

Design, breadboarding, and test

Patent prosecution (technical)

Design reviews for improved reliability, lower cost, better performance, or smaller size
Evaluation of design suggestions or proposals

4. Technical marketing support
 - Proposal preparation and review
 - Meetings with customer technical representatives
 - Briefings and presentation aids
 - Product evaluation with respect to customer technical requirements and competing products
 - Prediction of future requirements

5. Technical training: in-plant or outside
 - Practical circuit design principles and techniques (for design engineers)
 - Practical applications of communications theory (for system engineers)
 - Modern electronics and communications theory (for managers)

6. Technical support services
 - Writing of reports, proposals, manuals
 - Problems in program management and staffing
 - Problems in equipment operation or repair

Synergistic Technology Incorporated was formed by a group of senior engineering and management personnel who had worked together in the electronics industry and on volunteer programs. The synergistic principle is that the integration of skills from different backgrounds will be more effective than the sum of individual contributions. STI's skills are the abilities of experienced consultants brought together by common interests and mutual respect. Their backgrounds include, in addition to communications engineering, such peripheral disciplines as antenna theory and practice, mechanical engineering, solid-state physics, microwave component design, and data processing, to ensure a comprehensive, synergistic attack.

STI's president, David Dayton, is responsible for assigning and coordinating the consultants best suited to each project, as well as participating directly where his background is applicable. His is also the

primary responsibility for those additional elements which allow the consultants' capabilities to be effectively exploited:

- initial communications with the client, in his terms, to help define the problem and STI's contribution to it
- read-out of conclusions, things learned, and other results of the project, in the form(s) most useful to the client
- where appropriate, integration of STI and client personnel to assure the most efficient interface

Another of the STI Directors, Eugene Sheftelman, is responsible for circuit design, application of communications theory, and over-all technical direction. His long experience in the electronics industry brings to STI an outstanding capability in practical communications engineering.

The backgrounds of Dayton and Sheftelman are summarized on the following pages. Other consultants associated with STI are drawn from universities and private practice; their qualifications are best described on a project basis as assignments are made.

David S. Dayton, President

Mr. Dayton resigned in 1968 as vice president and technical director of Technical Communications Corporation to devote full time to STI. He had been a co-founder of TCC in 1962. From 1956 to 1962 he worked as an engineer, section head, and corporate staff consultant at Raytheon's Bedford laboratories and Lexington headquarters. His education includes a BSEE from WPI, MBA from Northwestern, and graduate studies in communications theory. His publications, patent applications, and professional activities have been primarily concentrated in communications system design. Mr. Dayton has also had considerable experience in teaching, writing, and public speaking, and has been president of many volunteer organizations.

His specific experience includes personal responsibility for analytical studies, system design, and hardware development in multiple-access satellite communications, electronic warfare technique evaluations, selection of optimum anti-interference modulation forms, propagation analyses, inter-system compatibility studies, comparative evaluation of spread-spectrum methods, digital signaling in analog channels, inter-computer data transmission, and new developments in anti-multipath signaling and precise ranging. Mr. Dayton was chosen by the Navy as its industrial representative on the tri-service technical subcommittee dealing with multiple access to tactical communication satellites. He has published papers in, and reviewed publications for, various IEEE and trade journals, in the field of signal design, correlation, and detection. He holds one patent and has contributed to others now pending, in the same field.

Eugene H. Sheftelman, Technical Director

BSEE, New York University

MEE, Polytechnic Institute of Brooklyn

Doctoral-level courses, Polytechnic Institute of Brooklyn

Recent courses in communications theory, Northeastern University

1961 - present: independent consulting engineer, Boston area

- (1) Development of new techniques for phase measurement; design of several types of VLF receiver for the Omega hyperbolic navigation system.
- (2) Improvement of the design of a microwave radiometer; general performance analysis, analysis of propagation problems in the near field of the antenna, analysis of interference susceptibility, analysis of spillover radiation from a Cassegrain antenna, test site design.
- (3) Design of a binary digital communication system using linear-"chirp" waveforms, including, among other tasks, the design of phase-locked synchronization loops, phase-stable limiters and matched filters.
- (4) Calculation of the output signal-noise ratio of a sampled polarity-coincidence detector having pseudo-noise input signal and additive Gaussian noise.
- (5) Analysis of the effects of chaff on the detection capability of radars which transmit burst waveforms.
- (6) Design of a miniature, battery-operated, solid-state electrocardiograph; design of a variable-rate exercise pacer using analogue techniques.
- (7) Design of a speech scrambler and related unscrambler.
- (8) Study of tracking problems in long-range sonar; theoretical analysis of multipath propagation effects in sound transmission; conception and analysis of devices for compensating multipath effects; logical design of tracking equipment.
- (9) Conception and analysis of a technique for predetection recording of phase-coherent signals from a hard-landing interplanetary probe; analysis and test of second-order effects in phase-modulated digital communication systems: degradation due to noise in the phase reference, degradation due to limiters with memory and finite gain, degradation due to filters.
- (10) Design of solid-state circuits for a radar display.
- (11) Study of the feasibility of acoustic imaging techniques at great depths.
- (12) Analysis of the errors in a sonar beacon navigation system.
- (13) Conception and analysis of a near-earth communication system minimizing the effects of multipath propagation.
- (14) Design of solid-state transmission and reception circuits for PSK and FSK systems.
- (15) Study of radar sensitivity to electronic countermeasures.
- (16) Analysis of electronic survey techniques for rating radio broadcast popularity.
- (17) Design of a simulator for testing space communication systems.
- (18) Design of several solid-state operational amplifiers, including one with very high input impedance.
- (19) Design of an optimum estimator of the synch epoch in reception of binary digital signals over a noisy channel.

1954-1961: project engineering and engineering management,
Sanders Associates, National Company, and AVCO R&D

- (1) Studies of (a) the performance of radar fuzing, (b) techniques for electronic scanning of large antenna arrays, (c) performance of high-altitude radar platforms, (d) detection of a fluctuating target by Pulse-Doppler radar, (e) the effect of limited bandwidth in the amplifiers of a Pulse-Doppler radar.
- (2) Development and design of (a) a U.H.F. receiver for a guided missile, (b) a 30 mc. logarithmic i.f. amplifier having a log transfer characteristic accurate within 0.5 db over an 85 db range, (c) a two-stage magnetic amplifier, and (d) a new type of summing matrix for forming multiple beams with a linear antenna array.
- (3) Establishment of parameters for the communications, tracking and telemetry subsystems of several satellites and space probes (SAMOS, APOLLO, PROSPECTOR).
- (4) Conception and rough design of a correlation-detection radio altimeter.
- (5) Principal technical effort on proposals for (a) relatively secure command link for missiles, (b) intruder alarm for perimeter protection, (c) data processing system for antisubmarine warfare, (d) point-of-impact display for artillery spotting; provided original concepts on which last three were based.
- (6) Design of solid-state control loop for atomic time standard, filters and comparison circuits for automatic missile checkout device, instrumentation for a nuclear induction experiment.
- (7) Studies of (a) effects of distortion due to band-limiting on digital communications, (b) error probabilities in digital communication systems based on satellites, (c) time synchronization over long distances.

1951-1954: project manager and research engineer,
W. L. Maxson Co. and Telechrome, Inc., New York

- (1) Equipment design for color television broadcasting.
- (2) Study of means of storing large quantities of information in small volumes.
- (3) Supervision of the development of an airborne navigation radar.
- (4) Design of a new type of radar display possessing high dimensional accuracy.
- (5) Design of the computing section of an aircraft flowmeter.

1940-1951: inspector and senior engineer, Signal Corps

- (1) Development of an automatic track-while-scan device for search radar.
- (2) Design of a precise radar simulator incorporating a new method for deriving spherical from rectangular coordinates.
- (3) Conception and initial design of a unique air traffic display, since used in Martin Company's "Missile-master".
- (4) Development of a beam-rider missile-guidance system.
- (5) Assistance in the design of a special purpose digital computer.
- (6) Design of improvements upon existing Signal Corps display and range-measuring devices.
- (7) Testing Signal Corps radio communication equipment.

9/5 Original and enclosures to Don Murphy

AMERICAN TELEPHONE AND TELEGRAPH COMPANY

195 BROADWAY, NEW YORK, N. Y. 10007

AREA CODE 212 393-9800

August 29, 1968

RECEIVED
SEP 3 1968
KENNETH H. OLSEN

Mr. Kenneth Olsen
Digital Equipment Corp.
146 Main Street
Maynard, Massachusetts 01754

Dear Sir:

Today, the American Telephone and Telegraph Company applied to the F.C.C. for permission to file changes in its interstate tariffs which will have significant impact on the connection arrangements for customer-provided terminal equipment. A copy of the covering letter to the F.C.C. and its attachments are included for your information. The Associated Telephone Companies plan to file similar revisions with the appropriate state regulatory agencies.

Since these tariffs may involve your equipment or services you provide to our mutual customers, we felt that you should be aware of them promptly. As you will note, we are aiming for an effective date for the revised tariffs of November 1, 1968. Customers will then have the choice of either providing their own modulating devices connecting through a data access arrangement or of using DATA-PHONE data sets provided by the telephone company. The estimated rate for the data access arrangement which provides for manual call origination and answering will be about \$2.00 per month. We are considering additional units which will provide automated calling and answering features.

The Engineering Department is presently compiling technical information regarding the data access arrangement. This information will be another Technical Reference in the Bell System Data Communications Technical Reference manual. It is expected to be available about mid October, 1968, as soon as they are available, we will make a normal distribution of copies to holders of this manual.

If you have questions regarding our new filings, it is suggested you contact the following:

1. Rate and Marketing questions - call Frank Wiley on Area Code 212 393-2690.
2. Engineering and Technical questions - call your normal contact in the office of the Engineering Director - Data Communications, at the above address.

Very truly yours,

H. B. Quirk

Marketing Director - Data Communications

V. N. Vaughan, Jr.

Engineering Director - Data Communications

To: List of Marketing Department contacts
Holders of Bell System Data Communications
Technical Reference manual

tt.

9/4
Received material
with no cover letter.
After receiving this
letter, returned material
to them. Over

E. J. HOLZER & Co.

60 EAST 42ND STREET
NEW YORK, N. Y. 10017

CABLES: EJJHOLZER NEW YORK
TEL. 212 - 682-8166

RECEIVED

AUG 30 1968

KENNETH H. OLSEN

August 28, 1968

Mr. Kenneth Olsen
President
Digital Equipment Corporation
Maynard, Massachusetts

Dear Mr. Olsen:

Reference is made to our letter of July 22nd with which we submitted to you a license proposal for a quenching logic and semi-conductor system for Thyristor controlled squirrel-cage motor drives.

We would appreciate very much if you would let us know whether you are interested in this project.

Should this not be the case, please return the literature to us.

Very truly yours,

E. J. HOLZER & CO.
Ernest J. Holzer

Ernest J. Holzer

EJH:sr

9/5
Original to Pom Smart to handle
Sent reminder on 10/8

REGISTRATION, INC. NEW IPSWICH, NEW HAMPSHIRE (603) 878-2730

10/9
Northeast Sales
met with this man
and told him we
were not interested

KENNETH H. OLSEN

August 26, 1968

Digital Equipment Corp.
Maynard,
Mass. 01754

Gentlemen:

Registration, Inc., is in the business of registering and identifying people at industrial trade shows. For some time now, we have felt that the computer will be the key to unlocking the snarl that surrounds registration at these events.

Enclosed is a synopsis of who we are, what we do and what we consider our problems to be. As a computer manufacturer, we would like to talk with you about how you might help us solve our problems of handling large numbers of people in short periods of time.

Please have your representative call and make an appointment at his earliest convenience.

Thank you.

Very truly yours,



Leonard V. Short, Jr.
President

LVS/emw
Enclosure

7/13
Original to Bob O'Hagan to act.



OFFSHORE TECHNOLOGY CONFERENCE

6200 NORTH CENTRAL EXPRESSWAY
DALLAS, TEXAS 75206 • 214-361-6604

August 22, 1968

Mr. Kenneth H. Olsen, President
Digital Equipment Corp.
Small Computer Products
146 Main Street
Maynard, Massachusetts 01754

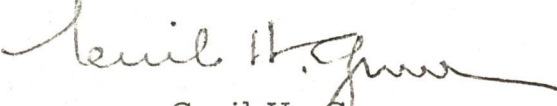
Dear Mr. Olsen:

A number of the leading engineering and scientific societies in the United States, with the coordination of the American Institute of Mining, Metallurgical and Petroleum Engineers have joined together to establish an annual Offshore Technology Conference. The purpose of the Conference is to provide a major forum for the exchange of knowledge on our offshore resources and environment. The first Conference will be held May 19-21, 1969, in Houston.

I have accepted an invitation to serve as a member of the Advisory Council for the Conference. We believe the Conference will be of interest to you and to other persons in your Company. I am enclosing a few copies of a booklet which explains the establishment of the Conference and plans for its operation. Please distribute these to your associates as you deem appropriate.

We believe that the Offshore Technology Conference will provide a forum of international importance and scope and that it will make a significant contribution to the development of our offshore resources. We invite your interest and participation in the Conference through the attendance of appropriate personnel and the offering of papers for the technical programs for the Conference in 1969 and future years.

Sincerely,


Cecil H. Green

CHGdfh

ANNUAL CONFERENCE ON OFFSHORE RESOURCES AND ENVIRONMENT JOINTLY SPONSORED BY:

The American Institute of Mining, Metallurgical and Petroleum Engineers • Society of Petroleum Engineers of AIME • Society of Mining Engineers of AIME • The Metallurgical Section of AIME
The American Association of Petroleum Geologists

The American Institute of Chemical Engineers
The American Society of Civil Engineers
The American Society of Mechanical Engineers • Petroleum Division
The Marine Technology Society

The Institute of Electrical and Electronics Engineers
• Aerospace and Electronics Systems Group • Communication Technology Group • Geospatial Electronics Group
The Society of Exploration Geophysicists
The Society of Naval Architects and Marine Engineers

HARVARD MEDICAL SCHOOL
25 SHATTUCK STREET
BOSTON, MASSACHUSETTS 02115
REGENT 4-3300

OFFICE OF THE DEAN

August 20, 1968

Mr. Kenneth H. Olsen
President
Digital Equipment Corporation
146 Main Street
Maynard, Massachusetts 01754

Dear Mr. Olsen:

It was disappointing to hear that Digital Equipment Corporation is not able to act favorably on Harvard's request for funds in support of the Student Research Program. We do, of course, understand that there are many claims on your corporate giving, particularly in the area of higher education.

I appreciate your willingness to offer technical advice, and hope that there will be an occasion in the future when we can get together and discuss matters of mutual interest.

Sincerely yours,



Robert H. Ebert, M.D.
Dean

RHE:cs

MASSACHUSETTS INSTITUTE OF TECHNOLOGY

CAMBRIDGE, MASSACHUSETTS 02139

20E-225

August 12, 1968

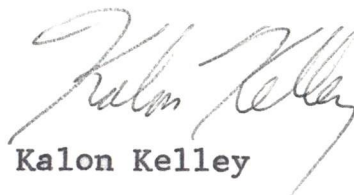
Mr. Kenneth Olsen
President, Digital Equipment Corp.
146 Main Street
Maynard, Mass. 01754

Dear Mr. Olsen:

Thanks for your letter and for the data sheets on incremental tape recorders. I think perhaps what I shall do is talk to some people in the Bio-medical library at UCLA who are involved in library mechanization projects and get their reaction as users. If they are encouraging it might be worth delving deeper into the engineering problems.

I shall be leaving MIT this week to return to UCLA, and if anything further should develop I will keep you informed. At any rate I am grateful to you for taking time to think about the idea and for your opinion.

Sincerely yours,



Kalon Kelley

Pleasant Hill Baptist Church

155 HUMBOLDT AVENUE, AT WAUMBECK STREET

Mailing Address: 254 SEAVER STREET

BOSTON, MASSACHUSETTS 02121

REV. SAMUEL H. BULLOCK

Pastor

Parsonage: GA 7-9427

Study: HI 5-4440

TAYLOR WORNUM, Treasurer

44B Weaver Court

Roxbury, Mass.

Phone: 427-6865

HAROLD C. HILL, Clerk

66 Crawford Street

Roxbury, Mass. 02121

HI 5-2892

August 15, 1968

Mr. Kenneth H. Olsen, President
Digital Equipment Corporation
146 Main Street
Maynard, Massachusetts

Dear Mr. Olsen:

The Pleasant Hill Baptist Church and pastor, for whom you have shown genuine friendship for more than a quarter of a century, will jointly celebrate their thirtieth anniversary during the month of October 1969.

The total news media will bring you detailed information concerning this "Grand Triumphant Thirtieth Anniversary," several weeks before it convenes.

The oldest Baptist pastor, both in service and in age, in Boston is Pleasant Hill's minister.

During the thirty years he has served here and other churches in the Commonwealth, he has twice found it necessary due to overwork, to spend ten days getting a complete rest in the New England Baptist Hospital.

In addition to performing his regular duties as Pleasant Hill's community pastor, Pastor Bullock will spend his remaining strength and years thinking, writing, and speaking for the eternal cause of love, humanity, peace and good will toward all mankind.

Whatever the Lord may lay upon your hearts to give again, for this most worthy enterprise, will be deeply appreciated.

Kindly make your check payable to the Pleasant Hill Baptist Church and mail to the New England Merchants National Bank, 642 Beacon Street, Boston, Massachusetts.

Your contribution is tax deductible, and we will send you an official receipt immediately.

Reverently yours,

Samuel H. Bullock
SAMUEL H. BULLOCK
254 Seaver St.
Roxbury, Mass.

SHB.at

9/4
Original & photo to Bob O'Hagan

August 12, 1968

RECEIVED

SEP 3 1968

KENNETH H. OLSEN

Digital Equipment Corp.
Maynard, Mass.

Dear Sir:

Since the Sea is our mutual frontier, I am writing you in the hope that we can be of service to each other. I am the owner-skipper of the THERESA R. II which is an 87 x 24 x 12.6 steel vessel presently operating as the newest stern trawler out of New Bedford, Mass.

The vessel, commissioned in January of this year, boasts all of the latest modern conveniences. With vinyl plywood paneling; vinyl inlaid floors; formica counters, cabinets and table; spacious airy accommodations on the main deck and a baseboard central heating system; She is a work boat with a yacht finish. She has a shower, head and lavatory area; plenty of storage space; a spacious deck working area and the very latest in electronic equipment.

The THERESA R. II was built with survey, research and diving in mind. Having a fuel capacity of 10,000 gallons, fresh water capacity of 4,800 gallons and a speed of about 12 MPH, affords her with a wide cruising range. In short, She is small enough for the little tasks, yet big enough for the longer range more difficult projects.

Should you have the need for or desire more information concerning the THERESA R. II, for some future endeavor, please contact me. I will be happy to supply any details and send more photographs of the vessel should you desire them.

Sincerely,

John P. Rita

Capt. John P. Rita
34 Stowell Street
New Bedford, Mass.
02740

LOS ALAMOS SCIENTIFIC LABORATORY University of California

(CONTRACT W-7405-ENG-36)

DEPARTMENT OF SUPPLY AND PROPERTY

P. O. BOX 990
LOS ALAMOS
NEW MEXICO
87544Mr. T. G. Johnson
Digital Equipment Corporation
146 Main Street
Maynard, Massachusetts 01754

August 8, 1968

Reference: IC8-3176

Dear Mr. Johnson:

During your recent absence from Maynard, we found it necessary to request immediate action from your Denver field office, relative to the referenced file. Since no sales representative was in the office at the time, we asked your Mrs. Jaffe to contact Maynard to secure information which we urgently required. Mrs. Jaffe carried out our request in a most satisfactory manner. Upon Mr. Duncan's return to that office we secured his full cooperation.

This office contacted your Mr. Ronald Wilson, relative to the matter, and we should like to state that Mr. Wilson handled the matter in a most efficient and satisfactory manner. In addition, we talked with your Mr. McInnes and the matter was immediately resolved to the satisfaction of this office.

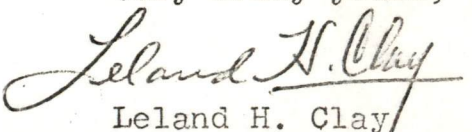
Too frequently all of us are inclined to register only complaints. In this case, we wish to thank Mr. Wilson and Mr. McInnes for their courteous cooperation. We also wish, at this time, to state that the personnel of the Albuquerque office, as well as the Denver office, have always been most cooperative in carrying out any requests we have made.

We feel that you are most fortunate in having in your field offices, personnel whose foremost interests are those of your company and its customers.

I am sure that Mr. Wilson will give you the full details in this matter.

Thank you for your courtesies.

Very truly yours,


Leland H. Clay

LHC:dm

cc. Mr. Kenneth H. Olsen ←
Mr. Ronald Wilson
Mr. Robert McInnes
Mr. Kenneth Larsen
Albuquerque Field Office
Denver Field Office

AN EQUAL OPPORTUNITY EMPLOYER



Massachusetts Institute of Technology
Alfred P. Sloan School of Management
50 Memorial Drive
Cambridge, Massachusetts, 02139
52-480

August 1, 1968

Mr. Kenneth H. Olsen
Digital Equipment Company
Maynard, Massachusetts

Dear Mr. Olsen:

I have enclosed a draft of the interview you were so generous in granting me in May. Please feel free to correct any points I may have misinterpreted.

Thank you.

Yours truly,

Edward A. Seykota

Edward A. Seykota

EAS:dj
cc: Dr. Morse

DIGITAL EQUIPMENT CORPORATION: STUDY IN INNOVATION

An interview with Mr. Kenneth^{H.} Olsen
President, Digital Equipment Corporation
Maynard, Massachusetts

by

Edward A. Seykota
Alfred P. Sloan School of Management
Massachusetts Institute of Technology
May, 1968

DIGITAL EQUIPMENT CORPORATION: STUDY IN INNOVATION

The Digital Equipment Corporation is a very successful manufacturer of computers and related equipment. Mr. Olsen, the president, traces his success to two ideas. The first is his relaxed attitude about his job as president. "I'll do the job until someone else comes along. Too many people want to be president too much to do the job." The second is his view of change. "Everybody says they want to do things differently, but they always go to established fields. Few people really want to do it differently. I can see several untapped markets in the computer business, but other firms would rather copy us and compete with us instead of finding something new."

Mr. Olsen's attitude of doing the job without worrying about the office was the focus of great changes at DEC in 19⁶57. Before 19⁶57, DEC was run like a club. The top management would get together and make decisions. Everyone generated ideas but nobody made sure the job was done.

Then, in 19⁶57, Mr. Olsen changed the operating procedure. Top management still generated ideas -- but they were now required to prepare budgets and plans and to expect monthly audits. This gave the system a jolt, and several senior people resigned. The final result: DEC soon doubled its size with the same number of people.

Mr. Olsen's attitude that change is hard to create does not stop him; it makes him aware of some of the difficulties. "The idea in schools these days is that freedom leads to creativity. I don't agree. Creativity needs discipline and feedback, otherwise you can go woods crazy." Too much discipline, however, can also be bad.

"The Ph.D is often too disciplined to do anything useful; he is too used to plugging." Mr. Olsen recalls that there were no Ph.Ds in M.I.T.'s Whirlwind Laboratory, the birthplace of modern computation. Another drawback to hiring the scholarly is that they are often preoccupied with attaining recognition for their pet ideas to the extent of failing to make a buck for the company. "We are hiring less out of school and more from other companies."

Change doesn't have to be a totally new product. The DEC PDP-8, which was originally the PDP-5, has been improved with every model. Customers and salesmen frequently develop new ideas. Since DEC is continually upgrading the PDP-8 to fit the customer's needs (rather than designing a completely new system), DEC knows it has the product the market wants.

"Change comes through constant probing." When Mr. Olsen wanted the best possible cabinet for his PDP-8, he spent many days in appliance stores closely examining every appliance. The characteristic DEC lighted panel and tab keys were, in this manner, discovered on a washing machine. Today the arrangement is widely imitated within the computer industry.

Change requires leadership, as well as vision, and leadership involves people. "I know where I want to go with this company -- but I don't tell anybody. In the first place, I may not be right; and in the second place, I want them to come up with the ideas themselves."

Mr. Olsen doesn't believe innovation can be taught in schools after the child is past the sixth or seventh grade. He believes innovative youngsters have had something different in their family backgrounds. From this, they have acquired an attitude wherein nothing phases them. Mr. Olsen thinks that his young children exhibit this "it can't phase me" attitude while reading aloud. When they come across a word they don't recognize, they blunder through it without becoming flustered.

On business trips, Mr. Olsen used to drop his fourteen-year old son anywhere in Europe with instructions only where to be that evening. Unphased, his son always showed up on time. His daughter decided to learn sailing. She studied a book, requested to be taken out once, and today sails like a dec(k) innovator.

8/19 Original to Tom Stockbrand -
Should we have these in
Cable Address:
MERGEVIC NEWYORK

Tel. Riverside 9-3369

VICTOR GEORGE HERMAN

49 WEST 96th STREET
NEW YORK, N. Y. - 10025

7/ 30/ 1968.

Mr. Kenneth H. Olsen, Pres.
Digital Equipment Corp.
146 Main Street:Maynard, Mass

Dear Sir :

Re: Gram Tension Gauges.

Please find attached our leaflet re our gram gauges; they are used to measure pressure of relays, switches, contacts, spring mechanisms, magnetic components, recorders, computers, telephone- and teletype equipment, pressure of brushes of electric motors, signal devices, etc.

The gauges come in 11 measuring ranges from as low as 0.3 gr. to as high as 2000 gr. They are in stock and immediate shipment can be made. The small ranges up to 150 gr. with the exception of the 3 gr. range only cost \$13.00, each, net, FOB New York, which is the lowest price in the country for gauges of this tupe. The small ranges up to 150 gr. with the exception of the 3 and 5 gr. range can be supplied with FLAT feelers and are used to measure pressure of relays easily, by simply lifting up the blades.

Please find attached a technical data sheet which will show you the many striking advantages of the Carpo gauges over other gauges of this type.

I will even go further; after you have ordered the first 50 (fifty) gauges every calendar year, I will reduce the price further to only \$12.00, each, net, FOB New York, with the exception of the 3 gr. range gauge.

Please show this letter to your Production manager and chief engineer and thanks in advance.

Yours very truly,


Victor George Herman

Encl. 2

VGH:lt

GENERAL SERVICES ADMINISTRATION

Federal Supply Service
Washington, D.C. 20405



AUG 2 1968

Mr. Kenneth Olsen, President
Digital Equipment Corporation
146 Main Street
Maynard, Massachusetts 01754

Dear Mr. Olsen:

In his report number B-115369, dated April 3, 1968, the Comptroller General of the United States expressed concern over the Federal Government's estimated annual expenditure of an amount in excess of \$50,000,000 for the maintenance of Automatic Data Processing Equipment. This amount is in addition to the substantial sums spent for purchase and lease of such equipment. Present dollar investments on the part of the Government, together with projected increases have marked this as an area that merits searching study and analysis. The Comptroller General has requested that the General Services Administration make such study and analysis.

Interest in this subject extends into other areas of the Government. As a result, the Bureau of the Budget and the Subcommittee on Economy in Government of the Joint Congressional Economic Committee as well as the Comptroller General and the General Services Administration are vitally interested in the results of the recently awarded Contract No. GS-00S-67231 for:

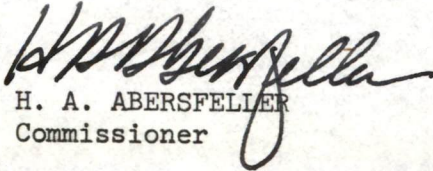
"MANAGEMENT CONSULTING SERVICE CONTRACT TO CONDUCT A SURVEY RELATING TO MAINTENANCE OF ADP EQUIPMENT - TO IDENTIFY, ANALYZE, AND EVALUATE THE ALTERNATIVE METHODS BY WHICH GSA MAY MOST EFFICIENTLY AND ECONOMICALLY MEET ITS STATUTORY RESPONSIBILITY TO PROVIDE FOR MAINTENANCE OF ADP EQUIPMENT WITHIN THE GOVERNMENT IN ACCORDANCE WITH CONTRACT GS-00S-67231."

This study contract has been awarded to The Boston Computer Group, Inc., 15 School Street, Boston, Massachusetts 02108, Telephone 617-227-8635, whose principals are Dr. William L. Gordon, President; William S. Grinker, Executive Vice President; and Adolf F. Monosson, Treasurer.

We would appreciate whatever assistance you can render to The Boston Computer Group, Inc. and the General Services Administration in its study and your cooperation with the principals who will be in direct contact with you.

Thank you for your cooperation.

Sincerely,



H. A. ABERSFELLER
Commissioner



THE
BOSTON
COMPUTER
GROUP, INC.

Computer Consultants · Management Education · Computer Leasing

15 SCHOOL STREET · BOSTON · MASSACHUSETTS 02108 | Area Code 617 227-8635

July 24, 1968

Mr. Kenneth Olsen, President,
Digital Equipment Corporation,
146 Main Street,
Maynard, Massachusetts.

Dear Mr. Olsen:

The covering letter from the General Services Administration has highlighted the growing dollar investment in ADPE and its maintenance. You, as the President of a highly-successful supplier of such equipment and services perhaps know the facts and figures of federal expenditures in this area as well as anyone in the Government or industry, and consequently can appreciate the concern of the GSA, GAO, Bureau of the Budget, and the Subcommittee on Economy in Government of the Joint Congressional Economic Committee.

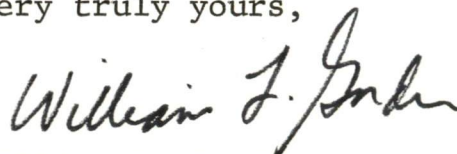
As recipients of Contract GS-00S-67231, you can also appreciate the enormity of our task. We are asking your cooperation in helping us fulfil our contractual obligations to the GSA in whatever way you feel the most progress can be made.

In fact, we look forward to receiving help from you in the giving of some of your time, and setting up with us a working liaison, so that we may benefit from your firsthand knowledge and experience.

We desire, also, to have the chance to benefit from YOUR personal insight into this enormous growth field, so that both of us (collectively and singly) may as taxpayers, feel that we have contributed to our Government by more than the mutually common procedure of paying taxes, both corporate and personal.

We are looking forward to your cooperation in this mutual undertaking. We recognize that your company is a large organization and will appreciate anything that you can do to expedite our joint effort.

Very truly yours,



William L. Gordon
President

WLG/bmb

7/25

Original to Stan Olsen -

This might be the output
device for the Hydramatic
Computer: Ken

E. J. HOLZER & CO.

60 EAST 42ND STREET
NEW YORK, N. Y. 10017

CABLES: EJHOLZER NEW YORK
TEL. 212 - 682-8166

July 22, 1968

Mr. Kenneth Olsen
President
Digital Equipment Corporation
Maynard, Massachusetts

Dear Mr. Olsen:

The following project might be of interest to you:

We have been authorized by a German client of ours to initiate negotiations with an American company interested in acquiring exclusive American manufacturing and sales rights under license for the Western Hemisphere for a quenching logic and semi-conductor system for Thyristor controlled squirrel-cage motor drives.

The quenching logic is a semi-conductor element used for the quenching of inductances. This is a new technique of semi-conductors combined with RC elements which prevent the build-up of induced voltages, burning of contacts and spark interference. The introduction of these elements accelerates the decay of the magnetic field, shortens the switch-off time and provides a safe spark-quenching with thyristors and transistors thus allowing high frequency operation with practically unlimited service life. This newly developed technique allows the inductance to act as a resistance.

The semi-conductor system for thyristor controlled squirrel-cage motor drives controls running in both directions and can be used with or without electrical braking following the cycle of operation. The system can be operated by regulators and/or logic control allowing perfect contactless start and operation of motors. This newly developed system can be used in connection with positioning elements, stepping drives, conveyor drives, fixed cycle operations, feed drives and fixed angular movements.

We are sending you under separate cover a memorandum written by our German client, ERA Elektronik-Regelautomatik GmbH & Co. KG. We also are sending

Digital Equipment Corporation

July 22, 1968

you German literature which is more extensive. Finally, we are sending you both the U.S. and U.K. patent applications. In addition, a Canadian patent application has been filed which is similar to the British application.

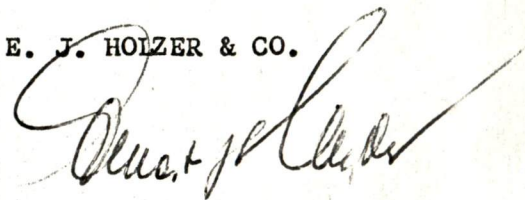
We would appreciate if you would study this material and let us know whether you are interested in exploring this license project further with us.

Should this not be the case, please return the literature to us.

We are looking forward to hearing from you and are,

Very truly yours,

E. J. HOLZER & CO.

A handwritten signature in cursive script, appearing to read "Ernest J. Holzer", written over the typed name.

Ernest J. Holzer

EJH:sr

7/25

Original to Nick and asked
him to have someone
take care of it. *ec*

**PRINTING
IMPRESSIONS**

The National Technical and News Publication for Printing and Publishing

July 19, 1968

President
Digital Equipment Corp.
146 Main St.,
Maynard, Mass. 01754

Dear Sir:

Enclosed is a photocopy of material we are planning to print about your company's products in the September issue of *Printing Impressions*.

As a service to the trade, each month we publish an *Equipment and Supply Review*, covering some category of machinery used by printing firms. The September category is typographic equipment. This will be subdivided into hot metal casters, text phototypesetters, display phototypesetters, computers, perforators, strike-on machines, etc.

The material on your company is based on matter we have printed in earlier issues, in new product reports or in prior *Equipment and Supply Reviews*. We have updated it from your product brochures where possible.

Can you please look over the material, write in any essential changes, and return it to us right away in the enclosed envelope? If the material is all right, we'd like the assurance of an okay from you, but in the absence of reply we will assume the material is correct.

Thank you very much for your cooperation.

Very truly yours,

R.W. Tucker

R. W. Tucker
Associate Editor

Published by


NORTH AMERICAN PUBLISHING CO.
134 North Thirteenth Street/Philadelphia, Pa. 19107
Telephone 215-564-5170

Graphic Arts Publications

PRINTING IMPRESSIONS
Business Edition
THE HERITAGE OF THE PRINTER
HOW TO PUBLISH & PRINT PHOTOMECHANICALLY
PRINTING EQUIPMENT DEALERS CATALOGS

RWT:rw
Encl.

Members of

BUSINESS PUBLICATIONS AUDIT 

DIGITAL EQUIPMENT CORP.

[Handwritten signature] #
PDP-8. Input: raw tape. Output: justified, hyphenated, formatted, mixed tape to 12,000 lines/hr. text or classified material, 10,000 lines/hr. display. Option: with or without disk. Remarks: flexible, may be used with many systems, hot and cold type; integral part of several typesetting systems sold by other companies, including Composition Systems and Mergenthaler. Base price, \$29,950; expanded systems to \$55,000.

coupon

7/25
Original to Harry Nelson

July 17, 1968

Kenneth H. Olsen, President
DIGITAL EQUIPMENT CORPORATION
146 Main Street
Maynard, Massachusetts, 01754

Dear Mr. Olsen:

Recently B-W Acceptance Corporation, wholly owned subsidiary of Borg-Warner Corporation, determined that it would enter into the commercial finance market. We would be most interested in discussing with you both our installment and equipment lease accommodations.

I am enclosing several of our brochures and rate charts for your examination.

May we hear from you?

Sincerely,

B-W ACCEPTANCE CORPORATION


D. E. Hoff

DEH/bb

7/24

Win talked with Mr. Stevenson on 5/11 and told him we are not interested. ec

Quantum Science Corporation

A SUBSIDIARY OF
SAMSON ASSOCIATES, INC.
NEW YORK AND PALO ALTO



245 PARK AVENUE
NEW YORK, N.Y. 10017
212 • 986-4410

July 12, 1968

Mr. K.H. Olsen, President
Digital Equipment Corporation
146 Main
Maynard, Massachusetts 01754

Dear Mr. Olsen:

Attached is a copy of a proposal for your participation in a multiclient analysis of: Technology in Education and Training. This proposal outlines our study which will focus on the applicability of computer, electronics, instrumentation and related technologies to the increasing needs of educational markets. Although the growth potential of this broad field has been widely recognized, the degree to which new technologies will be specially applied to it still remains to be sufficiently well analyzed and forecast.

Your cost of participation in this study would range, depending on the number of participating clients, from a minimum of \$6,000 to a maximum of \$9,000, payable 50% at the initiation of the study, 25% in 60 days after the initiation and the balance on submission of the report. Travel expenses for final individual presentation to you, as a client, will be billed, as incurred with the invoice for final payment.

We have selected your company as a potential participant because we believe that the growing market for Technology in Education and Training is pertinent to your corporate planning. We shall be glad to review with you in detail your specific interests and requirements relating to this program. One of our staff members will be in touch with you, shortly, to review your considered participation in this program.

When you decide to participate in our program in accordance with the proposal dated June 15, 1968, please sign and return to me the enclosed copy of this letter. We look forward to your early decision to participate in this program.

Sincerely yours,

APPROVED: QUANTUM SCIENCE CORP.

QUANTUM SCIENCE CORPORATION

By: _____

Date: _____

Mirek J. Stevenson
President

APPROVED:

By: _____

Date: _____

MJS:kas

Enclosure: Technology in Education Proposal

7/25 Original to Larry Portner



EDP Technology, Inc. 127 Smith Place Cambridge, Massachusetts 02138 Telephone: (617) 868-1551

Ken does not remember Mr. Linehan.

July 10, 1968
CAM007-8

Mr. Kenneth Olsen
Digital Equipment Corporation
Maynard, Massachusetts

Dear Mr. Olsen:

On Tuesday, 9 July, Mr. Martorano of my staff met with Mr. Larry Portner to introduce EDP Technology, Inc. On the strength of their conversation, I would like to meet with you and possibly your marketing staff to discuss the subject of supporting Digital Equipment Corporation in both customer system support and proprietary package development.

EDP has established regional offices in Washington, D.C., New York, Boston and Los Angeles. An Atlanta facility is scheduled to open this month under Dr. James L. Goddard and this is to be followed in the near future by facilities in Houston, Pittsburg, Chicago, and San Francisco.

As you know, software houses continue to spring up like mushrooms after a rainy day and many soon disappear mostly due to insufficient capitalization. EDP Technology is both financially and technologically responsible and recognizes that its chief resource is its people, their experience and their understanding of system concepts.

I believe the national scope of EDP Technology could be of valuable assistance to Digital Equipment Corporation. I will plan to call you during the week of 15 July to set up an appointment; it's been a long time since the Whittemore Building and the MTC.

Very truly yours,

Lawrence H. Linehan
Lawrence H. Linehan, Manager
Boston Regional Office

LHL:cb

Enclosure - Brochure

computers and automation

The magazine of the design, applications, and implications of information processing systems.

815 WASHINGTON STREET
NEWTONVILLE, MASSACHUSETTS 02160
617-332-5453

July 5, 1968

Mr. Kenneth H. Olsen
Digital Equipment Corp.
Maynard, Mass.

Dear Ken:

Thank you for your letter of June 28, and the two items you enclosed.

I have been much entertained and informed by "Good Managers Don't Make Policy Decisions". Much of what Mr. Wrapp says ties right in with a project of mine which I sometimes call "The Natural History of Mistakes and How to Avoid Them". I like especially his quotation from Kenneth Boulding: "The very purpose of a hierarchy is to prevent information reaching into higher layers. It operates as an information filter, and there are little wastebaskets all along the way."

I do not understand the environment of the sheet entitled "Forward", which I suspect was meant to be entitled "Foreword". The sheet is page 2 of 12, and I expect I need some more of the other 11 pages (of DEC STD 009) to understand. Perhaps you could send them to me -- if they are not confidential.

Your encouraging of feedback from me will produce more!

Feedback Item 1. Right now (July 4, 5:30 pm) I am distinctly unhappy because my PDP-9 wouldn't work properly last night July 3. The tapes were often but not always reading badly -- same complaint as last Monday, and the servicing on Monday afternoon apparently did not completely fix it. Question: What proportion of service calls are repeat complaints?

Feedback Item 2. I am also unhappy because I was told recently by DEC Field Service that "new computers in their guarantee period do not receive periodic maintenance". I think this is a silly rule, because if periodic maintenance once a month is good for computers on service contract, it should be equally good for a new computer during its first three months. And the particular trouble right now seems to me clearly relates to marginal voltage because of its behavior. Question: Is this rule sensible?

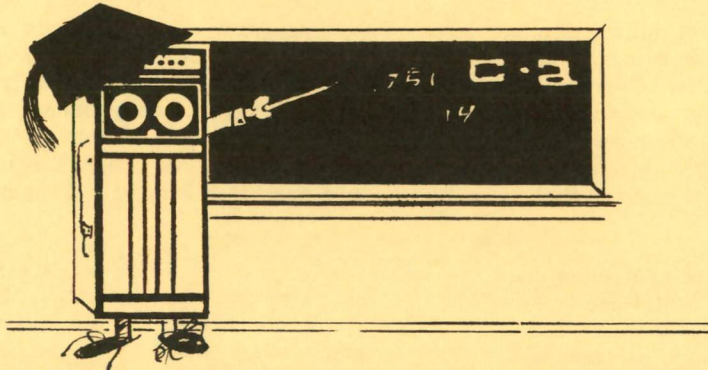
Feedback Item 3. It does seem to me to be a reflection on the quality of the PDP-9 computer (1) that it should have taken four days (from Tuesday April 30 to Friday May 3) to check out my computer after it was delivered on April 29 and (2) that we should have had to have four service calls since then, although we have only totaled about 50 hours of computer running time during the two months from May 3 to July 4. Question: What index do you use for measuring the operating quality of your computers in service at customers' locations?

Yours sincerely,

Ed

Edmund C. Berkeley
Editor

ECB/ef



The experience of:

- sitting at a computer;
- having the entire machine at your command;
- being able to look into any register you choose, to see just what information is there;
- experimenting first with simple programs, then with more complicated programs;
- having someone at your elbow to answer questions when you are perplexed; and
- being able to experiment with several different programming languages

is, we believe, one of the most exciting, interesting, and instructive experiences of the computer age.

This experience is, we think, part of the essential background of supervisory management. With such experience, supervisors of data processing departments and divisions are better able to:

- make reality-based appraisals of computing and data processing;
- form sensible judgments that are relatively independent of what the computer professionals in their groups may tell them;
- avoid commitment to unworkable proposals and costly errors.

We have acquired a powerful, modern, small, general-purpose computer. It is a Digital Equipment Corporation PDP-9 with 8000 registers of core memory;

it can perform 500,000 additions per second; etc. It is especially suited for investigation, experiment, research, and instruction.

Using this computer, and our experience since 1939 in many parts of the computer field, we have started to teach:

Course C12:

COMPUTING, PROGRAMMING, AND SYSTEMS FUNDAMENTALS FOR SUPERVISORY MANAGEMENT— WITH 'HANDS-ON-THE-COMPUTER' ORIENTATION AND EXPERIENCE

This course will be offered: July 17, 18, 19 (Wed. thru Fri.) and September 11, 12, 13 (Wed. through Fri.), and from time to time thereafter. Computer time for course enrollees will be available Wed. thru Sun. The fee is \$190; the enrollment is limited to 15.

If you are interested,

PLEASE TURN OVER

WHO SHOULD TAKE COURSE C12?

In a recent article in Computers and Automation, Swen Larsen, Vice President, Computer Learning Corp., said:

"In many companies, the top operating executive -- the one who makes the key decisions -- came into his position of responsibility before the computer revolution. Of all the men in an organization, he is probably the one in the greatest need of knowledge of the computer. Two computer experts describe the manager's plight in this way:

'The executive is likely to be baffled, or confused, or snowed. He has confidence in his firm's EDP manager, but he doesn't understand the jargon that he hears, nor does he comprehend what can be effected from the tools he controls.'"

Course C12 is directed squarely towards these people and this problem.

After the lectures beginning each day, the course will center around study groups of three or four persons who will have access together to the computer for three hours at a time; while one person runs his program, the others will work out or correct their programs. The instructor will be regularly available for guidance, and computer time will be available to course enrollees for five days (Wednesday through Sunday).

WHAT TOPICS ARE INCLUDED IN COURSE C12?

- Fundamentals of Computing, and Orientation in Computers and Programming, with "hands-on-the-computer" experience in: how to compute; how to program; how to edit a program; how to assemble a program; how to debug a program
- Some Powerful Concepts in Programming
- Introduction to Programming Languages
- Basic Principles of Systems in Computer Applications
- Applications and Nonapplications of Computers
- Some Natural History of Mistakes, and How to Avoid Them

WHO IS THE INSTRUCTOR?

The instructor for this course is Edmund C. Berkeley, editor and publisher of Computers and Automation since 1951, and president of Berkeley Enterprises, Inc., since 1954. He has been in the computer field since 1939. He took part in building and operating the first automatic computers, the Mark I and II, at Harvard University in 1944-45; he is now implementing the programming language LISP for the DEC PDP-7 and PDP-9 computers.

Mr. Berkeley is: a founder of the Association for Computing Machinery, and its secretary from 1947-53; the author of eleven books on computers and related subjects; a Fellow of the Society of Actuaries; and an invited lecturer on computers in the United States, Canada, England, Japan, the Soviet Union, and Australia.

He is a graduate of Harvard College, 1930, A. B., summa cum laude; his major was mathematics.

REGISTER ME FOR Course C12: FUNDAMENTALS OF COMPUTING, PROGRAMMING, AND SYSTEMS FOR SUPERVISORY MANAGEMENT

() July 17-19 () September 11-13

Name: _____

Title: _____

Firm: _____

Street: _____ Phone: _____

City: _____ State: _____ Zip: _____

Additional Students:

Name: _____ Title: _____

Name: _____ Title: _____

() Bill me () Bill my company () Check enclosed

Mail to: **computers**
and automation
COMPUTER-ASSISTED INSTRUCTION CENTER
815 Washington St.
Newtonville, Mass. 02160
(617) 332-5453

M. K. MELLOTT COMPANY
29 BROADWAY, NEW YORK, N. Y. 10006



Advisors in Financial Community Relations
(212) 344-3750

July 3, 1968

Mr. K. H. Olsen, President
Digital Equipment Corp.
Maynard, Massachusetts 01754

Dear Mr. Olsen:

Wall Street has not escaped the marked impact of the surging changes which are occurring in these times. It would not be unusual if some of these changes were having a telling and perhaps an adverse affect on the trading pattern in the shares of your company.

After more than 20 years of being responsible for the administrative effort connected with handling communications to the financial community for a diversified clientele -- and having sensed the coming adverse impact of a company's failure to communicate its corporate activities to the Wall Street audience -- I have diverted my own firm's service in financial community relations.

My longtime, personal experience in communicating corporations to Wall Street is now available on a spot basis. By this method I make the necessary study of a client company and then develop the essential steps in a tailored corporate communications program which, following limited instruction on handling detail, can be carried out by that company's own staff.

I invite your interest and inquiry concerning this new method of assisting a company to be competitive in these times for the awareness, understanding, and interest of the financial community. The fee is modest, and under this arrangement all assignments are handled by me personally.

I will welcome your response by letter or telephone.

Sincerely,

A handwritten signature in blue ink that reads "M. K. Mellott".

M. K. Mellott
President

TALCOTT COMPUTER LEASING

1290 Avenue of the Americas, New York, New York 10019 • (212) 956-4123

Division of James Talcott, Inc.

TRUMAN F. RICE
Senior Vice President

July 2, 1968

Mr. K. H. Olsen, President
Digital Equipment Corporation
146 Main Street
Maynard, Mass.

Dear Mr. Olsen:

Talcott Computer Leasing is a new Division of one of America's oldest companies, James Talcott, Inc. Over half a billion dollars in assets and 114 years experience are behind our new Computer Leasing Program.

To effectively serve the business community we have experienced, highly trained, and skilled professionals from the computer industry to work with our established financial team to assure the Talcott lessee the utmost in service. When your data processing objectives have been defined, we will be able to purchase from the manufacturer of your choice the equipment you need with speed and dependability. We are particularly interested in assisting you in the implementing of long range computer requirements. With our data processing know-how we plan to be an important part of the computer industry from now on.

We are ready to meet with you, so please feel free to write or telephone me collect at the above address.

Very truly yours,



Truman F. Rice

TFR/tlh

7/3 Original to Mort to see if we should participate
7/25 Sent to Roy Gould and said Mort would like to take part in it

THE AMERICAN COLLEGE OF PHYSICIANS

OFFICIAL JOURNAL—ANNALS OF INTERNAL MEDICINE

4200 PINE STREET, PHILADELPHIA, PA. 19104

BARING 2-8120

July 1, 1968

Mr. Kenneth H. Olfen
President
DIGITAL EQUIPMENT CORPORATION
146 Main Street
Maynard, Mass. 01754

Dear Mr. Olfen:

You may be interested in a special project being planned for the next Annual Session of the American College of Physicians in Chicago, April 20-25, 1969. We are sponsoring an advanced demonstration of the use of computers in medicine. This is under the direction of G. Octo Barnett, M.D., Massachusetts General Hospital.

During this meeting we always have an exhibit of technical materials to let book publishers, instrument manufacturers and pharmaceutical companies show our members products which can help them in their practices. We think this would be an excellent chance for your company to demonstrate your products in the computer field.

The American College of Physicians is composed of a membership of almost 15,000 specialists in Internal Medicine and closely allied medical fields. In Boston in April, 1968 more than 5,000 physicians registered.

If you are interested in exhibiting at this meeting in Chicago, which will feature "computers in medicine", please let me know and we will send you all detailed information necessary.

Sincerely yours,


Edward C. Rosenow, Jr., M.D.
Executive Director

ECR/amp