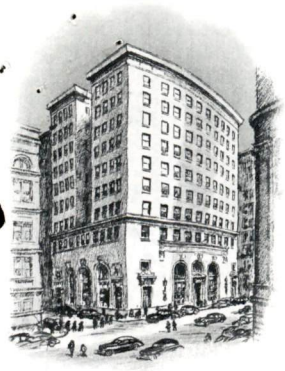

BOSTON SAFE DEPOSIT AND TRUST COMPANY

100 FRANKLIN STREET · BOSTON 6, MASSACHUSETTS
LIBERTY 2-9450

July 30, 1963

Mr. Harlan E. Anderson
Vice President
Digital Equipment Corp.
146 Main Street
Maynard, Massachusetts

Dear Harlan:

As promised, I enclose a copy of the Diebold Computer Census which lists DEC for the first time. Also enclosed is a copy of my letter to Diebold regarding their page 4 comment on profitable companies.

It was nice talking to you today, and I hope to see you in early September.

Sincerely,

Lou

Louis M. Rusitzky
Investment Officer

LMR:bg
Enclosures

Volume VIII, Number 4 *July 22, 1963*

The Diebold Group Inc.
430 Park Avenue, New York 22, New York
AUTOMATIC DATA PROCESSING SERVICE NEWSLETTER

JD&A Semi-Annual Industry Review*

NEWLY INTRODUCED computer models and an ever increasing number of computer installations indicate that the ADP industry is still very much a growth industry. The number of new installations alone should exceed twelve thousand in the next few months. Deliveries are also being made at an increasing rate, thus reducing the backlog of orders. As the backlog of orders is reduced the on-order position of the industry has declined. Part of this decline can be attributed to the increased production capacity of the manufacturers.

IBM still leads the industry in machines installed and on-order. However, the on-order position for several of its models has declined during the past half-year.

One of the most significant orders during the first half of 1963 was made by the Air Force to National Cash Register for 160 of its NCR 390 computer.

The following table summarizes census data from the last eight JD&A reports.

Date	*Total Number*		*Increase in Number of Computers Installed in Six-month Period*	*Net Change in On Order Position in Six-month Period*	*New Orders Received in Six-month Period*
	Installed	*On Order*			
January 1960	3612	1364	1578	127	1705
July 1960	4257	4377	645	3013	3658
January 1961	4528	6246	271	1869	2140
July 1961	5371	7437	843	1191	2034
January 1962	7305	7904	1934	467	2401
July 1962	9495	7286	2190	—618	1572
January 1963	11078	7097	1583	—189	1394
July 1963	11926	5889	848	—1208	360

* *The JD&A Semi-Annual Computer Census feature has been expanded to include a review of significant industry happenings during the previous half-year. Commencing with this issue, this feature will be called the JD&A Semi-Annual Industry Review.*

CLASS I GENERAL PURPOSE DIGITAL COMPUTER SYSTEMS

Class I consists of machines with vacuum tube circuitry which can generally be categorized by price range, internal speed and input/output media. Using these criteria, systems are segregated into small, medium and large groups. As in the last census, the figures are classified by systems, based on the computer and its associated peripheral equipment. There is no implied evaluation of machine capabilities in terms of large, medium, and small. Minimum requirements for each group follow:

Large-scale Class I: The system uses magnetic tapes and the computer operates at microsecond arithmetic speeds. Price is in the order of magnitude of one million dollars or more. Medium-scale Class I: The system uses magnetic tapes and the computer operates at millisecond arithmetic speeds. In general, the price range is from $500,000 to $1,000,000. Small-scale Class I: The system does not use magnetic tapes, but the computer is internally programmed.

Manufacturer	*Computer*	*Presently Installed*
Large-Scale Class I Systems		
Burroughs	Burroughs 220**	51
IBM	IBM 701**	1
	702**	2
	704**	76
	705 & 705 III	121
	709	18
Honeywell	Datamatic 1000**	6
RCA	Bizmac I**	1
	Bizmac II**	4
UNIVAC	Univac Sc. 1100 Series**	26
	Univac I** & II**	54
Medium-Scale Class I Systems		
Alwac*	Alwac III-E w/tapes**	5
Burroughs	205 w/tapes	51
Control Data	G-15 w/tapes***	141
IBM	650 w/tapes and/or Ramac	21
Underwood	Elecom Series**	2
UNIVAC	Univac File Computer	42
Small-Scale Class I Systems		
Alwac*	Alwac II** & III**	8
	Alwac III-E**	32
Burroughs	205 (no tapes)	7
Control Data	G-15 (no tapes) ***	164
General Precision	LGP-30	441
Idaho-Maryland	Readix**	7
IBM	650 (card)	464
	305 Ramac	489
NCR	NCR 102**	22
Total Class I Computers		2256

*Company no longer manufacturing computers.
**No longer in production.
***Formerly Bendix G-15.

Guide for Classification of Class II Digital Computer Systems

	Monthly Rental($)	*Number of Magnetic Tapes*	*Average Storage (in bits)*	*Overlap R-W-C***
A. Desk*	Under 2,000	None	20,000	None
B. Small	Under 12,000	None or up to 6	100,000	None
C. Medium	12-25,000	6-12	500,000	Yes
D. Large	25-75,000	More than 12	1,000,000	Yes
E. Extra Large	Over 75,000	More than 12	Over 1,000,000	Yes

* *Not relating to physical size.* ** *Read, Write, Compute.*

NOTES ON TABLE: *(Expansion to the next higher level is possible without serious imbalance; this applies to most systems).* DESK—*I/P-O/P normally paper tape or keyboard. No high speed printer.* SMALL—*All I/P-O/P on line.* MEDIUM—*Magnetic Tape Oriented.* LARGE—*Magnetic Tape Oriented.* EXTRA LARGE—*Speeds and capacities outside range of normal business data processing.*

CLASS II GENERAL PURPOSE DIGITAL COMPUTER SYSTEMS

Class II contains systems with transistorized circuitry, generally known as "second generation" computers. Many of these systems are characterized by expandability of modular design. Within each category, the systems are listed alphabetically by manufacturer.

Manufacturer	*Computer*	*Presently Installed*	*On order*	*Class Totals Installed*	*On order*
Class IIA (Desk)					
ASI	ASI 210	8	3		
Autonetics††	Recomp II	108	0		
	Recomp III	24	0		
DEC	PDP-5	0	2		
Friden	6010**	0	0		
General Precision	RPC 4000	103	0		
IBM	IBM 1620	985	110		
General Precision	LGP 21	30	35		
Monroe	Monrobot XI	265	207		
NCR	NCR 390	289	288		
	NCR 310	41	16		
Packard Bell	PB 250	130	20		
	PB 440	0	10		
SDS	SDS 910	16	38		
	SDS 920	16	9	2015	738
Class IIB (Small)					
Addressograph-Multigraph	A-M 900 Series	19	12		
Burroughs	B200 Series	146	68		
Control Data	160 & 160A	310	32		
DEC	PDP-1	42	9		
	PDP-4	16	10		
General Electric	210	70	6		
	225	158	43		
Honeywell	Honeywell 400	56	17		
	Honeywell 1400**	0	5		
IBM	IBM 1401	4760	3280		
	IBM 1440	0	565		
	IBM 1460	0	75		
ITT	ADX 7300	4	3		
NCR	NCR 315	82	126		
RCA	RCA 301	295	195		
TRW	TRW 130	71	82		
	TRW 230	0	4		
UNIVAC	Univac Solid State 80 & 90 & Step	340	14		
	Univac Solid State II	25	6		
	Univac 1050	0	10	6394	4562
Class IIC (Medium)					
ASI	ASI 420	0	0		
Burroughs	B5000	8	17		
Control Data	CDC G-20*	23	4		
	924 & 924A	12	3		
Honeywell	800	51	7		
	800 II**	0	0		
IBM	IBM 7070 & 7072 & 7074	361	46		
	IBM 7010	0	53		
	IBM 7040 & 7044	2	61		
	IBM 1410	228	134		
NCR	NCR 304	29	0		
Philco	Philco 1000***	4	16		
RCA	RCA 501	85	7		
SDS	SDS 9300**	0	0	803	348
Class IID (Large)					
Control Data	CDC 1604 & 1604A	52	2		
DEC	PDP-6**	0	0		
IBM	IBM 7080	45	23		
	IBM 7090 & 7094	285	90		
Philco	Philco 2000 (models 210 & 211)	18	8		
RCA	RCA 601	2	2		
UNIVAC	Univac 1107	6	13		
	Univac III	27	25		
	Univac 490	13	52		
Honeywell	Honeywell 1800	0	2		
	Honeywell 1800 II**	0	0		
Sylvania	Sylvania 9400	2†	0	450	217
Class IIE (Extra Large)					
Control Data	CDC 3600	2	15		
	CDC 6600	0	2		
IBM	Stretch (7030)	2	1		
Philco	2000 (model 212)	2	6		
UNIVAC	LARC	2	0	8	24
Total Class II Computers				9670	5889

**Formerly Bendix G-20.* ***Recently announced.* ****Formerly model 4000.*
†One in-company installation. *††Company no longer manufacturing computers.*

Miscellaneous Digital Computers

Miscellaneous computers are card calculators and other machines which do not fall into the Class I or Class II systems classifications.

Manufacturer	*Computer*	*Presently Installed*	*On Order*
Burroughs	E-101 & E-103	154	5
Clary	DE 60	130	2
IBM	IBM 604	3100	50
	607**	280	—
	608**	38	—
	609 & 609B-1	411	107
	610	204	5
Monroe	Monrobot XI	175	2
UNIVAC	Univac 40 & 60 & 120	860	—
	1004	28	845
Underwood	100**	2	0
Total Miscellaneous Computers		5382	1016

** *No longer in production.*

Significant Industry Happenings

Profits

• Control Data Corporation in its most recent financial statement indicated an increase in sales of thirty-nine percent over 1962 sales figures and an increase of sixty-eight percent in profits. CDC was the second company in the computer field to turn a profit.

CDC, reinforced by a healthy profit picture, has made several acquisitions during this half year. Bendix Corporation's computer division was purchased and the G-15 and G-20 computers are now being made under the CDC name. A printed circuit factory in California was bought, as well as a computer manufacturing facility in Holland. A sales representative in Australia was acquired and Meiscon Corporation was formed from a nucleus of engineers from the now-defunct Meisner Engineering Corporation.

Control Data's stock was admitted to trading on the New York Stock Exchange this year, and has since doubled in value.

• IBM has announced its six months net earnings as $270,647,030. This is an increase over the $234,609,000 earned during the same period of 1962 and sets an all-time high for any fiscal quarter.

• RCA's EDP division has indicated that the fourth quarter of 1964 should be profitable if everything goes "according to plan".

• Scientific Data Systems of Santa Monica, California is expected to become a profitable operation this year. This will be the third company in the field to turn a profit.

DCC already is also CDC

• Univac Corporation is hopeful of breaking-even in 1963.

Attrition and Mergers

• Alwac Computer Division has discontinued manufacturing its computer.

• Autonetics has discontinued the sale of their Recomp computer line. They will continue to service Recomp computers already installed.

• Bendix Corporation's computer division was sold to Control Data Corporation.

• Singer Company has announced plans to acquire Friden for $175 million in stock.

The ADP Newsletter appears on alternate Mondays. Subscription price: $37.50 per year.

Published By A.D.P. Co., Inc., 430 Park Avenue, New York 22, N.Y. Plaza 5-0400

July 30, 1963

The Diebold Group, Incorporated
A. D. P., Incorporated
430 Park Avenue
New York 22, New York

Gentlemen:

I am a subscriber to the ADP Newsletter and a great admirer of your subjects, comments, and computer census efforts. Because of this, I would like to take issue with a comment on the fourth page of the July 22 issue. You state that Scientific Data Systems "is expected to become a profitable operation this year. This will be the third company in the field to turn a profit." According to balance sheets filed at the Massachusetts State House, as required of all Massachusetts corporations, it is possible to derive figures showing that Digital Equipment Corp. (which you now include in the Census) is and has been a very profitable operation for a number of years. Like SDS, the stock is closely held, but would seem deserving of recognition if you are including such companies.

I hope that the next Census will be able to include figures on Computer Controls Corp.'s DDP-24 as this would fill out information in the scientific-industrial computer area. Again, this Company is profitable, but because of its current comparatively minor percentage of business in standard systems, its exclusion from the ranks of listed profitable companies is understood.

Sincerely,

Louis M. Rusitzky
Investment Officer

LMR:bg

HEA

STANFORD UNIVERSITY
STANFORD, CALIFORNIA

STANFORD LINEAR ACCELERATOR CENTER

July 30, 1963

Digital Equipment Corporation
146 Main Street
Maynard, Massachusetts

Gentlemen:

We are concerned with the thermal resistance of your digital modules. We are having test failures of these modules in a 40° C ambient when run in your card file on 5/8" centers. We would appreciate your written comments on the following items:

1. Your standard module test procedures, particularly with regard to ambient temperature, card spacing, and method and velocity of circulating air, if any.

2. Your recommendations for user card mounting with respect to ambient temperature, spacing, etc. for non-circulating air.

3. When will you have modules with all silicon semiconductors?

Yours truly,

J. M. Law
Components Engineer

cc: J. Faust
K. Larson - DEC
2450 Hanover Street
Palo Alto, California

D. Porat

RECEIVED
1963 AUG -1 AM 11:55
DIGITAL EQUIPMENT CORP.
SALES DEPARTMENT

JML:lm

copy to Bob Hughes ~~on~~ 8/1
Jim M.

PUBLIC RELATIONS BOARD OF NEW ENGLAND
29 COLUMBIA ROAD • MARBLEHEAD, MASS. 01947

AREA CODE 617
BOSTON 593-1323

Mr. Harlan Anderson
Digital Equipment Corp.
Main Street
Maynard, Mass.

Dear Harlan:

The Business Week people were most pleased with your cordial reception and the story they got. There will be more stories in the future with BW, I'm sure. For this story, they will have questions, and will likely want photographs. I suggested that Ted Merrill and Jim Peacock get directly in touch with you or Jack for the sake of expediency. Photos will be no problem, since they will send their own man out and finish them off in a morning.

This week and next, I shall be in touch with the Time and Fortune editors, to see what kind of stories they are interested in, if any. On something like the PDP5 or 6, I won't do anything until I get some sort of go ahead from you to talk to Datamation and others.

Best Regards,

F.N. Karmatz

Blue cover Brochure from above is filed under "articles" in DEC. file

PUBLIC RELATIONS BOARD OF NEW ENGLAND
29 COLUMBIA ROAD • MARBLEHEAD, MASS. 01947

AREA CODE 617
BOSTON 593-1323

July 29, 1963

Proposed Public Relations Program for Digital Equipment Corp.

Public Relations Board agrees to undertake the following projects:

1. Write for or place stories in major national publications.
2. Write for or place stories in trade and technical publications.
3. Prepare and mail press releases, or set up conferences for the press for new products or other newsworthy events.
4. Prepare press kits for shows and exhibitions.
5. Initiate a DEC newsletter for general distribution to potential customers, customers, sales personnel, and for the trade press.
6. Arrange for certain securities analysts (in cooperation with ARD), certain foreign visitors and trade missions, and the press to visit or become better acquainted with DEC.
7. Aid in broadening the DEC image through various public media.

In return, DEC will retain PRB for $500.00 per month, payable in advance the first of each month, plus any out-of-pocket expenses. (The fee will include a clipping service). After six months, DEC may cancel at any time with 30 days notice.

PUBLIC RELATIONS BOARD OF NEW ENGLAND
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BOLT BERANEK AND NEWMAN INC
CONSULTING DEVELOPMENT RESEARCH

50 MOULTON STREET
CAMBRIDGE 38, MASSACHUSETTS
TELEPHONE 491-1850

29 July 1963

Mr. Gordon Bell
Digital Equipment Corporation
Maynard, Massachusetts

Dear Gordon:

In accordance with your Purchase Order 25082 of 15 April 1963 (referring to our proposal P63-IS-3, of 28 March 1963) we are transmitting to you the following items:

1. Symbolic listing of Skeletal DECAL-BBN
2. Symbolic tape of Skeletal DECAL-BBN
3. Binary tape of Skeletal DECAL-BBN
4. Symbolic listing of ao's
5. Symbolic tape of ao's
6. Symbolic listing of ewd's
7. Symbolic tape of ewd's
8. Symbolic listing of ig's
9. Symbolic tape of ig's
10. Binary tape of Intermediate DECAL-BBN
11. Symbolic listing of LL-BBN (Linking Loader)
12. Symbolic tape of LL-BBN
13. Binary tape of LL-BBN
14. Binary tape of LTM-BBN (Library-tape-maker)
15. Programming Manual, Part I--3 copies

Dick McQuillin and Dave Park will hand-carry these items to Maynard today.

The punched paper tapes are labeled with the date, 26 July 1963. We would like to request that all future copies of these tapes be labeled "26 July 1963 (copy)". It is our feeling that this will prove of considerable importance in avoiding future confusion.

Sincerely yours,

Thomas Marill
Head, Information Systems Department

TM:jm

cc: H. Anderson
R. McQuillin

LYBRAND, ROSS BROS. & MONTGOMERY

COOPERS & LYBRAND
IN AREAS OF THE WORLD
OUTSIDE THE UNITED STATES

80 FEDERAL STREET
BOSTON 10

July 29, 1963

TO OUR CLIENTS:

Re: Travel, Entertainment and Gift Expenses

Final regulations on the deductibility of travel, entertainment and gift expenses have been published by the Treasury Department. These regulations are in addition to the record-keeping regulations which were summarized in our letter of January 7, 1963. Failure to meet the record-keeping requirements will result in disallowances of travel and entertainment expenses, even if such expenses would otherwise be deductible.

Dual Test for Deduction: Travel, entertainment and gift expenses must first be established as deductible expenses under prior tax law (i.e., the law prior to the new legislation passed in 1962). If the expenses meet this first test, they must then meet the new tests imposed by the 1962 legislation and the related regulations. Failure to meet either one of these tests will result in disallowance of the expenses as a tax deduction. Thus, for example, if certain travel expenses incurred by a wife in accompanying her husband on a business trip were not deductible under prior law, they would still be disallowed under the current regulations; also, certain expenditures deductible under prior law may now be disallowed.

Exceptions to the New Regulations: A taxpayer should first determine if the particular expenses in question are excepted from the new regulations. Certain travel and entertainment expenses are excepted and are deductible if they meet the record-keeping requirements and would have been deductible under prior law. In effect, no new test of deductibility has been imposed upon these expenses.

The common exceptions include expenses for:

1. Quiet Business Meals - Food and beverages furnished to an individual "under circumstances generally considered conducive to a business discussion." There can be no substantial distractions (e.g., floor show, night clubs, sporting events) if this test is to be met. It is not

necessary to actually discuss business, and the purpose of the entertaining may be to promote general business goodwill. Examples: Lunch or dinner with a customer or prospective customer at a quiet restaurant; expenditures for banquets sponsored by business associations, etc.

2. Employees' Meals - Expenses for food and beverages provided on the taxpayer's premises primarily for his employees. Example: A company cafeteria or executive dining room.

3. Compensation - Expenses treated as employee compensation subject to withholding. Example: An expense-paid vacation for an employee.

4. Reimbursements - Reimbursements for T & E expenses not treated as compensation to the employee incurring the expense are excepted as to the employee, but the employer is subject to the requirements of the new regulations in such case. A similar rule permitting only one disallowance applies to T & E expenses incurred by an independent contractor for his principal.

5. Recreational Expenses for Employees - Examples: Company picnic, summer outing, swimming pool. This exception does not apply if the expense is primarily incurred for the benefit of officers, shareholders, highly compensated employees, etc.

6. Business Meetings - Meals, cocktail parties, etc., at business meetings for shareholders, partners or directors.

7. Business League Meetings - Entertaining at meetings of professional associations, chambers of commerce, etc.

8. Public Use - Expenses for radio and television entertainment, for maintaining a private park for public use, distributing samples to the general public, etc.

9. Entertainment Sold to Customers (as part of an entertainment business) - The cost of operating a night club, cruise ship, or similar activity as a business.

10. Miscellaneous - Expenditures for supper money for employees working overtime, for a hotel room maintained by an employer for lodging of his employees while in business travel status, or for an automobile used in the active conduct of a trade or business.

Entertainment in General: The new regulations deal separately with expenses for entertainment activities, and with expenses for entertainment facilities used in connection with an entertainment activity. All expenses, whether for an entertainment activity or an entertainment facility, are subject to the requirement that they not be "lavish or extravagant." The regulations do not give any indication of what standards will be applied to determine "lavish or extravagant" entertainment.

Expenses of an Entertainment Activity: An "entertainment activity" is defined as any activity normally considered as entertainment, amusement, or recreation, and the term may include any other activity which satisfies the personal, living or family needs of an individual. "Entertainment activity" expenses include expenses in connection with entertaining at night clubs, cocktail lounges, athletic clubs, hunting trips, vacation trips, etc.

Entertainment activity expenses will be allowed by the new regulations if such expenses are "directly related" to the taxpayer's trade or business or, in certain cases, if the expenses are "associated with" the taxpayer's trade or business. The regulations are vague and do not precisely define these terms, and we expect wide variations in interpretation by individual revenue agents. We anticipate that numerous interpretative rulings and substantial litigation may be needed to determine the meaning of these and other terms contained in the regulations. A taxpayer, to best protect himself against later adverse tax results, should now maintain complete and detailed documentation of the business aspects of the entertainment (e.g., problems discussed, time of meeting, persons in attendance and business relationship, etc.).

Directly Related Entertainment: Entertainment meeting any one of the three following tests is considered "directly related":

Test 1 - All of the following must be met by the taxpayer:

(a) At the time he made the expenditure or committed himself to make it, he had more than a general expectation of deriving some income or specific trade or business benefit (other than the goodwill of the person or persons entertained) at some indefinite future time. However, he is not required to show that income or business benefit actually resulted from each and every expenditure.

(b) During the entertainment period, he actively engaged in a business meeting, negotiation, discussion or other bona fide and substantial business transaction for the purpose of obtaining income or a business benefit.

(c) The principal character (intent) of the combined business and entertainment was the active conduct of his trade or business. It is not necessary that more time be devoted to business than entertainment in order to meet this test.

(d) The expenditure was allocable to the taxpayer and a person or persons with whom the taxpayer engaged in the active conduct of trade or business during the entertainment. (Note: While this requirement would seem to exclude expenses allocable to the wives of the taxpayer and of the other persons entertained, the regulations definitely imply that such expenses will be allowed if expenses allocable to the husbands are deductible.)

Test 2 - The expenditure occurred in a "clear business setting directly in furtherance of his trade or business" (no night club entertaining, cocktail party, or other setting with substantial distractions).

The expense of providing a "hospitality room" at a business convention is specifically defined as "directly related." The regulations also specify, as "directly related," entertainment of business representatives and civic leaders at the opening of a new hotel or theatrical production where the clear purpose is to obtain business publicity, rather than to create or maintain goodwill.

Test 3 - The expenditure was made directly or indirectly to the taxpayer for the benefit of an individual (other than an employee), and such expenditure was in the nature of compensation for services rendered or was paid as a prize or award which is required to be included in gross income.

"Associated with Entertainment": "Associated with" entertainment must either directly precede or follow a substantial and bona fide discussion for the purpose of obtaining income or a business benefit. To be substantial, the business discussion must be the principal activity (purpose) of the combined business-entertainment. It is not necessary, however, that more time be devoted to business than entertainment for this purpose. A deduction will only be allowed for the expenses of entertaining the persons with whom the business discussion was held (see comments below relating to entertainment of wives).

Entertainment which occurs on the same day as a substantial and bona fide business discussion is considered as directly preceding or following such discussion. It is not necessary that the entertainment occur on the day of the discussion. For example, if a group of business associates comes from out of town to the taxpayer's place of business to hold a substantial business discussion, the entertainment of such business guests and their wives on the evening prior to or on the evening following the business discussion is generally regarded as directly preceding or following such discussion. It also appears that

entertainment expenses allocable to the taxpayer's wife will be allowed if the wife accompanies her husband to the entertainment activity and if the husband's entertainment expenses are deductible.

Expenses of Entertainment Facilities: Expenses of entertainment facilities, to be deductible, must be "directly related" to the taxpayer's trade or business (see the discussion above of "directly related"), and the facility must be used primarily in furtherance of the taxpayer's trade or business. There is no "associated with" test for deductibility of entertainment facility expense. Expenses of entertainment facilities include the costs of operating and maintaining yachts, hunting lodges, apartments, hotel suites, etc., and include the cost of dues to social or athletic clubs.

To obtain any deduction for expenses attributable to an entertainment facility, the taxpayer must first show that the facility was used primarily for furthering his business. "Primarily" means that over 50 per cent of the total use is for ordinary and necessary business purposes. He will then be allowed a deduction for the portion of the total facility expenses allocable to the "directly related" use of the facility.

In measuring the "over 50 per cent use" test, use of the facility for "associated with" entertainment counts as business use time (but not for purposes of allocating entertainment facility expenses). The regulations also permit use of club facilities for "quiet business meals" to count as "directly related" expenses, and therefore both for purposes of computing the "over 50 per cent use" test and for purposes of allocating expenses of an entertainment facility. For example, an individual uses his social club 25 per cent of the time for "directly related" business use, 30 per cent of the time for "associated with" business use, 15 per cent for "quiet business meals," and the remainder of the time for personal use. Since the club is used more than 50 per cent of the time in furtherance of the taxpayer's business, the taxpayer may deduct 45 per cent (the 30 per cent "directly related" time plus the 15 per cent "quite business meal" time) of the annual club dues as a "directly related" business expense. In addition, the taxpayer may also deduct the direct costs (meals, drinks, etc.) of the "directly related" and the "associated with" entertainment without proration, provided they otherwise qualify under the new regulations.

Travel: New rules apply to travel expenses of a combined business-vacation trip where the time away from home exceeds one week and the nonbusiness time on the trip exceeds 25 per cent of the total trip time. If the business-vacation trip exceeds one week and if the vacation time is more than 25 per cent of total time, the total travel expense is disallowed in the ratio that the number of nonbusiness days during such travel bears to the total number of days during such travel. This disallowance applies principally to transportation costs. Purely personal expenses (for side trips, meals and lodging during vacation days, etc.) are totally nondeductible (as personal expenses).

The new rules do not apply if the individual incurring the travel expenses does not have "substantial control over arranging the trip." Selection of the timing of the trip is not "substantial control." Employees generally will not be considered as having substantial control over arranging a trip if they are not managing executives of their employer (those who decide on the necessity of the trip), are not more-than-10 per cent shareholders, or are not self-employed persons. Also, if the individual can establish that the "major consideration" in making the trip was not a vacation, the new disallowance rules do not apply.

Gifts: The new regulations limit the deductibility of business gifts to $25 per year per individual. The principal impact of this limitation will be upon payments by corporations to widows of corporate executives. In the past, such payments have often been deductible by the corporation and not included in income of the widow, since the payments were considered as a "gift" by the corporation. If such payments are now deducted as a business gift, rather than as taxable compensation, only a $25 "gift" per year per individual recipient will be deductible.

The term "gift" does not include certain awards to employees or items with a nominal value (less than $4). Expenditures for gifts of packaged food or beverage to be consumed at a later time will be treated only as a gift (rather than as "entertainment"). A gift of admission tickets where the taxpayer does not accompany the donee to the entertainment may be treated either as a gift or as entertainment. Certain other expenditures may also be either gifts or entertainment expenses. At the election of the taxpayer, such expenditures may be treated as either a gift or as entertainment, whichever will give the more beneficial tax result. This election may be exercised or changed at any time within the applicable statute of limitations.

Summary: The new rules and regulations unfortunately leave much to the imagination and ingenuity of the individual examining revenue agent. Taxpayers should be prepared for substantial arguments over the deductibility of travel and entertainment expenses in particular. A complete and present record of who, when, where, and how (e.g., business discussions, expected business benefits to be derived from these expenditures, persons in attendance) will be a necessity to winning these arguments.

The transitional period for conforming accounting procedures to the new regulations has been extended to July 31, 1963. Examining officers are under instructions to resolve all reasonable doubts in favor of taxpayers when examining T and E expenses applicable to periods before August 1, 1963.

We shall be pleased to discuss the new regulations with you in greater detail or to respond to any questions on this increasingly important part of our tax laws.

Very truly yours,

Lybrand, Ross Bros. & Montgomery

HS, Jr/MEM

OHIO UNIVERSITY
ATHENS, OHIO

OFFICE OF THE PRESIDENT

July 25, 1963

Mr. Harlan E. Anderson
Digital Equipment Corporation
Maynard, Massachusetts

Dear Andy:

Just a note to thank you ever so much again for visiting us and being so helpful to our Computer Committee. I am delighted that you are submitting a proposal to the Committee.

Enclosed is a copy of my letter to Guinn Smith. We will arrange a luncheon when both you and Ken can be with us.

Cordially,

Vernon R. Alden

vra mw
enc.

July 25, 1963

Mr. Guinn Smith
Boston Safe Deposit and Trust Co.
100 Franklin Street
Boston 6, Massachusetts

Dear Guinn:

Ken Olson will be on vacation on the 12th and 13th of August so that we should probably postpone our luncheon with Harlan Anderson and Ken Olson until I am back for the September meeting. Nevertheless, I am looking forward to seeing you when I am back for the August Board meeting.

Cordially,

Vernon R. Alden

vra mw

The National
Shawmut Bank
of Boston

July 19, 1963

Mr. Harlan E. Anderson, Vice President
Digital Equipment Corporation
146 Main Street
Maynard, Massachusetts

Dear Mr. Anderson:

I am happy to enclose a letter of introduction to our very good friend, Mr. E. L. Carthew, Chief Manager, International Division, Bank of New South Wales in Sydney.

Interestingly enough, Mr. Carthew was here in Boston just a few weeks ago and is well known to a number of our officers, myself included. I am sure you will find him most helpful.

Enclosed is a booklet which was prepared by the Bank of New South Wales on Establishing a Business in Australia, parts of which you may find to be of interest to your company.

With all good wishes for a very successful trip.

Very truly yours,

N. R. Godwin

N. R. Godwin
Assistant Vice President

Enclosure
NRG:jhc

TECHNICAL STUDIES, INC.

SUITE 913

730 FIFTH AVENUE

NEW YORK 19, N. Y.

CABLE ADDRESS "CHUNNEL"

TELEPHONE CIRCLE 6-8550

July 17, 1963

Mr. Harlan Anderson
Digital Equipment Corporation
Maynard, Massachusetts

Dear Andy:

This morning I paid a quick visit to my old friends in Socony Mobil who were active in the linear programming field and mentioned to them that DEC is developing the PDP6 which would be particularly suited for the solution of large linear programming problems.

Will you be kind enough to send to the following two people the specifications on the PDP6 with a short covering letter mentioning that you are sending them at my suggestion:

Frank Conway
Socony Mobil Oil Co., Inc.
150 East 42nd Street
New York 17, New York

and to

Dr. Julius S. Aronofsky
(above same address).

While discussing with my old boss Frank Conway, he indicated to me that the best programers in the field of linear programming is

Bonner and Moore Associates
500 Jefferson Street Suite 1124
Cullen Center
Houston 3, Texas.

Bonner and Moore is writing linear programming programs for Sperry Rand and GE. They are also working for Socony to prepare a (question mark) compiler named Omega which would be most useful for industrial firms in the processing of their LPs.

Dr. Aronofsky understands well the electronic computers, but Frank Conway sees the problem from the practical end simulating day-to-day problems into LPs.

Hoping that you may sell a PDP6 to Socony, I remain

Sincerely yours,

A. de Vitry

Arnaud F. de Vitry

Public Relations Board
of New England

Lo 6-0670

July 15, 1963

Mr. Harlan Anderson
Digital Equipment Corp.
146 Main St.
Maynard, Mass.

Dear Harlan:

It was good to get together with you and Ken Olson and talk public relations. I hope the meeting proved fruitful for you. I would like to get together with you again in the near future, perhaps in your offices, and discuss in depth two or three specific project areas.

If I didn't state it before, I should make it clear that PRB will not send anything out or arrange any press interviews without first having your full approval. In this way, you can keep tabs on what we are doing and how we are doing it.

I shall look forward to seeing you again.

Cordially,

Chip

F.N. Karmatz

F. N. Karmatz
Ann Herzog

63 Selkirk Road
Brookline, Mass.

charles w. adams associates inc.

142 THE GREAT ROAD • BEDFORD • MASSACHUSETTS • Area 617 275-8050

July 8, 1963

Given to D. Mills 7/16

Mr. Harlan Anderson
Digital Equipment Corporation
Maynard, Massachusetts

Dear Andy:

Enclosed is our check for $1900, representing payment for the loan this Spring of your PDP-1 computer. As I mentioned to you on the telephone this morning, Adams Associates incurred a significant loss on the Stelma job (on which we used this computer), but this loss in no way should affect your right to the money which normally we could have collected from Stelma for its use.

While I was not aware that you had incurred costs in designing special equipment to prepare the computer for the Oregon job, Charlie and Jack have since told me this was indeed the case. We are pleased to learn that you have written off these costs and that you have released us from our Purchase Order No. 31-03-621 dated March 31, 1962 without liability on our part.

We also appreciate the very fair arrangement you have made with us regarding date of the first payment for the PDP-4. When Charles and Jack get the thing on the air, we will be delighted to entertain a visit from you and your friends at the Shawmut.

Nice to be doing business with you.

Sincerely yours,

R. A. Plachta
Director of Administration

RAP/hcs
enclosure

July 8, 1963

Dr. Roger L. Fulton
Mr. William P. Hyde
Eyeball Associates
4284 Pomona Way
Livermore, California

Gentlemen:

Please accept my apologies for this exceedingly tardy repponse to your letter of May 13 acquainting American Research with your interesting young company. An exceedingly heavy work load involving a great deal of travel unavoidably has delayed our study and consideration of your proposal much longer than is normally the case. I certainly hope that this delay has not seriously inconvenienced you.

Your "eyeball" concept for converting analog data into digital form appears to be a promising technique with many potential commercial applications. Based upon our present understanding, however, we wonder if the manufacture and sale of a converter of this type represents a sufficiently broad field of activity to justify the formation of a new business venture for its exploitation. It appears to us that perhaps your best interests might be served if your technology were perfected and commercialized within the organizational and financial structure of a successful and existing firm where there is a logical and compatible fit of products and people. By proceeding in this manner, it would appear to us that your technology probably could be pushed ahead more rapidly and most certainly at lower cost and, at the same time, your exceptional technical talents would be diverted as little as possible from the main objective of the undertaking to the many relatively mundane matters that unavoidably are encountered in any small business operation. Of course, there are compensating benefits associated with starting your own enterprise if the potential of the endeavor is sufficiently great to justify the extraordinary effort and expense involved. In our opinion, however, oftentimes equivalent rewards and satisfactions can be achieved by working on a semi-autonomous basis within the framework of an appropriate existing enterprise.

This reasoning leads us to the conclusion that ARD probably should not join with you in the development of Eyeball Associates as an independent business enterprise. However, if you see merit in the possibility of working on some basis with an established company, we would welcome the opportunity of exploring Digital Equipment Corporation's possible interest in joining with you. As you probably know, we are investors in Digital and enjoy the privilege of working closely with its top officers. It is quite possible, in my opinion, that perhaps DEC might be interested in having you develop your technology within its corporate framework as a semi-autonomous division or department if appropriate terms and conditions could be agreed upon. It is my sincere belief that this would be a preferable way of proceeding, both for you and for ARD, than to pursue the possibility of establishing an independent entity.

We appreciate very much your courtesy in exploring this matter with us. It would be a great pleasure to explore DEC's interest in your activities if you desire us to do so. In any event, we certainly hope that your plans can be developed to your satisfaction and that your technology can be made available commercially to those who can benefit from it.

Sincerely yours,

William H. Congleton
Vice President

whc/mj

bcc: Harlan Anderson

digital equipment corporation
MAYNARD, MASSACHUSETTS
TWinoaks 7-8822 TWX MAYN 816

June 25, 1963

Mr. Harlan E. Anderson, Vice President
Digital Equipment Corporation
Maynard, Massachusetts

Dear Mr. Anderson:

Please consider this notice of a meeting of the Board of Directors of Digital Equipment Corporation, to be held at the offices of American Research and Development Corporation, 200 Berkeley Street, Boston, Massachusetts on Wednesday, July 10, 1963, at 2:30 p.m.

I shall appreciate your indicating on the enclosed copy whether or not you plan to attend the meeting, returning the copy to me.

Very truly yours,

W. H. Congleton

William H. Congleton
Assistant Clerk

WHC:ah
Enclosure

Ken

POTTER INSTRUMENT COMPANY, INC.

151 Sunnyside Boulevard · Plainview, New York · OVerbrook 1-3200

June 24, 1963

Mr. Harland Anderson, Vice President
Digital Equipment Corporation
146 Mail Street
Maynard, Massachusetts

Dear Andy:

1. The purpose of this letter is to provide you with advance notice of the latest tape transport development program at Potter Instrument Company and to offer you the opportunity to obtain one of the first pre-production models.

2. Potter is extending the operation of our MT-36 vacuum-column tape transport to permit operation at 75 ips. Although detailed performance specifications have not been finalized, we will guarantee that this unit will be capable of writing and reading IBM-compatible tapes at either 200 or 556 bpi.

I have enclosed a copy of our MT-36 specification sheet so that you may have an idea of the approximate specifications for the MT-75. Several original equipment manufacturers have expressed great interest in a unit of this type and plan to order evaluation units for delivery at the earliest possible time.

3. The present schedule for our program is based on introducing the MT-75 at the Fall Joint Computer show on November 12,13 and 14. We are planning to build a few pre-production models in conjunction with our demonstration requirements. These units will be available for $5,000 each for the basic transport with delivery by 1 December 1963 to customers who place an order at the present time.

4. I plan to call you next Monday, 1 July 1963, in regard to this program because I believe that the unit described above

Mr. Harland Anderson
Digital Equipment Corporation

will offer you a superior product at an absolute minimum price. I hope that my call will be followed up by a personal visit to firm up contractual arrangements.

Kindest regards,

POTTER INSTRUMENT CO., INC.

Stephen J. Keane
Director of Marketing

SJK:sw
Enc. MT-36 Specification Sheet — Sent to cat file Purchasing

cc: Henry Crouse (DEC)
Roland Boisvert (DEC)

Walter E. Weeton
Wild & Associates, Inc.
P. O. Box 66
Needham 92, Massachusetts

AMERICAN RESEARCH AND DEVELOPMENT CORPORATION

THE JOHN HANCOCK BUILDING · BOSTON 16 · MASSACHUSETTS

AREA CODE 617 426-7060

21 June 1963

Mr. Harlan E. Anderson, Vice President
Digital Equipment Corporation
146 Main Street
Maynard, Massachusetts

Dear Andy:

Enclosed are copies of letters sent to Mr. Jean Riboud, President of Société de Prospection Electrique, the French affiliate of Schlumberger Limited, and to Mr. John Bolton, Chairman of the Board of Solartron, about Mr. Ronald Payne.

As soon as I receive answers from them, I shall forward them to you.

Sincerely yours,

A. de Vitry

AV:pc
Enclosures

Arnaud F. de Vitry,
Technical Studies, Inc.,
730 Fifth Avenue,
New York City, N.Y.
U.S.A.

June 14, 1963

Dear Jean:

Recently some friends of mine in the United States had the pleasure of meeting Mr. Ronald Payne of Australia. This man is apparently representing electronic companies in Australia and has met Schlumberger representatives in Paris.

His address is: the Ronald Payne PTY, Ltd. 385 Bridge Road, Richmond, Victoria.

I would be very grateful to you, if you were willing to send me whatever information you can on this gentleman and his organization. This gentleman suggested Schlumberger as a reference, and my friends are probably interested in him for the possible representation of their products in Australia.

Would you be kind enough to send the information to the address indicated above.

Henriette sends her regards to Krishna, and I do hope to have the pleasure to meet you on an airplane one of these days.

Sincerely yours,

A. de Vitry

Arnaud F. de Vitry,
Technical Studies, Inc.,
730 Fifth Avenue,
New York City, N.Y.
U.S.A.

June 14, 1963

Dear Mr. Bolton:

It was a great pleasure for me to meet you in November in Boston after hearing so much about you from John Weinberg. May I confess that I went twice to London since our meeting, but each time for less than twenty four hours, and I did not call on you. Later during the summer, the Channel Tunnel will call me back to London and I shall let you know before hand.

Recently, some friends of mine received the visit of Mr. Ronald Payne of Australia who apparently has had business relationships with Solartron. This gentleman's address in Australia is : Ronald Payne PTY, Ltd., 385 Bridge Road, Richmond, Victoria. He apparently represents electronic companies in Australia, and he contacted my friends for this purpose. Would you be willing to send me whatever information you would judge appropriate on his technical and business activities. I would appreciate receiving this information at the address indicated above.

Regretting to write you to ask you for your help, I hope to have the pleasure to see you in the near future,

Sincerely yours,

A. de Vitry.

M. Matievič
F. Vršnak
I. Senčar
AID Participants (Yugoslavia)

Syracuse 6/15/1963

Digital Equipment Corp.

Dear sirs,

we would like to express our thanks for your very kind receiving we had during our visit to your factory. The visit was very instructive and interesting for us. We wish prosperity for your enterprise and we remain

trully yours

Igor Senčar

WRH
6/17/63

WESTON COLLEGE
WESTON 93, MASSACHUSETTS

June 10, 1963

H/EG

Mr. Harlan Anderson
Digital Equipment Corp.
Main Street
Maynard, Mass.

Dear Mr. Anderson,

You may be interested in the enclosed article which was a by-product of the pilot project that Donald Fitzpatrick and I conducted last year, and in which you generously contributed your ideas and time. It is a by-product in the sense that all of the presidents interviewed stressed the importance of good employee relations. Twenty percent of the men specifically mentioned the beneficent role of profit sharing in their company's productivity.

A summary of the preliminary conclusions of the pilot project is being prepared for publication, and the project itself is still being carried on. You will receive a reprint of the report as soon as it is published.

If you have any comments on the enclosed reprint, or on the study of small business growth, I would be very happy to hear from you.

Meanwhile, wishing you every success in business, I remain

Sincerely yours,

J. David Morrissy, S.J.

J. David Morrissy, S.J.

Profit sharing

New Dimension in Free Enterprise

by J. DAVID MORRISSY, S.J.

► *Few practices have done more to vitalize American capitalism than employee profit-sharing plans. Such plans provide a powerful incentive for workers to improve productivity and efficiency which, in turn, is translated into higher sales and larger profits. Satisfied workers contribute more to the entrepreneurial process of production than passive stockholders who collect dividends and sell their "ownership" whenever they need cash. The 40,000 firms which have adopted profit sharing testify that it is good for the workers, for business and for stockholders. The Reverend* J. DAVID MORRISSY, S.J., *is on leave from Al-Hikma University, Baghdad, where he taught economics. Father Morrissy is presently doing research on business ethics at Weston College, Weston, Mass.*

AMERICANS pride themselves on being a nation of self-reliant pioneers. This desire for economic independence is borne out by the 75,000 annual rise in the number of businesses.

Today there are four and one-half million business firms in America—one firm for every 40 citizens. Yet over two million of these are one-man firms and more than one million others have less than four employees. Thus all the small firms together account for only six per cent of the American labor force. This means that over 60 million working Americans are not directly motivated by the risk-reward mechanism of the market place.

The "invisible hand," described by Adam Smith as guiding the legitimate self-seeking of individuals to achieve greater good for all, affects the "hired" Americans only remotely. True, shoddy workmen will lose their jobs because of better products made more cheaply by competitors, and disaffected workers who feel only the crack of the whip will trudge through reluctantly.

Or, like the workers in the movie satirizing trade unions in England, they slowly chant: "We all pull together, but not too fast. Got to help the other fellow make the job last." But when given the positive motivation of sharing in the success of the enterprise, workers respond energetically and cooperatively to produce the teamwork needed in today's complex industrial society.

Over a century ago, Alexis de Tocqueville observed the American workman to be "of singular warmth in his desires, enterprising, fond of adventure and above all of novelty. The same bent is manifest . . . in the depths of the backwoods as well as in the business of the city." Failure to take advantage of these traits is often due to management's failure to respond creatively to the problems of industrial relations.

More and more business leaders seeking imaginative answers to the subtle problem of human motivation find a solution in profit sharing. Profit-sharing plans date back to the time of Jefferson, but the oldest continuing plan in America began at Proctor & Gamble in 1887. Since then numerous companies such as Kodak, Kellogg, Philip Morris, Rexall, Zenith, Motorola and Sears, Roebuck have had similar success with their work force.

Nonetheless, profit sharing did not spread swiftly through industry. Originally, both business and labor leaders opposed it. As late as 1939, at a Congressional hearing, John L. Lewis and William Green, then respectively presidents of the CIO and AFL, scorned it as an attempt to avoid collective bargaining and fair wages. Businessmen often took up the program hoping to prevent unionization of their workers, but few were successful in this if they did not pay very good wages. In fact, in 1939 only 728 profit-sharing programs existed in America, and most of the literature of the subsequent decade described the shortcomings of such programs.

DURING World War II wage ceilings forced employers to use other incentives to get and keep good workers. They tried profit sharing and found it helpful, whereupon such plans grew in number and assets. In 1956 the total number of plans registered with the Internal Revenue Service numbered 11,324. Growth of new plans accelerated in subsequent years so that the total reached 30,000 in 1961.

In addition, an estimated 10,000 cash payment plans not registered with the IRS brought the number of all types of profit-sharing plans in America in 1961 to 40,000. Of all plans instituted, less than one per cent have been discontinued, demonstrating that no mere fad accounted for the recent growth. Even after mergers the acquiring company often continues the program, as did General Dynamics when it purchased Materials Services, Inc.

Financially, the size of the funds that profit-sharing trusts administer for four and one-half million workers has swelled to more than $6 billion. This growth is spurred on by workers who cooperate energetically and intelligently when their contribution is recognized and rewarded.

A spokesman for Sears, Roebuck Co., which has distributed $568 million between 1916 and 1960, says, "Profit sharing has become a unifying principle that serves as a symbol around which the entire organization revolves . . . there is a striking community of interest between stockholders and employees." After one year of operation, Richard E. Cross, Chairman of the Board of American Motors, says with enthusiasm, "There has been tangible evidence of the intangible benefits of this plan."

Gradually unions have also grown so accustomed to the place of profit sharing that Douglas Frazer, a member of the United Automobile Workers board, feels that plans of "this type hold great significance for

Reprinted from the June, 1963 issue of CHALLENGE, *The Magazine of Economic Affairs.*

American industry generally." Rather than add pages of testimony and countercharges, let us examine the anatomy of profit sharing.

The Council of Profit Sharing Industries defines profit sharing as: "Any procedure under which an employer pays or makes available to *all regular employees* subject to reasonable eligibility rules, in *addition to prevailing rates of pay,* special *current or deferred sums* based on *profits of the business.*" The four key elements of all effective profit-sharing plans deserve a closer scrutiny.

Rewards: current or deferred. Profit-sharing rewards can be made in cash payments or deferred in an employee trust fund. For immediate results the direct incentive of cash benefits paid quarterly or yearly is probably best. One electronics firm treasurer explained the psychology behind the semiannual payment of profit shares in June and December: "Workers always appreciate more money for Christmas gifts and for their summer vacation trips."

Yet because of tax regulations, deferred payment plans outnumber cash plans four to one. Firms with deferred plans are allowed to deduct an amount equal to 15 per cent of their payroll from taxable income and place it into a trust fund set up for the "exclusive benefit of employees." Bear in mind that companies of any appreciable size pay a tax of 52 cents on each dollar of profit.

MANY OF THE profit-sharing plans are contributory, which means that workers pay into the fund limited sums which the company matches with a portion of profits. The aim of the funds is to build up a "rainy day" cache for retirement or sickness expenses. Over a period of years these retirement sums swell enormously beyond the modest original employee contributions.

For example, a Motorola employee earning $5,000 yearly paid in $4 weekly ($200 yearly) since 1947 and found his account worth $18,134 by 1961. A Sears, Roebuck employee contributing to his profit-sharing fund since 1932 has an account worth $84,643 today, although in 30 years he has contributed only $4,804. The increase comes from the company profits paid into the fund for him and from the compound interest on his account.

Programs of this caliber foster strong company loyalty and diminish labor turnover because the company takes a long-range interest in its employees. Although James Lincoln, Chairman of the Board of the Lincoln Electric Co., opposed unionization and New Deal measures, he justifies his company's large profit-sharing program, saying: "Make the worker a member of the team. Production can be stepped up four times." For Lincoln, the "invisible hand" of self-interest spurs employees to greater efficiency.

Benefits for regular employees. Benefits give most incentive to regular employees who know the company routine and set the pace for temporary and supplemental help. In fact, deferred profit-sharing plans restrict participation to employees with one or more years of service. To ensure permanence of employment, workers for the first few years can withdraw only their own contributions from the fund. Gradually, employees become "vested" and gain control of the contributions the company has made for them. Seeing their accounts built up, they get a psychological—to say nothing of the financial—lift, making them more amenable to change when management decides to innovate. This type of teamwork permits labor-management relations to keep abreast of technological innovations.

Although regular employees take a deeper interest in their company's success and prospect, they have no desire to usurp management's prerogatives. Accordingly, in November, 1962 American Motors contributed to its employees' "progress-sharing fund" almost 200,000 shares of its stock without fear of union meddling because their labor contract clearly spells out that "the union disclaims any right or intention to review or participate in any management function, policy making or right."

Sears' long history with its trust fund plan uncovered no efforts of workers to wrest control from management, although employees own about 25 per cent of the company's stock. After all, in a free enterprise economy employee ownership of a business is a possibility that should surprise no one.

A decade ago Benjamin Fairless, President of U.S. Steel, pointed out that his company's 300,000 workers could, by saving $10 weekly for seven years, buy in the open stock market complete control of U.S. Steel. A whimsical gimmick, to be sure, but *The Wall Street Journal* applauded its core of common sense, while *Fortune* deplored its inflationary effect on steel stock, and steelworkers listened with profound apathy. The point at issue is that employee ownership of stock is not incipient socialism but a praiseworthy extension of free enterprise.

Above prevailing wage rates. In view of the number of large-scale strikes in recent years, especially in the transportation industries, labor and management can more easily agree on what is a fair day's wage than on what is a fair day's work. Success in profit-sharing techniques, then, will depend on mutual confidence in the fairness of both management and labor. Without this confidence the program will founder; with it a surprising spirit of cooperation induces flexibility and increases savings.

An example of this occurred in the first year of the American Motors plan when workers gave up a five-

minute wash period and saved the company $1,500,000 in labor costs. Voluntary discontinuance of a cost-of-living automatic pay increase saved the company another half million dollars. Editors of *The Wall Street Journal,* skeptical when American Motors announced the plan, commented that "a cost increase is a cost increase." They had not foreseen the savings of $2 million mentioned above and the improved production which "laid the basis for $5 million a year savings," according to Edward Cushman, Vice President of American Motors. Consequently, while profit-sharing payments are a cost increase insofar as they are payments to labor above prevailing wage rates, they also cause the counterbalancing savings and increased productivity.

Bonus based on profits. Obviously a Christmas turkey will win more good will for the company than a minuscule bonus in a year when profits are good. To have an impact on the workers, the plan must provide for a payment that is fairly substantial. A rule of thumb sets the range between five per cent and 20 per cent of the worker's annual wage. Thus a payment equal to two weeks' pay would be the lower limit of the ideal range for a worker's share of profits in a good business year.

GENERAL ELECTRIC terminated its program in 1948 after 13 years because it felt that payments averaging $17.64 for each of 165,000 workers were too small to be effective. *Fortune* agreed that the payment was too small, but only because General Electric shared too small a portion of its total profits (one and one-half per cent) with its workers. *Fortune* explained that if General Electric had distributed one-fourth of its $173 million profits, the average payment to workers would have been $240—a sizable incentive payment, yet the total would have been only half the amount paid out to stockholders.

The amount earmarked for profit sharing will vary according to the industry and the firm's place in that industry. The amount set aside for sharing should be proportioned to total profits roughly as wages are to sales. For example, in a company with sales of $100 million and a payroll of $10 million per year, 10 per cent of the profits should be allocated for sharing.

In some phases of industry, where labor costs constitute a large segment of total selling costs, as for instance in accounting and clerical work, employees themselves greatly influence the final cost of the services. But in the more mechanized sectors of industry, labor costs are dwarfed by capital outlays. The amount to be shared is usually determined after a certain percentage of profits is set aside as a minimal return on capital investment.

Businessmen may object for two reasons to making workers' rewards dependent on the size of a company's profits. First of all, such a practice may encourage a "second squeeze on profits." The July, 1962 issue of the *Harvard Business Review* pointed out that declining growth rates in sales of conventional products, excess capacity, foreign competition and consumer resistance to price increases have already combined to make the future of profits bleak.

Yet neither management nor labor has anything to lose from profit sharing. Payment is conditioned upon the actual earning of profits; if no profits are made, the company has no increased financial obligations and workers still earn their fair wages. Indeed, judging from the experience of many firms, employers can expect increased cooperation to result in greater productivity. At the very least, the employer can assure his workers in profitless years that their diligence on the production line has helped to keep the firm in business. This recognition can be salutary, especially when it is coupled with the earnest assurance that they will share generously in future profit harvests.

For instance, even during depression years, when there were no profits to be shared, the president of Vanadium Alloy Co. enjoyed the loyal support and cooperation of his employees because of the good will the company's profit-sharing program had built up. In any case, business will be best able to withstand the profit squeeze if it can get workers to increase productivity. Profit sharing can enlist total dedication because it appeals to the worker's self-interest and self-esteem.

PROFITS, SOME SAY, should go exclusively to the investor who takes the risk and thus deserves to receive the rewards. Undoubtedly the stockholder has a claim to a just return on his investment, and many plans set aside a minimal return on investment (usually six per cent) before any profits are shared. Yet too often the rights of stockholders and their allegiance to the company are exaggerated. Profits are not due exclusively to the investor who puts up the money for the venture; profits are the result of many factors which are impossible to measure accurately: economic stability, international tranquillity, market opportunities, innovating management, and the industriousness of the labor force.

Failure to acknowledge the role of labor in increasing profits through increased productivity misses an opportunity to strengthen the company. Certainly a firm does not become successful merely because it institutes profit sharing. But the success of many companies which have such plans indicates that successful companies in increasing numbers have seen the wisdom of rewarding labor as well as stockholders from swelling profits.

Nor does labor receive its "reward for productivity" at the expense of the stockholder. In fact, stockholders in companies that have profit sharing do better than their counterparts in firms without such plans.

A recent study of 23 profit-sharing companies listed on the New York Stock Exchange showed that the val-

VARIETY OF PROFIT-SHARING PLANS

THERE ARE an almost infinite number of variations in profit-sharing programs. Waiting periods in plans can run from none at all through five years. Allocation of profit-sharing money to individuals can reflect merit, thrift, seniority, attendance, responsibility or earnings. Vesting rights can be immediate or delayed, full or graded.

B. L. METZGER, Director
Profit-Sharing Research Fdtn.

ue of their shares increased 237 per cent between 1954 and 1960. By comparison, shares of the 30 industrial firms that make up the Dow-Jones average increased only 52 per cent in the same six-year period.

Stockholders in companies with profit sharing received capital gains on their investment in excess of what might be called normal. Again, the inference to be drawn is not that profit sharing by itself has caused this increase, but simply that stockholders have not suffered a loss because of profit sharing. In fact, diehard opponents must admit that stockholders have prospered despite profit sharing, possibly because of it.

THE IDEOLOGICAL argument that free enterprise gives dynamism to a mobile society of free men, freely competing to produce the best goods for the lowest cost, is a strong argument in favor of profit sharing. Prof. Benjamin Selekman warned in the April, 1962 issue of the *Harvard Business Review* that "if we are to keep our economic and social life in some sort of equilibrium, we must find ways of maintaining social progress at a rate which is somewhat apace with technological advance."

Workers should be invited to join management in increasing productivity and then sharing the resulting profits. It is not enough to say that America has a free enterprise economy because more than 17 million Americans own stock. Most stockholders are interested mainly in dividends and have no concern with the entrepreneurial process of production. At most they tour the factory, hear financial reports, eat a box lunch and go home with their cash dividends. When they need money, they sell their stock and thus terminate their "ownership" in the company.

Workers, on the other hand, have a deeper interest in the success of the company for which they work because their wages enable them to pay for today's groceries and tomorrow's college education for their children. This employee allegiance to the company is maximized through profit-sharing plans, as some 40,000 firms have already discovered.

The managers of these profit-sharing companies have striven creatively to adapt collective bargaining to meet the needs of free enterprise in today's rapidly changing society. ■

OHIO UNIVERSITY
ATHENS, OHIO

OFFICE OF THE PRESIDENT

June 6, 1963

Mrs. N. Survilas, Secretary
Administrative Department
Digital Equipment Corporation
Maynard, Massachusetts

Dear Mrs. Survilas:

I'd be very pleased indeed to attend the luncheon preceeding the Board Meeting on June 18. I'll be in touch with Dorothy Rowe so that I can arrange to ride out with her to the luncheon and meeting.

Cordially,

Vernon R. Alden

Vra:lp

UNIVERSITY OF CALIFORNIA

LAWRENCE RADIATION LABORATORY
BERKELEY 4, CALIFORNIA

June 3, 1963

Mr. Harlan Anderson
Digital Equipment Corporation
Maynard, Massachusetts

Dear Harlan:

I'm not sure that you think that we're still your friends since LRL has decided to get the DDP 24 to do spark chamber data analysis. But at least we are still trying to see how to keep PDP-1's the best way for bubble chambers; and we have some questions.

One of my colleagues, Margaret Alston, is making a tour of several universities where our friends are trying to decide which way to go in bubble chamber data analysis. The scheme we like best right now is to buy a small computer to run several of the Berkeley SMP devices (on-line scanning and measuring machines) until PEPR comes along, and then probably switch to PEPR. But $150,000 for a medium sized PDP-1 (with 24% discount) to run the SMP's still doesn't seem very competitive, and we are wondering how much room there is for savings by either special deals involving the purchase of lots of computers, or special configurations.

After the problems become a little clearer, Dr. Alston is going to phone you ~~next~~ this week, probably from Madison, Wisconsin. One of the questions she will ask you, if you will tell her, is just how much it costs you to put together a PDP-1. That will give us some idea of how much margin there is for economy. Also are there any plans for making PDP-1's read Fortran.

Sincerely,

Art

A. H. Rosenfeld

AHR/ks

LEE HIGGINSON CORPORATION

50 FEDERAL STREET, BOSTON 7, MASS.

BOSTON
NEW YORK
CHICAGO

May 28, 1963

Mr. Harlan E. Anderson, Vice President
Digital Equipment Corporation
Main Street
Maynard, Massachusetts

Dear Mr. Anderson:

I do not know whether or not Richard Laulor has told you but he is no longer with us. I shall hope to carry on the friendly relations with you and look forward to seeing you before long.

Sincerely yours,

C. E. Cotting

COMPANY CONFIDENTIAL

H. Anderson

LYBRAND, ROSS BROS. & MONTGOMERY

COOPERS & LYBRAND
IN AREAS OF THE WORLD
OUTSIDE THE UNITED STATES

80 FEDERAL STREET
BOSTON 10

May 24, 1963

Technograph Printed Electronics, Incorporated
920 Northwest Boulevard
Winston-Salem, North Carolina

Dear Sirs:

We have reviewed the computations by Digital Equipment Corporation of manufacturing costs of printed circuit boards as covered by the Settlement Agreement dated as of May 15, 1963 between Technograph Printed Electronics, Incorporated and Digital Equipment Corporation.

In our opinion, the accompanying statement signed by George T. O'Dea, Treasurer of Digital Equipment Corporation, represents a fair determination of costs incurred by Digital Equipment Corporation ($55,163) in the manufacture of printed circuit boards (as defined in the Settlement Agreement referred to above) during the period from August 23, 1957 to February 2, 1963.

Very truly yours,

Lybrand, Ross Bros. & Montgomery

REI:AMH
JFA

Enclosure
Statement

FABRI-TEK INCORPORATED
FOSHAY TOWER • MINNEAPOLIS 2, MINNESOTA • TELEPHONE: 336-1646

Please reply to:
1019 EAST EXCELSIOR BLVD.
HOPKINS, MINNESOTA
WEst 5-5518

Send to Purchasing
and file

May 14, 1963

Mr. Harlan Anderson
Digital Equipment Corp.
Maynard, Massachusetts

Dear Harlan,

It was a pleasure talking to you on the phone the other day regarding our FFM-202 thin film memory system. In the possible event that you or some of your people miss us at the SJCC in Detroit, I am sending some of our literature on this unit.

A set of prices, close to the ones which I gave you on the phone, are as follows:

----128 words, 36 bits, 300 nsec	$19,950.
----256 words, 36 bits, 300 nsec	$23,700.
----512 words, 36 bits, 300 nsec	$30,200.
---1024 words, 36 bits, 500 nsec	$43,100.

Delivery time on the first three would be four months, and on the 1024 word size, five months.

If you desire any further information on this memory system, feel free to call us.

Sincerely yours,

Richard J. Petschauer

Richard J. Petschauer
Director of Advanced Development

encl 2

cc: J. W. Schallerer
R. E. Rife
W. Weeton
File

knm

digital equipment corporation
MAYNARD, MASSACHUSETTS
TWinoaks 7-8822 TWX MAYN 816

May 14, 1963

Mr. V. W. Masson
University of California
Lawrence Radiation Laboratory
Purchasing Department
Berkeley 4, California

Dear Mr. Masson:

Digital Equipment Corporation has just released a new Magnetic Tape Control Unit for the PDP-4 computer. This unit should be an attractive addition to the proposed system in our recent proposal number 363 dated April 26, 1963. Therefore, I am enclosing Alternate Proposal B for your consideration in your current computer evaluations.

This new control unit is designated the Type 520 and is basically the same as the existing PDP-4 Automatic Tape Control Type 57. The primary differences are that the word counter (WC) and current address (CA) registers are now in the control unit instead of being PDP-4 memory locations. This change plus some other modifications permits faster operation and enables the Type 520 unit to control the following Tape Transports:

IBM Series 7330

IBM Series 729 Mark II, IV, V, and VI

With the use of the above transports, many transfer rates, tape densities, and operational

costs are available.

If any questions should arise concerning the enclosed proposal, please feel free to contact me.

Sincerely,

George L. Rice

George L. Rice
Applications Engineer

GLR:mc

Enclosure: Alternate Proposal B

CC: Dr. Leroy Kerth, LRL
Mr. Jerry Russell, LRL
Dr. Howard White, LRL
Dr. Arthur Rossenfelt, LRL
Mr. Ken Larsen, DEC Palo Alto Office (326-5640)
Mr. Ted Johnson, DEC
Mr. Harlan Anderson, DEC

University of California
Lawrence Radiation Laboratory
Purchasing Department
Berkeley, California

ATTENTION: Mr. V. W. Masson

REFERENCE: Proposal - Medium Size Digital Computer

Digital Equipment Corporation, Maynard, Massachusetts wishes to offer the University of California's Lawrence Radiation Laboratory, Berkeley, California the following addition to the proposal number 363, dated April 26, 1963.

Alternate Proposal B PDP-4C Price Schedule

PDP-4C including: $53,960*

Central Processor
8, 192 words of core memory
Control Console
Real Time Option with:
Device Selector, Information Collector,
Information Distributor, Program Interrupt,
Data Interrupt, Real Time Clock

Extended Arithmetic Element Type 18 . . . . . $ 4,788*

Automatic Magnetic Tape Control Unit Type 520 . . . $18,240*

Controls IBM Transports, Series 7330 and
Series 729, Mark II, IV, V and VI

TOTAL SYSTEM PRICE $76,988*
(Assumes use of existing IBM Tape Equipment)

*These figures are based on AEC's and DEC's current negotiated price contract number AT(30-1)-3214 dated April 18, 1963.

All of the terms and conditions as stated in the original proposal No. 363, dated April 26, 1963 apply to this alternate proposal.

digital

CAP
COMPUTER ANALYSTS & PROGRAMMERS LTD
11 Grocers Hall Court Poultry London EC2
MONarch 2717

Our ref: DH/MB. Your ref:

10th May, 1963.

Harlan E. Andersen, Esq.,
Digital Equipment Corporation,
146 Main Street,
Maynard,
Massachusetts,
U.S.A.

Dear Mr. Andersen,

This is to inform you that I have left the I.T.T. in order to join this Company. CAP specialises in automatic programming and the development of compilers.

The current activities include:-

1. The specification and implementation of a commercial dialect of ALGOL called TALK; this language has an "English" veneer and some of the features of COBOL. It has been written for the English Electric KDF6 which has similarity with the PDP-1 although it is slower.

2. Implementation of COBOL for a large machine.

3. Writing a COBOL checker program which verifies the source language program.

Two members of CAP have some experience of the PDP-1 gained while working with the I.T.T. at Paramus, New Jersey. In particular Mr. K. W. Clark has participated in the writing of ITTAC-2.

I hope that the above information is of interest to you. If your Company intends to extend its activities in the European market CAP may be of service to you in the software aspects of this.

Yours sincerely,

Don Hunter

D. Hunter.

H. E. ANDERSON

Copy of letter and invitation to have coffee with them and give plant tour to

Maynard Sandler
Dick Best
Ken Olsen

H. G.

DIGITAL EQUIPMENT CORPORATION

Reminder File for May 13

information sciences and technology

AUERBACH
corporation
1634 arch st.
philadelphia 3
pennsylvania
locust 3-7737

April 23, 1963

Mr. Harlan Anderson
Digital Equipment Corporation
Main Street & Route 62
Maynard, Massachusetts

Dear Mr. Anderson:

It was certainly very pleasant talking to you yesterday concerning the projected visit by members of the Olivetti Company. This letter will serve to confirm the visit on Wednesday, May 15, 1963, at 2:00 P.M. by the following people from the Olivetti Company:

1) Mr. Ottorino Beltrami, Electronic Division Chief
2) Mr. Alcide Ferrera, Electromechanical Equipment Production Manager
3) Mr. Remo Galletti, Engineering and Production Supervisor
4) Mr. Luciano Nicelli, Electronic Production Manager
5) Mr. Gian Franco Raffo, Engineering Department Manager
6) Mr. Camillo Vigezzi, Administrative Manager

I would like to express our appreciation for allowing these men to visit your organization. I look forward to hearing from you and receiving literature about your company.

Cordially,

AUERBACH Corporation

Lynn-Michelle Stein

(Miss) Lynn Michelle Stein

LMS:hmw

digital equipment corporation
MAYNARD, MASSACHUSETTS
TWinoaks 7-8822 TWX MAYN 816

April 26, 1963

Mr. Harlan E. Anderson
Vice President
Digital Equipment Corporation
Maynard, Massachusetts

Dear Mr. Anderson:

Please consider this notice of a meeting of the Board of Directors of Digital Equipment Corporation, to be held at the offices of American Research and Development Corporation, 200 Berkeley Street, Boston, Massachusetts, on Tuesday, May 14, 1963, at 2:00 p.m.

I shall appreciate your indicating on the enclosed copy whether or not you plan to attend the meeting, returning the copy to me.

Very truly yours,

Dorothy E Rowe

Dorothy E. Rowe
Clerk

DER:ah
Enclosure

BOSTON SAFE DEPOSIT AND TRUST COMPANY

100 FRANKLIN STREET · BOSTON 6, MASSACHUSETTS
LIBERTY 2-9450

April 25, 1963

Mr. Harlan E. Anderson
Vice President
Digital Equipment Corporation
146 Main Street
Maynard, Massachusetts

Dear Harlan:

Again, I would like to thank you for taking so much time with me last Tuesday. We certainly appreciate your efforts to make us knowledgeable of Digital Equipment Corp. which in turn assists in our investment decisions on American Research & Development. Personally, the whole time was a delight and lunch was delicious. Hope we will soon be able to get together again.

Sincerely,

Louis M. Rusitzky
Investment Officer

LMR:bg

UNIVERSITY OF CALIFORNIA

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

Copy for H. Anderson

April 19, 1963

Miss Eunice C. Cronin
DECUS Meetings Chairwoman
Air Force Cambridge Research Laboratories
CRRBI
L.G. Hanscom Field
Bedford, Massachusetts

Dear Miss Cronin:

The following information is given in answer to your letter of March 25, 1963, concerning the DECUS Meeting to be held in Livermore.

Date of Meeting: We have chosen Monday and Tuesday, November 18 and 19 for the meeting. We hope to start at 8:30 a.m. and close about 4 p.m. each day.

Length of Meeting: Two days.

1st day - Presentation of Papers.
2nd day - Presentation of Papers.
" " One hour has been set aside for tour of our Computer Area. Because of Security Regulations, a tour of the entire facilities is not possible.

Facility Requirements: The meeting will be held at Livermore, at UC Lawrence Radiation Laboratory, in a conference room which will accommodate up to 100 persons.

We have in this room: Speakers podium
Microphone
35 mm Projector & Screen

Refreshments:

1. We will serve coffee at mid-morning and mid-afternoon breaks.
2. Luncheon arrangements have been made in our Laboratory cafeteria. Because of the noon rush, the Cafeteria Manager has asked that we lunch from 11:30 until 12:30 in a closed section where discussions may be held.

Publications:

1. Skeletal Schedule of Talks to be supplied by you.
2. Abstract of Papers or Proceedings to be supplied by you and distributed at meeting.
3. Duplicating facilities are available at our Laboratory.

Will get these out

Publications (Cont'd)

3. A list of the people attending the conference must be sent to us well in advance of the meeting. Our Laboratory is in a security area, and a check must be made on each person, badges made, etc.

4. We are enclosing brochures and descriptive material on Livermore. A map of San Francisco, the Bay Area, and Livermore is now on the drawing board, and copies will be sent to you immediately after release.

Hotel Facilities:

1. Livermore does not have facilities to handle large groups.

2. Hertz cars are available at S.F. Airport and in San Francisco.

3. We have attached a list of hotels recommended by our Housing Director.

4. There are no discounts for Military or Educational personnel at any of the hotels.

We have endeavored to give all information necessary. However, if additional items have not been covered, we shall be more than glad to cooperate.

Sincerely yours,

J. E. Wirsching

Joseph E. Wirsching, Supervisor
PDP Programming Group

JW:cs
Encls.

Cles

Centre Lebel d'Études Scientifiques

Scientific data processing services.
Digital recording of
experimental results for
analysis by Electronic Data
Processing Machines.

April 5, 1963

Mr. Harlan E. Anderson
Vice-President
Digital Equipment Corporation
146 Main Street
Maynard, Mass.

Andy

Dear Mr. ~~Anderson~~:

Please find enclosed herewith a blind copy of a letter that I am sending today to Mr. Sonnenfeld.

The more I think about the problem suggested to us by the "Electricité de France" the more I am convinced that it is an ideal situation for a very fast computer; such as the one that can be built from Digital Equipment Corporation blocks. I hope that we may work on this problem in one way or another.

When I was in your plant two weeks ago, I outlined the problem of a buffer memory to be placed between the output of our digital magnetic tape system and an IBM tape transport unit on which we would transfer the data gathered in our format. We will continue to work on this problem here. You may expect to hear from us again within the next couple of months. If, however, in the meantime, your people have some ideas to give us, we certainly would welcome them.

May I take this opportunity to thank you and Stan for the

6 AVENUE DANIEL LESUEUR, PARIS VII^e, FRANCE BREteuil 11-70 +

delicious dinner you offered me at the Top of the 6's. I had never been to that lovely place before.

Yours sincerely,

Jean D. Lebel

JL/lg/10

Encl. 2

P.S. I'm enclosing too, a copy of the translation of the EDF note.

April 5, 1963

Mr. Richard Sonnenfeld
General Manager
Digital Systems Division
Foxboro Instruments Company
Natick, Mass.

Dear Mr. Sonnenfeld:

Last week in New York I had dinner with Mr. Harlan E. Anderson, Vice-President of the Digital Equipment Corporation. We are using a few of their building blocks in our center in Paris.

We were approached not long ago by engineers of the "Electricité de France" (the French nationalized electric power industry) who hope that we can help them find references concerning the application of digital computers to the switching problems in transformer stations. When I mentioned this to Mr. Anderson he told me that perhaps you could help us provide the Electricité de France people with literature describing actual applications in their field of interest.

As a consulting center, we would be very pleased to investigate this problem with you. In the meantime, however, if it is at all possible for you to send us a reprint of an article or report describing the application of digital computers to the transient switching of transformer power station, we would appreciate it greatly. Any material of this kind would, of course, be treated confidentially.

The note enclosed herewith describes what the Electricité de France engineers have in mind. It is a translation of their

original inquiry. From the note it is clear that the problem which interests them is not the use of computers to analyze the optimum load distribution at the output of a plant, but rather, the analysis of switching transient and its application to the making and breaking of the proper circuits.

Thank you for any assistance you can give us in this matter.

Yours sincerely,

Jean D. Lebel

JL/lg/10
Encl. 1
b.c. Mr. Anderson

NOTE CONCERNING THE USE OF ELECTRONIC COMPUTORS IN ELECTRIC SWITCHING STATION

In the past electronic computors have been used to operate electric power plants and nuclear reactors, or for rapid measurements in these various plants. It does not seem, however, that there has been any use of electronic computors in electric switching station.

It would seem that computors could be put to such a use. The usual transformers for intensity and tension could furnish information (probably in quantized form) concerning the voltage and phase of the current and tensions for each outgoing line.

An electronic machine would compare the different results and prescribe the necessary measures (disconnection of a given line, grounding of another, putting into service of an emergency line not then in use, use of suitable compensatory systems like rotating compensators, inductors or capacitors, etc.)

The comparison of this data concerning the outgoing impulses could be accomplished in about 1/1000th of a second; which would lead to very rapid action of the closing of circuits. The time constants of these machines are almost always greater than the reply time of an electronic computor.

Naturally, it would be necessary for those in charge of the station to study beforehand the various eventualities that might result and decide upon the operation to be undertaken in each case. The program for the machine could follow from this study.

It seems strange; that, although this idea is not an original one (it must have occurred to every electrical enginner having used a computer in a power plant) to the knowledge of the French electrical company no studies have been published. Might such studies have been made outside of France, perhaps in the US. Were such studies fruitless, and if so, why?

April 4, 1963

COPY

Mr. P. J. Nahser
Western Electric Company
Department 3634
Burlington, North Carolina

Dear Mr. Nahser:

Although we could not be of immediate assistance to you with your "Scope Writer", you may find the enclosed literature helpful to you.

Digital has a wide variety of flexible plug-in modules that can be used for logical programming of your test equipment. The modules, because of their ease of use and guaranteed operation, have gained for us a "high quality" reputation throughout the industry.

Our Special Systems Division is equipped to handle a wide variety of custom systems from the design through installation. You may find this service helpful to you in future projects.

We will be happy to show you our facilities at any time that you or others at Western Electric wish to visit us.

Very truly yours,

Kenneth L. Wakeen

KLW/bl

CC: Mr. H. E. Anderson, DEC

Enclosures

SALES CALL REPORT

FIRM Western Electric	DATE 4/4/63
DIVISION Department 3634	SALESMAN K. Wakeen
STREET	OFFICE Maynard
CITY Burlington STATE N. C.	NATURE OF CALL Telephone
PHONE NUMBER 228-7811 AREA CODE	FOLLOW-UP DATE 4/4/63

CONTACTED

P. J. Nahser

SUBJECT

Automatic Module Tester

REMARKS (CONTINUE ON BACK OF SHEET)

Mr. Nahser is a Planning Engineer at Western Electric. He works with product engineers to specify, design or purchase test equipment for Military computers. He is interested in the possibility of using card input to an existing system and displaying operating instructions on a standard oscilloscope in alpha form. He has room for about two drawers of logic in which to perform this function. The system is already built and is installed in a van for mobile use.

He is not interested in an automatic module tester as such since they do have equipment of their own which is not as sophisticated but is adequate for present use.

I informed Mr. Nahser that we have a good in-plant capability for both the engineering and production of custom systems (Special Systems Division). He agreed that he would call Digital first if he needed such services.

Attached is a copy of a follow-up letter sent to Mr. Nahser along with advertising literature.

PROMISED

HOW TO LOCATE PLANT

UNIVERSITY OF CALIFORNIA

LAWRENCE RADIATION LABORATORY
BERKELEY 4, CALIFORNIA

March 25, 1963

Digital Equipment Corporation
8820 Sepulveda Blvd.
Los Angeles 45, California

Attention: Mr. Theodore Johnson

Gentlemen:

This Laboratory is engaged in basic nuclear research under the University's prime contract W-7405-Eng. 48, with the Atomic Energy Commission. Our high energy physics research program is to a great extent, dependent upon the resolution of large volumes of data by use of various computer systems. It now appears that we may require a medium size electronic digital computer. It is presently contemplated that this computer will be utilized in the following manner.

1. As an automatic million-event-per-year spark chamber film analyzing system.
2. As an off-line Cathode-Ray Tube display facility for expediting graphical presentations and recording from the IBM 7090.
3. For Pattern Recognition and Precision Encoder (PEPR) applications for automatically scanning and measuring bubble chamber photographs.
4. As a test control computer for developmental equipment.

We are also concerned with the development of special data processing computer attachments for direct use in physics research. There are plans to use this moderate cost computer to test several experimental data handling devices without the need of expensive large scale computer operation.

We invite you to submit a proposal to supply this general purpose digital computer system. Your proposal should be based on the information contained herein and in the attached characteristic outline. The system should not be unique but rather a normal configuration of off-the-shelf equipment.

The Laboratory has a budgetary limit of $200,000 for the purchase of this equipment. The characteristics outlined in the attached are minimum requirements. Proposals should be based on equipment with performance capabilities equal to or exceeding such requirements. This outline is intended as a guide in preparing your proposal. Your proposal must be explicit and contain comprehensive information as to the system offered. If your equipment is available on a rental or lease/purchase option basis, this information should be included. Attached for your consideration are the Laboratory's "Terms and Conditions" of purchase, Purchase Order (Form RL-2354c) and Addendum No. 1 (Form RL-2360a).

In evaluating proposals, all characteristics of the system will be given consideration. Initially all proposals meeting the general minimum requirements and offering prices within the budgetary limits will be technically evaluated. Proposals failing to meet the general minimum requirements or proposing a price in excess of the stated budgetary limit will not be eligible for further consideration. After the proposals have been ranked as to machine characteristics and ability to perform the specified tasks, consideration will be given to the total price of the system, programming aids, command structure, expansibility, reliability, and ease of constructing interfaces for external equipment. Other factors which will be considered are delivery date for the system, experience of the company in meeting specifications and delivery requirements, relative cost for maintenance, warranties, willingness to accept Laboratory purchase terms and conditions, and financial responsibility of the company.

The Laboratory qualifies as an educational institution and in evaluating all proposals, careful consideration will be given to any educational contribution offered in your proposal.

Should you wish to discuss our requirements, you may arrange a conference for this purpose by contacting Mr. Howard S. White at 843-2740, extension 5775. For any other assistance, please contact the undersigned at Berkeley, California, 848-6424.

AC 415

In order for your proposal to be considered, it must be received by this office no later than April 26, 1963. Please address your proposal to

University of California
Lawrence Radiation Laboratory
Purchasing Department
Berkeley 4, California
Attn: Mr. V. W. Masson
Proposal - Medium Size Digital Computer

Should the proposal you submit prove of interest, we may wish to discuss it in detail with you. You are cautioned that such action on our part will not necessarily mean an award will be made to you. We may have such discussions with several manufacturers. We reserve the right to reject any or all proposals, to accept other than the lowest prices, and to waive any informality in a proposal.

Very truly yours,

V. W. Masson

V. W. Masson
Purchasing Department

VWM:cr

PROPOSED CHARACTERISTICS FOR A MEDIUM SIZE ELECTRONIC DIGITAL COMPUTER FOR LRL BERKELEY

A. System Characteristics

The Computer system must include the following:

1. A central processor capable of performing addition, multiplication, subtraction and division in parallel mode. The processor must also perform logical memory referencing, indexing and input-output operations. The computer word shall be binary and of at least 18 bits long. A longer word with a lenth of 24 bits would be considered more desirable. The system shall include ability to perform special floating-point arithmetic operations. Fixed point multiplication and division shall be executed by equipment rather than through programming subroutines.

move on This →

2. There shall be a magnetic core directly addressable random access memory of at least 8,000 words. The equipment design should permit easy expansion of the directly addressable memory size to 16,000 words.

3. At least three magnetic tape transports shall be attached to the central processor through a buffered data channel. The transports must be able to produce tape compatible with the IBM 729 series tape systems at a 15,000 character-per-second minimum rate. Additional data channels are considered desirable and will be considered in evaluating proposals.

4. There shall be an operator-maintenance console with a display of all internal registers and toggles as well as provisions for manual program intervention.

5. An input-output typewriter shall be installed at the console.

6. In addition to the magnetic tapes, there shall exist either a card or paper tape reader-punch combination.

7. So that external equipment can be connected directly to the central processor, information lines from within the computer shall be brought to a plug. Information shall pass from or to the central processor from external equipment, a computer word at a time, in parallel fashion. In addition to the date lines, there shall be appropriate sense and control connections, from the computer, available to the external equipment at a plug. The ability to address any unique piece of external equipment from among several such pieces is considered desirable.

B. Reliability

1. The entire computer shall be built from modern solid-state circuits, carefully packaged for resistance to thermal, mechanical and electrical disturbances. It is expected that the equipment will operate in a usual office environment and will require no extensive air-conditioning.

2. There shall be provisions for performing marginal time and voltage operating tests.

3. The proposal shall include component testing equipment as well as a supply of basic spare parts.

4. The proposal shall include statements about the mean error-free time for the equipment.

5. A warranty period must also be specified.

6. A complete set of circuit schematics, logic diagrams (or equations) and other engineering information for servicing or modifying the equipment shall be delivered with the equipment.

C. Programming Aids

1. The proposal shall include complete descriptions of any symbolic assembly programs, equipment diagnostic routines, compilers (such as FORTRAN), and library routines (such as tape loaders, floating point, or multiple precision arithmetic routines). An adequate symbolic assembly program must be available for any machine considered by LRL.

2. Final programming manuals, flow charts, assembly listings and debugged programs shall be delivered with the computer.

D. Training

1. The manufacturer shall state to what extent LRL personnel will be trained.

E. Maintenance

1. The manufacturer must be willing to provide complete maintenance for the system under a separate agreement until LRL personnel are able to perform these tasks.

WCB:MHA
March 25, 1963

Harlan

COOPERS & LYBRAND
WIRTSCHAFTSPRÜFUNGSGESELLSCHAFT MBH

...RLIN, FRANKFURT (MAIN), HAMBURG, KARLSRUHE, KÖLN, MÜNCHEN, PIRMASENS, STUTTGART.

BEFREUNDETE PRÜFUNGSGESELLSCHAFTEN IN: ZENTRAL-, OST-UND WEST-AFRIKA, AUSTRALIEN, BELGIEN, BERMUDA, KANADA, FRANKREICH, HOLLAND, IRAN, ITALIEN, MALAYA, MEXIKO, NEUSEELAND, SCHWEIZ, SINGAPUR, SÜDAFRIKA, VEREINIGTE STAATEN, VEREINIGTES KÖNIGREICH.

FRANKFURT (MAIN),
WÖHLERSTRASSE 8

TELEFON: 721341.
TELEGRAMMANSCHRIFT: TREUDICAT.

March 21, 1963

H.G.

Digital Equipment Corporation
Maynard, Massachusetts

Attn: Mr George T. O'Dea
Treasurer

Re: Digital Equipment GmbH

Dear Sirs:

We thank you for your letter of March 18, 1963, addressed to Mr A. Holterman, who is at present absent from the office for a few days. However, we are sure that he would be pleased to meet Mr Kenneth Olsen should he be able to include a stay in Frankfurt on his itinerary. Please advise us in time of any contemplated visit because the timetables of our partners are always very tight.

We have forwarded copy of your letter to our Munich office (33, Sonnenstrasse, Tel: 554006) and are certain that you will receive there any assistance and advice they are able to furnish in view of the setting up of the new company.

Very truly yours,

Coopers & Lybrand
Wirtschaftsprüfungsgesellschaft mbH

/j

DECUS

DIGITAL EQUIPMENT COMPUTER USERS SOCIETY
MAYNARD, MASSACHUSETTS / TWinoaks 7-8822 / TWX MAYN 816

SUBJECT: Minutes of Executive Board Meeting - March 20, 1963

PRESENT: Charlton Walter, AFCRL
Ben Gurley, Information International
Dick Hayes, AFESD
Jim Wood, Information International
Gordon Bell, DEC
Eunice Cronin, AFCRL
Dick McQuillin, BBN
Elsa Newman, DECUS
Dit Morse, DEC

The Following agenda items were concluded.

1. Individual Membership Applications:

It was generally agreed, although not formally voted, that individual membership applications be accepted.

2. Revision of DECUS By-laws:

Jim Wood presented a list of suggestions to be considered by the Board before rewriting the Sections to be revised. He will rewrite amended sections and present them for Membership approval.

3. Proceedings 1962:

Elsa reported that the Proceedings were 80% completed. She was pulling together loose ends and hoped for completion by March 31. Charlton Walter prepared a suggested grouping of papers and wrote a short but very interesting foreword.

4. Annual Meeting - 1963

Eunice presented plans for the 1963 meeting to be held at L.R.L. She mentioned the possibility of having the meetings at University of Cal. proper. She was going to try to get special accommodations and will make an announcement at the May Symposium. She has appointed a Committee of ten to review papers to be presented in either September or October. This date would be agreed upon after more coordinating with L.R.L.

5. Nominations for 1963-64 Officers:

Dick McQuillin - who is proxy for Bill Fletcher, Equipment Committee Chairman (Los Angeles BBN) was voted Nominations Chairman. He will prepare a slate of nominations for candidates for 1963-64 DECUS offices of President, Secretary and Meetings Chairman. He will accept nominations, which must be supported by at least three members.

March 19, 1963

Mr. Marvin W. Taylor, Buyer
Jet Propulsion Laboratory
4800 Oak Grove Drive Building 126
Pasadena, California

Dear Mr. Taylor:

Confirming our telephone conversation of this afternoon I hereby warrant that:

1. The Digital Equipment Corporation, Maynard, Mass., does not have a Cognizant Government Audit Agency.

2. The hourly wage rates quoted in the Bid submitted by our Mr. Ted Johnson are current rates paid by the Company to persons in those specialties.

3. The overhead and G&A rates quoted in the same bid are taken from the Company Books and in fact were somewhat reduced below the actual experience of the first seven months of our current fiscal year ending June 30, 1963.

Very truly yours,

George T. O'Dea
Treasurer

GTO'Dmcs

bcc: Mr. Ted Johnson
Harlan Anderson
Dick Mills

Harlan:
he agreed to accept this in lieu of audit - no doubt owing to the smallness of the transaction
G.O'D.
3/19/'63

March 18, 1963

Mr. A. Holterman
Resident Partner
Coopers and Lybrand
Wohlerstrasse 8,
Frankfurt am Main

Dear Mr. Holterman:

Our Company is presently in the process of forming a limited liability type of operation in Munich to be known as:

Digital Equipment G.m.b.H.

In the course of discussing this matter with our Auditors, Lybrand, Ross Brothers and Montgomery in Boston, Mass., we were referred to Mr. Herbert Schueller of the International Division of Lybrands in New York City. Mr. Schueller recommended that we contact you directly for advice on this matter.

Our President, Mr. Kenneth Olsen, plans a trip to West Germany in early April and would like very much to stop in and visit with you.

By way of advance description of the topics for discussion let me describe our operations in the U.S.A. and plans for the Munich Office.

The Digital Equipment Corporation, Maynard, Mass. is a company in its sixth year of operation. It develops, manufactures and markets General Purpose Electronic Digital Computers and Accessories, special testing systems for Digital Computers, and Logical Building Blocks for use in Digital circuitry.

As regards the Munich operation, the initial plan is to open an office to specialize in the Sales and Service of the Company's products. If things go well, it is hoped that this operation can be expanded to include at least final assembly of some of the products.

It is anticipated that most of the Sales of the Munich office will be to companies located in the Federal Republic of Germany but we would hope that some business would be obtained from other European countries.

As to incorporation, we have retained the services of a Munich Attorney, Dr. Jacob Strobl and requested that he obtain a charter calling for an initial capitalization of DM 80,000.

As to staff, the office will consist of a Sales Engineer bearing the title of Director of Sales, and a Secretary. The Sales Engineer is Mr. Guenter Huewe presently at our plant in Maynard for a month of training. It is hoped that Mr. Huewe will have the Munich Office running no later than May 1, 1963.

Mr. Kenneth Olsen, President of The Digital Equipment Corporation, Maynard, Mass., will hold the title of Managing Director, Digital Equipment G.m.b.H.

At this writing the Company contemplates utilizing the services of Schenker and Company, G.m.b.H. as its Customs Broker.

Two primary matters of concern about which we seek your advice would be those of Taxation and Accountancy. We would like you to establish a set of books for Digital Equipment G.m.b.H. which:

a) meet all requirements of the Federal Republic of Germany
b) make possible the filing of accurate Tax Returns
c) divulge the operating information needed back here in Maynard to appraise the profitability of the Office.

We would hope that either your office or your Munich office could instruct our Secretary in the keeping of these books.

For a letter of introduction Mr. Holterman we've gone fairly deeply into specifics. If you feel you would be interested in our problem we will be delighted to include a visit to your office on Mr. Kenneth Olsen's itinerary.

Very truly yours,

George T. O'Dea
Treasurer

GTO'Dsncs
cc: Roscoe Irving, LRB&M
bcc: Ken Olsen, Harlan Anderson, Stan Olsen, Dick Mills

Hold for Reminder File
on 4/1/63

13 March 1963

Mr. Gordon Bell
Digital Equipment Corporation
Maynard, Massachusetts

Dear Gordon:

In our phone conversation of 12 March, I said that we would send you a proposal for work on DECAL-BBN, but that we were disinclined to think in terms of a fixed-price contract (which is what you were interested in). Since then, we have thought some more about this, and will try to get a fixed price proposal out to you. However, we would like to have one more week or so to consider this in greater detail. A fixed price contract, you understand, makes us run a considerably greater risk.

I think we will be able to come up with something like this (the following is not a proposal, but only an indication of our present thinking):

We will provide:

1. Symbolic listing of skeletal DECAL-BBN.
2. Binary tape of skeletal DECAL-BBN.
3. Symbolic tapes of selected action operators, instruction generators, and ewd's (sufficient to obtain procedures, subscripts, for statements).
4. Binary tape of complete system (skeletal system plus selected ao's, ig's, and ewd's).
5. Complete draft of programming manual (the thought here is that you would put it in final shape and assume the responsibility for printing. We would also want to review the final copy and give our approval before printing.)
6. Complete draft of technical manual (same as 5.).
7. Symbolic listing of new linking loader, LL-BBN.
8. Binary tape of LL-BBN.
9. Symbolic listing of new library tape maker, libetapemaker-BBN.

11

10. Binary tape of libetapemaker-BBN.
11. Symbolic listing of subscript-interpreter (suitable for integer arrays).
12. Symbolic tape of subscript-interpreter.
13. Linking-loader tape of subscript-interpreter.

The price for the above thirteen items would lie between $11,000-$15,000. We'll be able to determine the cost better within the next few weeks.

Sincerely,

Thomas Marill

Thomas Marill
Head, Information Systems Department

TM:jm

cc: Mr. Harlan Anderson

ROOM 2308
200 BERKELEY STREET
BOSTON 16, MASSACHUSETTS
HANCOCK 6-7060

13 March 1963

Dear Andy,

Enclosed with this letter is the Hertz card which you were kind enough to send to me. It was very thoughtful of you to think about it, and I hope I have not overstepped my spending abilities.

Miss Rowe gave me an invitation to the IEEE show in New York, which I am planning to visit on Monday, March 25.

My visit to DEC was most instructive. It seems to me that progress is continuously made in many different fields, such as control procedures, automatic testing, improved efficiency in the plant, and so on. I am certain there are still quite a few problems left, but as usual, you will solve them patiently and in your usual quiet manner.

Please be sure that Stanley Olsen or John Fadiman will let me know when they are coming to Europe. There is at least one man I would like them to meet who would be a potential buyer for one or two PEPR systems.

Hoping to see you again soon, I am

Most sincerely yours,

A. de Vitry

Mr. Harlan E. Anderson, Vice President
Digital Equipment Corporation
Maynard, Massachusetts

Enclosure - Hertz charge card 1249 917 0014 5 NA

H.S.C.

March 12, 1963

COPY

Dr. Jakob Strobl
8 Munchen 2
Briennerstr 15/II
(Eingang Luitpold - Kino)
West Germany

Dear Dr. Strobl:

You will share our enthusiasm to hear that the Board of Directors of the Digital Equipment Corporation has voted to proceed with the formation of a Limited Liability type of company in West Germany to be known as

Digital Equipment G.m.b.H.

We would appreciate it if you will consent to serve as Counsel to us for the formation of this company.

For the past three months, we have been seeking as much advice on the matter as could be obtained locally. I'm sure that some of our conclusions will prove inadequate when put to the test of reality but we would like to outline our plans in advance of Mr. Stanley Olsen's next visit in order that you can point out such inadequacies as may exist before Mr. Olsen arrives.

First, as regards Capitalization, we have been advised that a minimum of 25% must be paid-in. Our intention had been to start the company with $5,000.00. This would support an initial capitalization of DM 80,000 (25% paid-in equaling DM 20,000 at approximately 25¢ per DM = $5,000.00). We understand that the minimum value of a certificate is DM 500 so we would like 160 certificates at DM 500.

We have been told that at the moment of incorporation there must be more than one owner. If so, we would be prepared to have a minimum number of certificates issued to Mr. Olsen who will subsequently assign them to us.

Second, as regards the Charter, we have been advised that changes in the original charter are expensive. Our original operations in Munich will consist of sales and service of the company's products but we hope eventually to go to manufacture. If you feel it would be appropriate to encompass all of these activities in the original charter than we would want it written that way.

Third, as regards administrative matters, we will be working through the West German Affiliates of Lybrand, Ross Brothers and Montgomery namely Coopers and Lybrand. We assume that problems of accounting and taxation will best be handled by them. As to customs and import duties, we will probably work with Schenker and Co. G.m.b.H. It is our wish to appoint Mr. Kenneth Olsen, President of Digital Equipment Corporation, as Managing Director of Digital Equipment G.m.b.H. Mr. Guenter Huewe, Sales Manager of Digital Equipment G.m.b.H. will hold the limited Power of Attorney for the company in Munich. We would be interested in your opinion as to the extent of limitation normal for these circumstances.

We appreciate that the problems of incorporating are no doubt vastly more involved than those outlined above but hope that this preliminary exchange of correspondence will enable Mr. Stanley Olsen to be fully prepared to finalize the act when he arrives in Munich (about April 1, 1963.)

Please inform us what additional information and documentation is needed.

Very truly yours,

George T. O'Dea
Treasurer

GTO'D:ncs
cc: H. Anderson
S. Olsen
R. Mills

March 8, 1963

Mr. Lincoln E. Barber, Jr.
Assistant Vice President
The National Shawmut Bank of Boston
40 Water Street
Boston 6, Massachusetts

Dear Lincoln:

We enclose the Financial Statements for January 1963, the most recent Short Term Cash Forecast, and the Twelve Month Financial Forecast of March 5, 1963.

In regard to the P&L you will note that for the first time since June of '62 the Company has had a loss. While disconcerting, this was not surprising since it had been predicted in the Twelve Month Financial Forecast issued as long ago as November 30, 1962.

The simple truth of the matter is we ran out of business! If you take yourself back to the Summer time, you will recall that our Backlog was over Four Million dollars. The problem was to get the equipment out the door. Efforts to obtain new computer orders were not accelerated. Then, in September, ITT cancelled three big orders worth nearly a million dollars! Simultaneously, the shipments began to flow bringing the inventory down and putting money in the bank but depleting the backlog.

Today marketing effort is being pushed hard and the new order rate is coming back up.

There is no need to generalize, the following unfilled order detail tells the story completely: ($000's Omitted).

Backlog at 6/30/'62	$4,720
Summer Bookings (net after ITT cancellation)	1,826
Summer Billings	3,949
Backlog at 9/30/'62	2,597
Autumn Bookings	1,110
Autumn Billings	2,614
Backlog at 12/31/'62	1,093
Winter Bookings (Est.)	1,900
Winter Billings (Est.)	1,200
Estimated Backlog at 3/31/'63	$1,793

As indicated by the short term cash forecast this delay in new orders coupled with the Production Managers performance in bringing inventories into line has created a temporarily superb cash position.

As indicated by the twelve month forecast, the till will be strained come June of '63. This will come about as a result of approximately doubling the Engineering effort as part of a development program designed to keep DEC out in front.

If after you've gone over these documents you wish to explore any of the points further please feel free to call.

Sincerely,

George T. O'Dea
Treasurer

GTO'Dmcs
Enclosures (3)

cc: K. Olsen
H. Anderson ✓

NEW ENGLAND OFFICE 594 MARRETT ROAD, LEXINGTON 73, MASSACHUSETTS
PHONE: 862-0020

SCIENTIFIC AMERICAN
ESTABLISHED 1845

THE MAGAZINE READ BY TECHNICAL MANAGEMENT

March 6, 1963

Mr. Harlan E. Anderson
Vice President
Digital Equipment Corporation
Maynard, Massachusetts

Dear Mr. Anderson:

With our compliments, I send you the enclosed copy of the March issue of SCIENTIFIC AMERICAN. I do so at the kind suggestion of Mr. John Atwood.

I believe you will share with our more than 335,000 regular readers the pleasure and interest they take in its unusual editorial contents. I have, therefore, taken the liberty of adding your name to our complimentary subscription list. Future issues of SCIENTIFIC AMERICAN will reach you regularly at your home.

SCIENTIFIC AMERICAN is the nation's first magazine - and the world's largest - to report the leading and significant developments in the fields of science, research and technology. It is addressed, without compromise, to those who are most interested - to the growing group of trained and gifted men of the engineering, research and executive echelons of American industry and government. These are the men of Technical Management. In today's complex technical economy, Technical Management's crucial decisions vitally effect the choice of products and services purchased by industry and government.

SCIENTIFIC AMERICAN is a product of a unique collaboration between scientists and journalists. The articles in SCIENTIFIC AMERICAN are first hand accounts of the advances being made in the frontier areas of science. Each article is written by a leading authority in the field under discussion, and is addressed to the interest and understanding of the readers outside of the particular field concerned. We take great pride in the fact that twenty-seven SCIENTIFIC AMERICAN authors have won the coveted Nobel Prize.

Sincerely,

Sherman P. Laire

Sherman P. Laire
Manager,
New England Office

SPL:cjb
(Enclosure)

NATIONAL INSTITUTE FOR RESEARCH IN NUCLEAR SCIENCE

RUTHERFORD HIGH ENERGY LABORATORY,
~~HARWELL,~~ Chilton
DIDCOT, BERKS.

TELEPHONE: ABINGDON 1900
OUR REF:
YOUR REF:

7th March 1963.

Mr Harlan E. Anderson
Digital Equipment Corp.
Maynard
Massachusetts
U.S.A.

Dear Mr Anderson,

Thank you very much for your letter of 25th February explaining the delay in the delivery of my order.

I am happy to say that that order arrived today so thank you very much for your help in clearing up the difficulties so rapidly.

Yours sincerely,

David H. Lord

D. H. Lord

Baystate Science Foundation

Post Office Box 1930, Boston 5, Massachusetts

February 28, 1963

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

Dear Mr. Olsen:

Placing great importance on responding to the challenge which today confronts technical education and research-based industry, a voluntary committee in Boston addressed itself during the past three months to the question of more effective means for the development and employment of the technical resources of Massachusetts and the New England region. The initial membership of the committee was Lloyd D. Brace, Chairman of the Board of the First National Bank of Boston, Julius A. Stratton, President of the Massachusetts Institute of Technology, and William Webster, President of the New England Electric System. James R. Killian, Jr., Chairman of the M.I.T. Corporation, joined the committee in January when Dr. Stratton departed on an extended trip abroad.

One concept has emerged from this study which is deemed worthy of consideration by the community at large: the idea of a regional corporate structure within which industry and the universities may work more closely together in the common cause of educational and industrial growth associated with science and technology. The recommended organization has two main parts: the Baystate Science Foundation, as the initiating element, and an operating company called Advanced Technology, Inc., to be wholly owned by the Foundation.

After discussion among interested businessmen and educators, it was decided that the Foundation should be brought into being as a basis for further exploration of the concept. This has been done by the undersigned Trustees, and we present to you, herewith, the report of the committee, commending it to your careful attention.

You will readily understand that we must assure ourselves, as a next step, that the necessary equity capital for the operation will in fact be forthcoming from industry. A sampling of research-based companies by representatives of the Foundation has revealed a generally favorable reaction on this count. The purpose of this letter is to acquaint you with the organizational concept and, specifically, to determine whether your company wishes to associate itself with the endeavor by giving it your financial support.

Contingent on the pledges received from this solicitation, the Baystate Trustees will be prepared to take the definitive step of organizing the operating company. If the total pledged is sufficient to justify proceeding, all pledges will be called in, Advanced Technology, Inc., will be formed, and vigorous action will be undertaken to attract an outstanding president.

The Baystate Trustees are prepared to serve also as Directors of Advanced Technology, Inc., and to elect additional Directors from business and education. Dr. Killian is willing to serve as one such Director and as Chairman if so requested. To date, also, Mr. C. A. Coolidge, Chairman of the Mitre Corporation and member of the Harvard Corporation, Dr. Asa S. Knowles, President of Northeastern University, and Dr. Nils Y. Wessell, President of Tufts University, have agreed to serve as Directors if elected.

You will of course recognize that we will in the first instance need a firm base of community approval in securing a first-rate individual to head the operation. For this reason, especially, we would appreciate hearing from you as soon as possible, preferably within the next two weeks.

Based on commitments ranging from $2,000 to $25,000 from the sampling of research-based companies, we take the liberty of suggesting that a company electing to participate, make its tax-deductible contribution in the range noted on the enclosed form. *

The Trustees of the Baystate Science Foundation:

O. Kelley Anderson, President,
New England Life Insurance Company

Byron K. Elliott, Chairman,
John Hancock Mutual
Life Insurance Company

Lloyd D. Brace, Chairman,
First National Bank of Boston

William Webster, President,
New England Electric System

Erwin D. Canham, Chairman,
Federal Reserve Bank of Boston

Erskine N. White, President,
New England Telephone &
Telegraph Company

*DEC has been asked to pledge $4,000.

A REPORT TO THE TRUSTEES OF THE BAY STATE SCIENCE FOUNDATION ON A CONCEPT FOR A REGIONAL ORGANIZATION IN SCIENCE AND TECHNOLOGY

THE PLANNING COMMITTEE:

LLOYD D. BRACE
Chairman, The First National Bank of Boston

JAMES R. KILLIAN
Chairman, Massachusetts Institute of Technology Corporation

WILLIAM WEBSTER
President, New England Electric System
and President, Yankee Atomic Electric

This is the final report of a voluntary planning committee which has met from time to time during the past three months to consider the possibilities of community supported organization to increase the effectiveness of the development and application of the technical resources of Massachusetts and the New England region.

1 BACKGROUND

The universities and the industries of our area constitute one of the most fertile concentrations of science and engineering in the country and contain the basic elements for continuing growth. Yet we know that our present capabilities are not fully utilized and that the present level of their use in national programs is by no means assured for the future. It is therefore a challenging question whether the region can match its technical creativity and ingenuity with organizational innovation to bring its resources more productively into play.

We are aware of efforts underway in other localities to strengthen technical education and training and the industrial base in advanced technology through concerted action involving also the business and financial interests of the community. The problem of our region in this regard is different from that of the other localities so engaged — in fact, unique in two important respects. On the one hand, we already have in existence the wealth of varied technical resources the attainment of which is the primary goal of similar effort elsewhere. On the other hand, we do not have on the industrial side the aerospace industrial capacity to attract the large national projects with their attendant local technical and economic effect. The crux of our question is whether there are new ways, suited to the particular structure of our community, which can comparably amplify our total effect. Are there possibilities of new concepts of educational and industrial organization which might usefully supplement the traditional structure?

In the course of the committee's examination, one concept did emerge that seemed to warrant further consideration. As presented herewith, it has been tested and developed in a series of discussions with financial, industrial and educational interests to the point where it now seems suitable for presentation to the entire community.

2 PURPOSES OF A NEW ORGANIZATION

The purposes of the organization would be:

a. To develop a new and more powerful pattern of mutual support between industry and higher education, responsive to the demands and pace of modern science and technology.

b. To promote the more efficient flow of new scientific and engineering knowledge into industrial application and the general economy.

c. To increase the contributions of the technical abilities of the region to national programs.

3 CRITERIA FOR SUCCESS

Some elements essential to the success of the endeavor would be:

a. That it give credible assurance of intent to render important national as well as regional service.

b. That it emphasize collaboration among universities and industries and offer prospects for a high order of mutual reinforcement.

c. That it be welcomed by the industries and universities it is intended to serve. Clearly, it should not compete or conflict with its own constituency.

d. That it be sufficiently persuasive in the practicality of its concept to attract the necessary financing and quality of management.

4 INITIAL ACTIVITIES

It would be the aim of the organization to provide community services of unquestioned practical value. Initially, these would necessarily be modest in scope, and at no time is it conceived that the operation would intrude into the "hardware" province of industry. The following are examples of contemplated services:

a. Act as a regional clearinghouse for information on national programs in science and advanced technology supported by government grants and contracts.

b. Supply a continuing forum for technical review of such programs, existing and potential, to analyze the applicability of regional resources to them.

c. Provide follow-up on ideas resulting from such review, through leadership in bringing together industry planners and university personnel to insure that ideas requiring a multi-organizational effort do not lie fallow by reason of inertia.

d. Supplement individual industrial efforts in bringing area capabilities to the attention of government and industry outside of New England, collaborating appropriately with state and local governments and other community service organizations in this regard.

e. Serve as a regional information center on science and technology, perhaps operating a reposi-

tory of technical publications and abstracts in selected fields or a regional patent information center, or both. Such operations might offer national advantages sufficient to attract government support, especially as pilot models, through operating contracts or otherwise

f. Supply techical advisory services to industry and government, self-supported or under contract as appropriate in various cases, by task forces of selected experts from universities and industry.

g. Supply leadership for groups of small companies that may have recognized a need for coordination in some particular endeavor.

h. Serve as a focus of continuing review of the possibilities for quicker and broader transfer of new knowledge from research into application — on local initiative as well as on national programs with government support.

i. Management of technical studies and other technical operations under contract to government, industry and universities.

5 LATER POTENTIAL

The organization would seek to find other opportunities of service, such as:

a. Scientific planning services for government and industry, going beyond special studies although possibly arising out of such activities.

b. With the cooperation of its industry and university associates, to prepare and present to government and major prime contractors proposals for multi-organizational efforts suitable to regional capabilities, and to act as contractor in the execution of such work.

c. Take-over of technical projects originating in universities which have progressed beyond the appropriate university sphere, but which are still not adapted to management by an individual company. Similar opportunities also arise occasionally from unusual situations in industry.

6 SYSTEM ENGINEERING

The committee gave especially careful consideration to the possibility that the new organization might be called upon to provide major centralized system engineering services for regional industry. The committee's conclusion in this regard is that the organization should contemplate moving into this area only where its services will be of clear benefit to the community, with meticulous attention always to its basic objective of supplementing and not competing with the efforts of its industrial constituents.

7 ORGANIZATION AND FINANCE

The organization would have two basic elements, a charitable foundation called Baystate Science Foundation, and a profit-making corporation called Advanced Technology, Inc. (ATI).

a. **Equity base.** The Foundation, organized with educational institutions to be the beneficiaries, would initially obtain its funds by way of tax-deductible gifts from industrial concerns in the area. It would use these funds to purchase all of the common (controlling) stock of ATI.

b. **Long-term debt.** Banks, insurance companies, utilities and universities would be expected to loan to ATI an aggregate of several million dollars, some fraction of which — say 10% — would be supplied initially and the balance when needed.

c. **Trustees and Directors.** The Foundation Trustees would be prominent citizens, none of whom would represent an educational institution which might benefit from the Foundation or an industrial company competing for government contracts in advanced technology. The Foundation, as sole stockholder, would elect the Directors of ATI. In addition to the Foundation Trustees, these would be individuals similarly interested in the general scientific and economic progress of the area and not competing for government contracts.

d. **Geographical limitations.** For practical reasons, operations would be limited initially to Massachusetts. It would be the intent, however, that operations would be broadened later to include other New England areas.

e. **Financial objectives and planning.** ATI would be expected to become self-supporting and begin repaying its debts within a few years, through fees on worthwhile services to government and industry. General start-up expenses during the first two to three years, over and above any income from the sale of its services, might amount to as much as $1 million. To insure that the new venture had a full and fair chance of getting off the ground, it would be necessary that the proceeds from the purchase of ATI stock by the Foundation and the down payments on the loans to ATI be sufficient to cover these initial expenses. After the start-up period, the balance of the loans would be paid only as concrete contractual opportunities occur for usefully expanding ATI activities. No further solicitation of gifts to the Baystate Foundation is contemplated. It is conceived that prudence and propriety will dictate for ATI profit objectives in the range customary for a progressive regulated public utility.

f. **Management and staff.** ATI would have a full-time President of recognized stature in the manage-

ment of science and technology who would be assisted by such full-time technical and administrative staff as the developing needs of the organization may require. The Directors and the President would appoint (and compensate as appropriate) such part-time technical, financial and other advisory committees as they deemed useful in carrying out their responsibilities.

8 UNIVERSITY PARTICIPATION

It is contemplated that universities would support the organization in the following ways:

a. By joining in the planning and the establishment of ATI.

b. Through representation on the ATI Board of Directors.

c. By participation in the loans to ATI.

d. By encouraging faculty and staff members to serve on ATI technical advisory committees and participate in its various technical activities, as individuals and within existing rules concerning outside consulting. These individuals would usually be compensated by ATI at going rates.

e. By undertaking research and studies under ATI sponsorship in a manner appropriate to academic institutional policy. Where services by university-operated, government-financed laboratories may be involved, special arrangements with the government would be necessary, but government agreement may be anticipated on projects of genuine interest to the government.

f. Through educational and training programs needed by industry.

g. By the use of ATI as a subcontractor in government-supported projects, with government approval.

9 INDUSTRY PARTICIPATION

It is contemplated that technically-based industry would participate in the work of the organization in the following ways:

a. Through the initial gifts to the Foundation.

b. Through feeding ATI's common pool of non-proprietary information.

c. Through participation of company personnel in ATI studies conducted with a view toward promoting the general interest but which are at the same time of particular interest to the individual companies.

d. Through the use of ATI as subcontractor.

e. Through subcontracts from ATI at customary profit margins.

10 THE ORGANIZATION IN RELATION TO ITS CONSTITUENTS

The normal competitive efforts of individual companies would be expected to continue undiminished. ATI's role in this regard would be as a stimulator of more fruitful endeavor generally; as a catalyst — and nucleus where appropriate — of joint operations among companies; as a coordinator where coordination is desired by the industrial participants; and as a means for more effective relations with the academic community.

The committee has conceived of ATI growing into self-sufficiency — not dependent on continuing donations — via the role of contractor in non-hardware work, with the full approval of both its industrial constituents and its customers.

It would be expected that the participating universities would make their contributions to the endeavor in ways entirely appropriate to educational institutions. Their rewards would be found in benefits to the community of which they are institutional citizens; in improvement of the process by which the products of their research are made useful to society; in support of academic research and education by the Foundation (as ATI may prosper); and over time, in stronger support of education by the community made more acutely aware of the values involved.

It is recognized that success in the endeavor will require overcoming difficulties and avoiding hazards, especially in the initial stages, and that the objectives of the operation must be kept continuously clear. The universities of the region vary greatly in their characteristics and objectives. So also does the technological industry, important segments of which represent operating units of larger companies having their main roots elsewhere. Even among the locally based companies, the wide range in their size and degree of maturity and in their fields of interest will result in diverse individual attitudes toward the values of such a collaborative effort. In addition, there will be practical problems within the constituency and also with regard to both university and company commitments and interests reaching outside.

Probably the best guarantee that can be given for solving the problems and steering clear of hazards will be found in the wisdom and skill that can be brought to the top echelon of the organization. So important indeed is this aspect of any such concept of operation as the one presented here that the planning committee secured the advance acceptance of responsibility by the present Trustees of the Foundation, if called to service by the community. The committee is pleased also to know, as it concludes its own task, that these Trustees intend to present the organizational concept for approval by the com-

munity very broadly and, contingent upon such approval, to elect as Directors of ATI individuals who, like themselves, represent the interest of the entire community.

11 IN CONCLUSION

The Administration's budget request now before the Congress proposing a NASA electronics research and procurement center to be located in the Greater Boston area supplies new and gratifying evidence of national recognition of the value of our resources. If approved, this NASA center will be a substantial addition to the other government activities in the area, notably the Air Force concentration around Hanscom Field. The committee has not, however, thought of its own proposal in terms of the presence or absence in the community of any particular government office. The concept, rather, is of a regional effort, privately organized and regionally fostered, to promote the growth and enhance the effectiveness of the technical resources of the region for all of the purposes of our essentially industrial society. All use of the proposed organization by agencies of the Federal Government, the universities and industry, within or outside the region, will have to be earned through demonstration of its value.

The committee wishes to acknowledge the sustained and invaluable assistance of Ephron Catlin, Vice President of the First National Bank; Donald J. Hurley of the law firm of Goodwin, Procter, and Hoar; and James McCormack, Vice President of M.I.T.

digital equipment corporation
MAYNARD, MASSACHUSETTS
TWinoaks 7-8822 TWX MAYN 816

February 27, 1963

Mr. Harlan E. Anderson, Vice President
Digital Equipment Corporation
Maynard, Massachusetts

Dear Mr. Anderson:

Please consider this notice of a meeting of the Board of Directors of Digital Equipment Corporation, to be held at the offices of American Research and Development Corporation, 200 Berkeley Street, Boston, Massachusetts, on Tuesday, March 12, 1963, at 2:00 p.m.

I shall appreciate your indicating on the enclosed copy whether or not you plan to attend the meeting, returning the copy to me.

Very truly yours,

Dorothy E Rowe

Dorothy E. Rowe
Clerk

DER:ah
Enclosure

Harlan Anderson

DATA TRENDS INC

R. W. HUGHES
PRESIDENT

DATA TRENDS, INC.

1259 RT. 46, PARSIPPANY, N. J. TEL 201-334-1515

19 February 1963

Mr. Kenneth Olsen
President
Digital Equipment Corporation
Maynard, Massachusetts

Dear Ken:

It was nice to talk to you the other day and also interesting to hear of the new 16,000 word memory with its attractive low price.

We are all quite enthused at the prospect of working with DEC and believe that the combination of our talents will permit a very attractive package for quite a few customers. I have - in fact - already contacted one customer and the response was quite favorable. Since this customer is interested in an early delivery, I would like to meet with you to define - between ourselves - the split of responsibilities so that we are clear from the beginning on this point. As I believe I mentioned, I plan to attend the ARD Annual Meeting on March 6th and also plan to be in Boston either the day before or the day after. If you are free on one of these days, I suggest that I come to DEC and we can discuss the above subject. Why don't you select the day convenient for you and drop me a line?

As a preliminary thought on the split of responsibilities, our feeling is that a logical arrangement is for DEC to provide the following:

1. The PDP-1 equipment.
2. Manuals covering the equipment supplied, including any drawings necessary for maintenance.
3. To ship, install, and check out the equipment from an equipment operating viewpoint.

On the other hand, DTI would furnish:

1. The marketing of the system.
2. System analysis and system engineering.
3. All programming.
4. System checkout and final system acceptance.
5. System manuals and system information.

I will be looking forward to seeing you and Andy.

With best regards,

R. W. Hughes

RWH/adk

February 18, 1963

COPY

Mr. Henry W. Fitzpatrick
Assistant Director
Lincoln Laboratory
Lexington, Massachusetts

Dear Mr. Fitzpatrick:

We are pleased to hear of your interest in our PDP-1 Computer and we would like to do everything we can to make it usable as soon as possible. In order to speed up complete evaluation of the equipment, and to allow work on the project to start immediately, we would like to loan a computer to Lincoln Laboratory. There is no obligation on the part of Lincoln Laboratory in accepting this loan. Our own insurance completely covers the equipment for both accident and fire and accepting this loan implies no obligation whatsoever to purchase this or any other DEC equipment.

If there is any other way in which we can help, please feel free to call on me.

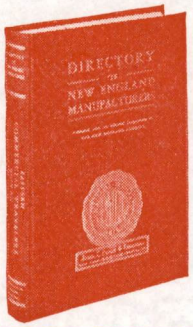
Sincerely,

Kenneth H. Olsen
President

KHO/mr

Copy to: Mr. Alan Gronetstein
Mr. Jonathan Huntington
Mr. Harlan Anderson
Mr. Stanley Olsen

GEORGE D. HALL COMPANY • *Publishers* • 20 KILBY STREET, BOSTON 9, MASS.



THE DIRECTORY
of
NEW ENGLAND MANUFACTURERS

February 14,1963

Telephone: LAfayette 3-3745 *Published with Editorial Co-operation of* THE NEW ENGLAND COUNCIL

Mr. Harlan E. Anderson
Digital Equipment Corporation
146 Main Street
Maynard, Massachusetts

Dear Mr. Anderson:

Please accept our sincere thanks for your check No. 28387 in the amount of $6.00 to cover cost of BOLD FACE TYPE for your company name in the 1964 edition of the DIRECTORY OF NEW ENGLAND MANUFACTURERS.

We note that revised or approved data was not included with your check and to assure accurate and complete listing, we are enclosing a second proof of data as currently shown.

We would appreciate your noting your approval, or indicating revisions, and returning the enclosed to us at your earliest convenience. Careful attention will be given to your company's data.

Sincerely yours,

GEORGE D. HALL COMPANY

E. J. Sullivan, Gen. Mgr.

S/e
enc.

KHO

January 25, 1963

COPY

Doctor R. L. Fulton
4284 Pomona Way
Livermore, California

Dear Doctor Fulton:

We were very interested to hear about your plans to form Eyeball Associates. We would like to do all that we can to help and encourage you. Be sure to keep us informed as to your status so that we can tell people about what you can do if they happen to come to us.

Information International Incorporated, who are located in Maynard, Massachusetts, have done some film reading using the PDP-1 Computer. I would suggest that you contact them so that you may explore possibilities on which you might cooperate, or so that you at least would know their competitive situation. Edward Fredkin is President and Benjamin Gurley is Vice President and Maynard, Massachusetts is sufficient address.

If you will excuse my boldness, I would like to suggest that you do not use the name of Eyeball Associates. The word eyeball in your sense is known to very few people and to most others it has rather an unpleasant meaning.

We all wish you the best of success in your venture.

Sincerely yours,

Kenneth H. Olsen
President

KHO/mr

4284 Pomona Way
Livermore, California
January 20, 1963

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

Dear Mr. Olson:-

Eyeball Associates has been formed for the purpose of providing, to business, military and governmental agencies, fast accurate digitization of visual records. Our main service, at least in the beginning, will be that of digitizing curves and graphs. We have been developing this technique for over two years and now have a proven method of automatic curve reading, which utilizes the eyeball attachment on the PDP 1. We have successfully read and processed curves from both film and hard copy, including pictures of oscilloscope traces taken by a Polaroid Land camera. Therefore, with the successful obtaing of contracts, we will need to rent time locally on a PDP 1.

We have worked with IBM 704, 709, 7090 and 7094 computers and with your PDP 1 and find, that for eyeball purposes, your computer is capable of producing vastly superior results. We have proven that PDP 1 eyeball can consistently read curves with greater speed and more accuracy than any known manual or semi-automatic method. It is now ready for commercial and industrial use. We believe that Eyeball, Associates and D.E.C. can work together to promote this use and both can profit from this cooperation.

The PDP 1 is competitively priced, as well as reliable, and we are convinced that its outstanding sales appeal may rest in an effort to offer a visual reduction system in addition to its computational facility. The market for visual data reduction is virtually unlimited and we are confident that we can help your organization stay well ahead of any competition that develops in this field.

Ted Johnson mentioned to us that you are considering opening an office in the San Francisco area in the near future. Perhaps you are planning to make a trip to the West Coast, at which time we would like very much to make arrangements to meet with you and discuss our ideas in greater detail.

Yours truly,

Roger L. Fulton

Dr. R. L. Fulton

William P. Hyde

William P. Hyde

David C Mapes

David C. Mapes

mj
CC: Ted Johnson

The National
Shawmut Bank
of Boston

January 22, 1963

Dear Harlan:

Our plans for dinner and the hockey game on Thursday, January 24, 1963 are now complete.

We will meet at the Union Club, 8 Park Street, Boston at 5:30 p.m. where we can enjoy a leisurely dinner and then proceed to the game.

We are looking forward with pleasure to seeing you.

Sincerely,

Lincoln E. Barber, Jr.
Assistant Vice President

Mr. Harlan E. Anderson
Vice President
Digital Equipment Corporation
Maynard, Massachusetts

UNION CLUB DINNER AND HOCKEY GAME

January 24, 1963

Mr. Everett B. Anderson, Vice President & Treasurer, Berkshire Bank & Trust Company
Mr. Harlan E. Anderson, Vice President, Digital Equipment Corporation
Mr. Austin J. Blood, Executive Vice President & Treasurer, Crocker Institution for Savings
Mr. Donald P. Cooke, Vice President, Holyoke National Bank
Mr. Richard B. Foster, Vice President & General Manager, Boston Division, Minneapolis-Honeywell Regulator Company
Mr. Robert E. Hanson, Comptroller, Boston Division, Minneapolis-Honeywell Regulator Company
Mr. Harold A. Holbrook, Chairman of the Board, Strafford National Bank
Mr. Robert O. Imper, Treasurer, Elm Farm Foods Company
Mr. William S. Leonard, President, Strafford Savings Bank
Mr. George T. O'Dea, Treasurer, Digital Equipment Corporation
Mr. Frederick L. Patton, Treasurer & Assistant Secretary, Cambridge Rubber Company
Mr. Robert T. Sheldon, President, Strafford National Bank
Mr. Clarence E. Stoneham, Chairman of the Board, Berkshire Bank & Trust Company

John Ware, Jr.
Edgar C. Bailey
John J. Green
Lincoln E. Barber, Jr.
Brewster J. Gifford

BOLT BERANEK AND NEWMAN INC
CONSULTING DEVELOPMENT RESEARCH

50 MOULTON STREET
CAMBRIDGE 38, MASSACHUSETTS
TELEPHONE 491-1850

8 January 1963

Mr. Harlan Anderson
Digital Equipment Corporation
Maynard, Massachusetts

Dear Andy:

As we discussed on your visit here, Bolt Beranek and Newman Inc. would like to make available through Decus its Time-Sharing System for the PDP-1 computer. It is our belief such a program system will be of great value to the members of Decus as Mr. Fredkin pointed out in his letter on the back of Decuscope.

At the present time we do not feel that the Time-Sharing System is in a sufficiently clean and refined form for general use. On the other hand, Bolt Beranek and Newman Inc. has already spent some $ 40,000 of its own funds in support of this project and cannot afford any further investment. Since Digital Equipment Corporation may be sufficiently interested in having this material available, we are taking the liberty of proposing that DEC support a clean-up and rewrite of the present Time-Shared program and the preparation of an instruction manual for the program users.

This work will be done at Bolt Beranek and Newman Inc. by Mr. William Mann and Mr. Jack Rogers under the direction of Mr. Sheldon Boilen.

The project will require until 1 April and we are prepared to deliver a normal Decus tape, Macro English tape, Macro listing and instruction manual in form suitable for photo offset for a total price of $ 16,800.

If this proposal meets with your approval, we will be happy to start work immediately.

Sincerely yours,

BOLT BERANEK AND NEWMAN INC.

Jordan J. Baruch
Vice President

JJB:hl

Ken Olsen
NEA

January 3, 1963

To: Mr. John Garofalos
UNIVAC Division
2121 Wisconsin Avenue
Washington 7, D. C.

RE! ACM TALK

Name of Firm: Digital Equipment Corporation
Maynard, Massachusetts

Date Desired: February 21, 1963

Subject: A CASE FOR COMPLETELY PROGRAMMED I/O OPERATION

Efficient use of I/O devices in a simultaneous asynchronous manner can be achieved with a basic set of input/output hardware. Given this basic hardware, essentially any I/O scheme may be realized, thus enabling the small, high-speed, general purpose digital computer to approach a large machine's I/O capability. The PDP-4 computer will be discussed, and several cases given.

Speakers: Gordon Bell
Harrison Morse

Backgrounds: Mr. Bell received his S.B. and S.M. degress in Electrical Engineering from M.I.T. in 1957. He was a Fulbright Scholar during the 1957-1958 period. From 1959 to 1960 Mr. Bell did speech analysis at M.I.T.'s Research Laboratory for Electronics. Since 1960 he has been employed by the Digital Equipment Corporation as a Computer Design Engineer. He was responsible for the design of the PDP-4.

Mr. Morse received his S.B. degree in Mathematics from M.I.T. in 1959. For the next two years he was Staff Programmer at M.I.T. He is presently Supervisor of Programming at Digital Equipment Corporation, and has been heading up the Company's PDP-4 programming effort.

Visual Aids Necessary: 35 mm slides.

Coordinator: H. O. Painter, Jr.
Digital Equipment Corporation
Maynard, Massachusetts
AC 617 TW 7-8821 Ext. 278

January 23, 1963

COPY

Mr. William Snow
Overseas Division
Dewey and Almy Chemical Division
W. R. Grace and Company
701 Concord Avenue
Cambridge 38, Massachusetts

Dear Mr. Snow:

Both Mr. Anderson and myself wish to thank you again for the very kind reception which you gave us yesterday. Your advice has cleared our thinking on many points.

Sincerely,

George T. O'Dea
Treasurer

GTO'D:ncs

bcc: H.E.Anderson

THE FOXBORO COMPANY

MAIN OFFICE AND PLANT · FOXBORO, MASSACHUSETTS, U.S.A.

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Instrumentation

PLEASE ADDRESS YOUR REPLY TO
DIGITAL SYSTEMS DIVISION
21 STRATHMORE ROAD
NATICK, MASSACHUSETTS
OLYMPIC 3-5560

February 1, 1963

Digital Equipment Corporation
Maynard
Massachusetts

Attention: Mr. Arthur Hall

SUBJECT: Extended Arithmetic Control Unit and Magnetic Drum System

Dear Mr. Hall:

In an effort to eliminate the recent confusion and to satisfy an inquiry from one of our customers, would you please confirm in writing the correct numbers we are to use when referring to your Extended Arithmetic Control Unit and your Magnetic Drum System.

As I mentioned during our telephone conversation this afternoon, trol Unit, Type 18 and the Magnetic Drum System, Type 24. Mr. Anderson's letter of October 5 also refers to the Extended Arithmetic Control Unit, Type 18.

However, Gordon Bell's draft, dated December 26, as received by Saul Dinman refers to Arithmetic Unit, Type 22 and the Drum System, Type 18. Your PDP-4 Manual, F-45, also refers to the Extended Arithmetic Control Unit, Type 22.

Thank you for your immediate attention to this matter and we look

ELECTRONIC ASSOCIATES, INC. *Long Branch, New Jersey*
TELEPHONE CAPITAL 9-1100 • TWX LG BR 896

January 29, 1963

Mr. Harlan E. Anderson
Vice President
Digital Equipment Corporation
Maynard, Massachusetts

Dear Harlan:

Thank you for your letter of January 18. I am having copies circulated to those who attended our meeting.

As I previously wrote you, we all appreciate the time and contributions which you and Gordon Bell have made to our current study regarding general purpose computers.

Very truly yours,

John A. Curtis
(bjp)

John A. Curtis
Vice President, Marketing

JAC:bjp

File

Itek ITEK CORPORATION - 10 MAGUIRE ROAD
LEXINGTON 73 MASSACHUSETTS - VOLUNTEER 2-6200

January 25, 1963

Mr. Harlan Anderson
DIGITAL EQUIPMENT CORPORATION
146 Main Street
Maynard, Massachusetts

Dear Mr. Anderson:

Just a short note to thank you for the tour. I appreciated it, and let me hasten to add that I was impressed with the growth you have achieved to date.

I'll send along the resume shortly. As I wrote to Mr. Olsen, it details seventeen years of experience which I know can be an asset to DEC. I would like to put down a list of specifics on why I think so. This might serve as a good agenda for a second meeting.

Sincerely,

Joseph J. Stahl

Joseph J. Stahl
Director of Public Relations/
Advertising

JJS/cls

THE FOXBORO COMPANY

MAIN OFFICE AND PLANT - FOXBORO, MASSACHUSETTS, U.S.A.

FOXBORO REG. U.S. PAT. OFF. Instrumentation

PLEASE ADDRESS YOUR REPLY TO
DIGITAL SYSTEMS DIVISION
21 STRATHMORE ROAD
NATICK, MASSACHUSETTS
OLYMPIC 3-5660

January 18, 1963

Mr. Harlan E. Anderson
Vice President
Digital Equipment Corporation
Maynard, Massachusetts

Dear Harlan:

We acknowledge with thanks your letter of January 17, 1963, regarding Fitchburg Paper. Your offer is sufficient to enable us to make an attractive offer to Fitchburg.

Our offer has received the endorsement of their technical people, and we have a date to see their top management this Monday. We should then be in a better position to determine Fitchburg management's interest in this offering.

Thank you for your interest and help on this project which could prove to be of great mutual value to us.

Very truly yours,

R. W. Sonnenfeldt

R. W. Sonnenfeldt
General Manager

RWS:jh

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Instrumentation

PLEASE ADDRESS YOUR REPLY TO
DIGITAL SYSTEMS DIVISION
21 STRATHMORE ROAD
NATICK, MASSACHUSETTS
OLYMPIC 3-5660

January 17, 1963

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

Dear Ken:

We greatly appreciate your recent letter informing us of your conversations with Leeds and Northrup and your bid on the Chalk River project. As I mentioned to you, we elected not to bid on the Chalk River project because their requirements cannot be met with our present product line. We fully understand your position with respect to other DEC customers even when they are Foxboro competitors, and we appreciate your courtesy in informing us of your status in this respect.

I am concerned that we should be in the position of unknowingly bidding different systems containing DEC computers to the same customer, since this is likely to hurt both of us while benefiting a competitor. We will brief you at frequently regular intervals on Foxboro projects likely to become quotations. We wish to reiterate that Foxboro has no interest in selling systems that can be supplied in their entirety from the DEC product line. We give you names of Foxboro customers in confidence as we hold information from you in confidence.

I have had recent occasion to tell Ben Bristol, Fry, and other members of Foxboro's top management how much we enjoy working with you.

Very truly yours,

R. W. Sonnenfeldt
General Manager

jh
cc: W. W. Frymoyer
H. Thistle

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REGISTERED OFFICE: CONNAUGHT HOUSE, 63 ALDWYCH, LONDON, W.C.2.

INTEGRATED ELECTRONIC SYSTEMS DIVISION

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TELEX: 21409 (RELAY ENFIELD)
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YOUR REF:
OUR REF: 87:HAS:PN

17th January, 1963

Mr. Harlan E. Anderson,
Vice President,
Digital Equipment Corporation,
Maynard, Mass.,
U.S.A.

Dear Mr. Anderson,

By this time I had hoped to be able to advise you on our decision regarding taking delivery on ADX No.11 ordered by ITT. I have had a brief discussion of this with our Managing Director, but the final decision could not be made at that time. He has had to go to the Continent on business, and I will be unable to have a full scale discussion on this matter until this coming Saturday. I will then be in touch with you next week.

Very truly yours,

H.A. Saye.

41 EG

January 14, 1963

COPY

Mr. John Curtis,
Vice President of Marketing
Electronic Associates, Inc.
Long Branch, New Jersey

Dear Mr. Curtis:

In accordance with Mr. Harlan Anderson's request, I am forwarding nine issues of DECUSCOPE which constitute Volume I.

Volume II begins with the January issue which includes an article by Charlton Walter written especially to show the potential of the PDP's color scope. It has just come off the press so I am including it also.

I hope you will find DECUSCOPE interesting as well as informative and that you may wish some day to join DECUS.

I welcome your comments on DECUSCOPE.

Sincerely,

Elsa Newman (Mrs.)
Editor

EN:dk

January 14, 1963

COPY

Dr. Thomas D. Truitt, Director
Advanced Study Group
Electronic Associates, Inc.
Princeton, New Jersey

Dear Dr. Truitt:

Mr. Harlan Anderson suggested I send you the nine issues of DECUSSCOPE which constitute Volume I.

Volume II begins with the January issue which includes an article by Charlton Walter written especially to show the potential of the PDP's color scope. It has just come off the press so I am including it also.

I hope you will find DECUSCOPE interesting as well as informative and that you may wish some day to join DECUS.

I welcome your comments on DECUSCOPE.

Sincerely,

Elsa Newman (Mrs.)
Editor

EN:dk

BLAIR AND BUCKLES
PATENT AND TRADEMARK COUNSEL
79 MILK STREET
BOSTON 9, MASSACHUSETTS

HUBBARD 2-5161
CABLE: "EMBOVA"

January 11, 1963

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

Dear Ken:

This will confirm my telephone call advising you of Technograph's decision to sue for infringement of reissue of patent 24,615. I understand that you have now been served with the complaint.

Contrary to my previous information, it is my understanding that the complaint asks for an injunction from further infringement of the patent. However, there is no need to worry about this request. The patent expires on February 2, and after that you will be perfectly free to use the invention disclosed in it without incurring any liability whatsoever. Moreover, during the next three weeks the case will not reach the stage at which the Court would issue an injunction.

In any case, it appears that the injunction was included only because the complaint is a standard form which Technograph has used in suing dozens of other defendants, with only the names of the defendants being changed in each case. Thus, the filing of the suit does not really affect our negotiations with Technograph, and they should continue on to a conclusion in the near future. In fact, the last letter from the Technograph attorneys makes this rather clear. It states that their only reason for suing was to preserve their rights.

I shall keep you fully informed of everything that transpires in this matter, and if at any time you have any questions whatsoever, do not hesitate to get in touch with me.

Sincerely,

Robert A. Cesari

D/kmh

cc. Mr. H. Anderson

ELECTRONIC ASSOCIATES, INC. *Long Branch, New Jersey*
TELEPHONE CAPITAL 9-1100 • TWX LG BR 896

January 10, 1963

Mr. Harlan E. Anderson, Vice President
Digital Equipment Corporation
146 Main Street
Maynard, Massachusetts

Dear Harlan:

Just a note to thank you and Gordon Bell for spending most of yesterday with us to bring us up to date regarding your company's products and to discuss the possibility of our working more closely together in the future.

All of the EAI personnel attending the meeting were most impressed by the contents of your presentation. We therefore await with interest to hear from you further regarding the several items discussed during lunch, so that your answers can be a part of our study consideration.

You will recall there were two items which you planned to discuss with your associates and regarding which you intended to convey to us your company's decisions. The first item was the possibility of your company providing us without cost for marketing and engineering purposes two computer systems of the type which your company and ours would consider useful in the effort discussed during our conference. Obviously, the desirable peripheral equipment which you might have available would also be a part of any such equipment loan. Secondly, you also agreed to review our proposal regarding equipment discount rates, though all of us present realize that the equipment program referenced above might be a substitute for this requested consideration.

So that you might clearly know the area of responsibility of Mr. Christianson's staff members who were attendees to yesterday's meeting, I am listing below the EAI officers present at your presentation and their respective responsibilities.

May I again express on my behalf and that of my associates our appreciation of your yesterday's visit.

Very truly yours,

John

John A. Curtis
Vice President, Marketing

JAC:bjp

cc: Lloyd F. Christianson, President
Romeo R. Favreau, Vice President - Research & Computation Division
Fred L. Martinson, Vice President - Engineering & Manufacturing
David P. Wilkinson, Vice President - Corporate Planning

TELEPHONE
DEEP RIVER JUstice 4-3311
PEMBROKE REgent 2-9911

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IN YOUR REPLY PLEASE QUOTE
FILE NO. .....

ATOMIC ENERGY OF CANADA LIMITED

CHALK RIVER PROJECT

CHALK RIVER, ONTARIO

Nuclear Physics

January 10, 1963

Mrs. Elsa Newman, Editor
DECUSCOPE
Maynard, Mass.
U.S.A.

Dear Mrs. Newman:

It seems to have fallen to me to reply to your questionaire about the spring DECUS meeting. The answer is, as I have indicated on the form, that we almost certainly would not suffer any restriction of admission to Livermore. However, our travel budget has been restricted due to the Canadian austerity and it seems unlikely that we could send anyone that far.

We are sorry that we have no contributions to DECUSCOPE but we are working hard and may have something for future issues.

I must report that reading DECUSCOPE has made us very greedy. The Flint-36 system looks extremely useful and we would like to add it to the list of requests which we sent previously. Since we are using DECAL, this version is the one that we would like.

Is the AFCRL Double Precision Floating Point System supplied by Miss. E. Cronin the same that was described in the September DECUSCOPE and was requested in my December letter? It looks the same but if not, could we add this to the list as well.

Also please add the single precision floating point system of R.J. McQuillin and the double precision package of Roland Silver.

Do you have tapes for the "Scopetrace" of J.R. Hayes described in Hascom Field Report ESB-TDR-62-41. If so, could we please also get this.

We have been working on a double precision (or double length) fixed point set of routines. We may be duplicating the programs of Roland Silver in this regard, however, if not, this will probably be completed soon and we can offer them to you if anyone is interested. We are continuing to get experience with the computer. It turns out that the basic DECAL library will not work in the second part of our 8K memory but we are working to correct this. Probably this will be corrected in the tapes that we are going to receive from Mr. McQuillin.

Routines for the elementary functions and also linear equation solving are of interest to us and we would be glad to hear anything along these lines.

Thanking you for your consideration,

Yours sincerely,

A.J. Ferguson

AJF:kmf

charles w. adams associates inc.

142 THE GREAT ROAD • BEDFORD • MASSACHUSETTS • Area 617 275-8050

January 9, 1963

Mr. Harlan E. Anderson, Vice President
Digital Equipment Corporation
Maynard, Massachusetts

Dear Harlan

Thank you very much for your letter of January 8, 1963, in which you outlined the conditions under which a PDP-1 computer and related equipment would be made available to Adams Associates on temporary loan. We will be pleased to accept delivery of these items in accordance with your conditions.

It is understood and agreed that regardless of the amount of income derived from the rental of computer time to outside organizations, Adams Associates will reimburse Digital Equipment Corporation not beyond 1/30th of the purchase price of the equipment involved. We will, moreover, bear the cost of fire insurance and such other forms of insurance as are in the interest of both Adams Associates and DEC.

The separate building which is being completely renovated for the computer and other equipment will be completely finished by the end of this week or the early part of next. We therefore will be ready for the computer sometime next week, the specific date of which will be given to Ed Howard two days prior thereto.

Charlie and I both appreciate the loan of the PDP-1 and peripheral equipment and would like to thank you and Ken for having made this possible.

Sincerely

John T. Gilmore Jr

John T. Gilmore, Jr.
Vice President

JTG/hcs

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FOXBORO, MASS.

FACTORIES IN
UNITED STATES
CANADA · ENGLAND
NETHERLANDS · JAPAN

January 9, 1963

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

Dear Ken:

Just a note to let you know that our Mr. Connelly, Foxboro regional manager in Chicago, is following your lead at Kitchens of Sara Lee. They are currently awaiting a report from Armour Research Corporation with recommendations for a computer system. We will keep you informed of further developments.

I have not forgotten your request for system specifications and you will receive a representative set shortly.

With best regards,

Dick

R. W. Sonnenfeldt
General Manager

jh

H. Anderson

January 3, 1963

To: Mr. John Garofalos
UNIVAC Division
2121 Wisconsin Avenue
Washington 7, D. C.

Re: ACM Talk

Name of Firm: Digital Equipment Corporation
Maynard, Massachusetts

Date Desired: February 21, 1963

Subject: A CASE FOR COMPLETELY PROGRAMMED I/O OPERATION

Efficient use of I/O devices in a simultaneous asynchronous manner can be achieved with a basic set of input/output hardware. Given this basic hardware, essentially any I/O scheme may be realized, thus enabling the small, high-speed, general purpose digital computer to approach a large machine's I/O capability. The PDP-4 computer will be discussed, and several cases given.

Speakers: Gordon Bell
Harrison Morse

Backgrounds: Mr. Bell received his S.B. and S.M. degress in Electrical Engineering from M.I.T. in 1957. He was a Fulbright Scholar during the 1957-1958 period. From 1959 to 1960 Mr. Bell did speech analysis at M.I.T.'s Research Laboratory for Electronics. Since 1960 he has been employed by the Digital Equipment Corporation as a Computer Design Engineer. He was responsible for the design of the PDP-4.

Mr. Morse received his S.B. degree in Mathematics from M.I.T. in 1959. For the next two years he was Staff Programmer at M.I.T. He is presently Supervisor of Programming at Digital Equipment Corporation, and has been heading up the Company's PDP-4 programming effort.

Visual Aids Necessary: 35 mm slides.

Coordinator: H. O. Painter, Jr.
Digital Equipment Corporation
Maynard, Massachusetts
AC 617 TW 7-8821 Ext. 278

January 2, 1963

Mr. Lincoln Barber, Assistant Vice President
National Shawmut Bank
40 Water Street
Boston, Massachusetts

Dear Linc:

We are happy to enclose our Financial Statements for the month of November, 1962.

Sincerely,

George T. O'Dea
Treasurer

GTO'D:ncs
Enclosure
bcc: Ken Olsen
Harlan Anderson

COPY

January 2, 1963

Mr. David Dyche
Corporate Research Department
Morgan Guaranty Trust Company
140 Broadway
New York 15, New York

Dear Mr. Dyche:

We are happy to enclose a copy of our Financial Statements for the month of November 1962.

Sincerely,

George T. O'Dea
Treasurer

GTO'D:ncs
Enclosure
bcc: K. Olsen
H. Anderson

H. Anderson

Copies to S. Olsen H. Anderson K. Olsen

Mr. Nicholas Mazzarese
Digital Equipment Corporation
Maynard, Massachusetts

Dear Mr. Mazzarese:

Enclosed is a proposal for two projects in the area of PDP applications to publishing. One project is experimental and is directed toward the use of the Type 31 display as a rapid proof press and typesetting machine. The second is a proposal effort toa magazine publisher or a newspaper publisher.

The intent of the latter effort is to present to news publishers the concept of using a PDP with some simple form of time sharing to handle the editing, revision, and display problems associated with the final phases of newspaper or magazine makeup. The advantage of the DEC equipment over its competitors is that it can handle multiple inputs at a low initial cost. The disadvantage of the application is that the time saved often is lost due to the length of time required 1) to get galley proofs, and 2) to set final type. For this reason, we feel that this effort should be complemented by a CRT display effort.

The CRT effort is directed toward developing a use for the existing DEC high resolution display capability in typesetting. In my opinion, it is the more important of the two proposal efforts because, if successful, it will speed up the galley production which will make more significant the speeding up of the other aspects of copy preparation, such as editing etc. Here again, the success of this effort would give DEC a considerable advantage over its

competitors, because to my knowledge there are no other high resolution displays available. In addition, this use of CRT would give a large impetus to the use of offset printing processes instead of letterpress in newspapers which, if started, would create a considerable market for equipment of this type.

Task 1. Assistance in the Preparation of Proposals to News Publishers.

The end product of this task would be text matter suitable for inclusion in a DEC proposal to a news publisher. The work should be divided into two phases with the second phase contingent on the successful outcome of the first.

There are two areas of publishing which are most likely to adopt computer procedures of the type proposed: scientific publishing and news publishing. We would recommend approaching news publishers at this time because the systems and techniques for scientific publishing are at present in a state of change, and to try to sell any publisher would necessitate long waiting periods for the customer to decide what he is going to do. In that area, a new equipment development (such as mentioned in Task 2) will help them make up their minds more quickly than the approach of selling a computer alone.

In the area of news publication, Inforonics knows one potential customer (Time, Inc.) fairly well. They, at present, are drafting requirements for a time shared editing and makeup system which could be satisfied by a PDP installation. It is recommended that as Phase 1, Time, Inc. be contacted along with Newsweek, Look, and two large newspapers, and presented with a briefing on how a time shared copy preparation and editing system would work. In the case of the newspapers, a method of integrating the billing operations for classified ads would also be proposed.

Phase II of the effort would be to prepare a detailed PDP system proposal for any of thosecontacted who is receptive. At that time, if the results of the CRT effort were ready, they would be incorporated into the sales proposals.

Task 2. The Test of a Type 31 Display as a Typesetting Machine and Proof Press.

The end product of this task will be:

1. A sample of text, printed by an offset process and/or a Dycril letterpress process, which will demonstrate the quality of typesetting which can be obtained with a Type 31 display. If successful, this sample could be incorporated into a brochure or sales aid to be used by DEC.
2. Additional tests will be made to determine the quality loss due to shrinking the character matrix size. The sample text will be produced by a character matrix size of 72 x 72. Matrix sizes of 54 x 54 and 36 x 36 will also be tested although the text produced by these smaller matrixes will not contain the entire alphabet of symbols.
3. A test will be made which will determine the effect of the variation of intensity across the diameter CRT spot on the edge sharpness of the characters produced. This test, in conjunction with the tests made in 2, will reveal the contribution of matrix size and spot distribution to the overall degradation in quality of the final image. An answer to these problems will allow one to determine optimum matrix size and accurately estimate the printing speed of the CRT.