1913	FIFTH ANNIVERSARY PINS	40
3000	SALES PROMOTION	
3213	1962 FJCC PUBLICITY	43
3214	1963 EEE PUBLICITY	50
3217	NOVEMBER RELEASE B	45
3218	NOVEMBER RELEASE C	46
3219	NOVEMBER RELEASE D	47
3220	DECEMBER RELEASE B	49
3221	DECEMBER RELEASE C	50
3222	DECEMBER RELEASE D	51
3223	JANUARY RELEASE B	2
3224	NEW PUBLICITY MAILING LIST	47
3304	NEW REPLY CARD	41
3318	NEW COVER LETTERS	41
3319	POSTAGE METER SLUG	39
3329	NOVEMBER SALES MAILING	44
3331	1962 FJCC MAILING	47
3332	1963 EEE MAILING	3
3333	DECEMBER SALES MAILING	49

3334	JANUARY SALES MAILING	2
3335	NOVEMBER GENERAL MAILING	46
3336	DECEMBER GENERAL MAILING	50
3337	JANUARY GENERAL MAILING	3
3338	PHARMACEUTICAL HOUSE MAILING	44
3339	EDUCATIONAL MAILING	49
3416	1962 FJCC DISPLAY	48
3422	LITERATURE CARTONOCRATES	44
3428	1963 EEE DISPLAY	4
3513	NEW TRAINING MODULE CATALOG	40
3514	SYSTEMS BROCHURE	44
3515	NEW PDP01 BROCHURE	48
3521	INTRODUCTORY BROCHURE	44
3529	PDP04 CONTROL APPLICATIONS FOLDER	43
3531	CRT 30 BROCHURE	44
3532	CRT 31 BROCHURE	48
3533	COLOR DISPLAY BULLETIN	46
3535	OF LINE UNIT BULLETIN	45
3536	MT 1521 BROCHURE	

Display of Pattern Recognition.

3537	~~PEPR SPECIFICATIONS~~ Table	48
3538	CD 53063 BULLETIN	45
3539	DECEMBER CATALOG INSERTS	49
3540	JANUARY CATALOG INSERTS	2
3541	VHF MODULES BROCHURE Delay	48
3542	CURRENT CALIBRATOR 72 BULLETIN	46
3543	NOVEMBER LITERATURE LIST	46
3544	DECEMBER LITERATURE LIST	50
~~3546~~	~~TAPE TRANSPORT 50 BULLETIN~~	48
~~3547~~	~~TAPE CONTROL 51 BULLETIN~~	48
~~3548~~	~~TAPE CONTROL 52 BULLETIN~~	48
~~3549~~	~~TAPE CONTROL 54 BULLETIN~~	48
3550	CARD PUNCH CONTROL 40 BULLETIN	48
3551	CARD READER 41 BULLETIN	48
~~3552~~	~~LINE PRINTER 62 BULLETIN~~	48
3553	1962 FJCC DEMONSTRATION FOLDER	48
3701	SALES DEPARTMENT SIGN	46
3806	DIGITAL QUOTATION FORM	41
~~3807~~	~~PROPOSAL COVERS~~	40

3824	NEW SALES LEAD FORMS	48
5000	TECHNICAL INFORMATION	
5531	NEW PDP01 MANUAL F-1 Nov. 28	42
5538	PDP04 MANUAL F-45	42
5539	PDP04 MAINTENANCE MANUAL	44
5546	MEMORY EXERCISER 2207 MANUAL	42
5549	PDP01 INSTALLATION PLANNING MANUAL	40
5550	MAINDEC 1 MANUAL	41
5552	CRT 30 MANUAL	42
5553	SCHEMATIC BOOK COVERS AND INSERTS	43
5554	FORTRAN MANUAL	
5555	PDP04 PROGRAM LIBRARY	
5556	ALGOLODECAL MANUAL PDP01	
5557	DDT PROGRAM MANUAL	
5558	EXPENSIVE TYPEWRITER PROG MANUAL	
5559	LP 62 MANUAL for Livermore.	44
5561	NOVEMBER REPLACEMENT SCHEMATICS	48
5562	DECEMBER REPLACEMENT SCHEMATICS	1
5563	MEMORY BUFFER 2010 MANUAL Almost finished	45

5565	BCD APPLICATION NOTE	45
5566	CRT 30C MANUAL	46
5567	CRT 31 MANUAL	46
5568	CARD PUNCH 40 MANUAL	46
5569	CARD READER 41B MANUAL	46
5570	MAINDEC 10 CHANGES	46
✓5571	2108G CORE TESTER MANUAL — Jono.	47
✓5572	PDP01 INOOUT MANUAL — nick	52
✓5573	NEW MACRO MANUAL	48
5803	MODULE ACCESSORY FORM	46
5901	PDP04 INSTRUCTION CARDS At Printer.	40
6000	INDUSTRIAL DESIGN	
6707	WEST COAST OFFICE SIGN	43
6804	NEW LETTERHEAD DESIGN	42
6805	TEST DATA CARD DUMMY	40
6807	PDP01 MODULE LABEL DESIGNS	39
6811	NEW DIGITAL CARTON Sometime	39
6812	NEW BUSINESS CARD DESIGNS	42
6813	SBB PACKAGING DESIGN	40

Livermore

6814	DANGER STICKERS DESIGN	40
6816	DEBIT SHIPPING MEMORANDUM	43
6818	PDP SCHEMATIC BOOK COVER ART	46
6901	LOBBY REDECORATION PLANS	40
6903	IDENTIFICATION CARD DESIGN	44
6905	EQUIPMENT LOGOTYPES	39
7000	GRAPHIC ARTSOPHOTOGRAPHY	
7927	PROTYPE LINE SPECIMENS	40
8000	GRAPHIC ARTSOPRINTING	
8505	NOVEMBER DECUSCOPE	45
8506	DECEMBER DECUSCOPE	50
8507	JANUARY DECUSCOPE	2
8899	TEST DATA CARD BLANKS	43
8904	BIWEEKLY REPORT 1109062	46
8905	BIWEEKLY REPORT 11023062	48
8906	BIWEEKLY REPORT 1207062	50
8907	BIWEEKLY REPORT 12021062	52
9000	GRAPHIC ARTSOPRINTING	
9816	PDP04 PROGRAM LIBRARY FORMS	40

INTEROFFICE MEMORANDUM

DATE June 29, 1962

SUBJECT MODULE ALLOCATION

TO Harlan E. Anderson

FROM L. Rittner

In my opinion, the incorrect module mix is being produced. With a decreasing backlog, decreasing sales, increasing production rate and increasing finished goods inventory, either units available in inventory are not being shipped (a real possibility) or the mix of modules is not in balance.

The reasons for this are not entirely clear. However, some of the contributing reasons are in the goal being set at a total number of units per month, the reconversion from actual requirements to job lot sizes, and the "filling-in-jobs" when the modules of high priorty cannot be worked on because of materials or construction problems.

Requirements for the month of June (or overdue before June) numbered roughly 7500 units. Actual production is about 11,000 units. Yet there still remains the problem of shortages on many units.

We should decrease the job lot size of rarely used modules. If we have a requirement of 3, and little usage throughout the year, a sum of 10 rather than 30 may be sufficient. Also, if we must process low or no priorty items, let us do it with high usage modules that will develop requirements in the future.

Perhaps we should even re-load our manpower capability and material availability to build, as 7000 of the perhaps inefficiently correct mix is more beneficial than 11,000 of the wrong mix. We cannot build for requirement only, as we must consider long range plans, but a more concise balance between actual requirements and production of specific units is needed.

dec INTEROFFICE MEMORANDUM

DATE June 29th, 1962

SUBJECT

TO

FROM Kenneth H. Olsen

Harlan Anderson
Jack Atwood
Bob Beckman
Gordon Bell
Dick Best
Al Blumenthal
Peter Bonner
Lee Butterworth
Jim Cudmore
Bob Dill
Jon Fadiman
Ben Gurley
Ed Harwood
Bob Hughes
John Koudela
Bob Lassen
Fred Mariani
Nick Mazzarese
Dick Mills
Dit Morse
Elsa Newman
John O'Connell
Stan Olsen
George Rice
Bob Savell
Barbera Stephenson
Bob Tringale
Brad Towle
Dick Whipple
Don White
Ron Wilson
Others Concerned

We have been very conscientious in using the DEC Dining Room only for business purposes. Since we have taken only business guests, this cannot be considered a form of extra income to the individuals who use the restaurant. However, we do not have any records to prove that we use the Dining Room only for business purposes, and that it is not a place where we give free meals to certain people within the company.

We should keep these records and so we will have to insist that everyone who uses the restaurant notify my secretary or Andy's secretary that they will be using the restaurant and who their guests will be. At the end of the month, the secretaries will match these records with the signed slips from the restaurant. We would like to encourage you to be conscientious about this practice because, to make the records meaningful, they are going to have to be complete.

Kenneth H. Olsen

INTEROFFICE MEMORANDUM

DATE June 28, 1962

SUBJECT DELIVERY OF STACKS

TO H. Anderson

FROM Jack Smith

VENDOR	NO.	DUE DATE	ASSIGNED TO:
G.C.	1	7/6	MIT
AMP.	1	7/9	MIT
Fer.	2	7/15	DEC
			ADX-7 (Central Processor)
Amp.	1	7/16	DEC
G.C.	1	7/23	PDP-4 (DEC)
Amp.	1	7/27	ADX-6
Fer.	2	7/30	ADX-6
			ADX-6
G.C.	2	7/30	U.A.
G.C.	1	8/6	A.A.
G.C.	1	8/13	ADX-3 (Central Processor)
Fer.	3	8/15	ADX-7
			ADX-7
			ADX-7
G.C.	1	8/20	Standard (9000-4550)
G.C.	1	8/27	ADX-3
Fer.	3	8/30	ADX-3
			ADX-3
			ADX-3
G.C.	1	9/3	ADX-3
G.C.	1	9/10	ADX-8 (Central Processor)
G.C	1	9/17	ADX-8

Ampex has confirmed that they will be shipping 3 stacks per month starting in August. Before intergrating these into our schedule, I would like to wait for more conclusive information that they will meet this schedule.

dec INTEROFFICE MEMORANDUM

DATE June 28, 1962

SUBJECT Meeting of Tuesday, June 26th, to discuss future computer development at DEC.

TO

K. Olsen
H. Anderson
H. Morse
A. Kotok
S. Piner
E. Fredkin
M. Gretz
J. Koudela
R. Doane
A. Blumenthal
G. Bell

FROM Bob Savell

The question under discussion was, "Should we build a new machine, and if so what sort of machine should it be?"

It was agreed that we should make the decision not on the basis of what the competition is doing, but on whether we can offer something new and different. Price probably is not of much concern. However, the new machine must be really new and significantly different from anything else in the field, because it is in building equipment that is really new and different that DEC stands out and can make a significantly greater profit than if we are building to compete.

Some discussion was held about the type of clientele and type of business that we should go after, one suggestion being that we might go after the business end of the computer business. Gordon Bell suggested possibly a 1401 type machine with lots of IO gear. Fredkin's comment on this was that he felt it would tend to discourage good people from working at DEC, because this sort of business would be really competitive. The conclusion was that unless someone has a special interest in business data processing we will not try to enter the field.

Large scale 7090 like machines were discussed and the conclusion reached that we would not like to build machines on this scale for many reasons. One is that customers for such large systems are few and far between and they require much sales effort.

The Character oriented machines, such as the Burroughs B-5000, were discussed. There was no definite feeling generated that DEC should build a machine of this sort. The B-5000 is an soft-ware oriented machine, and when one buys a machine of this sort one is buying an entire system rather than just a computer. It was felt that DEC now has in PDP-1 a simple straight-forward machine and that there is much to be said for keeping any computer that we build simple and straight-forward.

John Koudela was pushing for a powerful arithmetic element, also for a longer word length. He felt that the things that people have most asked for are longer word length, index registers, and built-in floating point. The chief objector to this was Ed. Fredkin who is

quite convenienced that five years from now the largest use of computers is not going to be for doing arithmetic primarily, but for doing more routine processing of data.

Ben Gurley inquired whether the group felt there would be a market for a PDP-1D, an improved engineering model of the PDP-1C, possible a smaller or lower cost version, easier to manufacture but other than that identical to the present PDP-1. The general consensus was that we should not devote engineering time to this kind of machine. Ben also brought out the point, in reply to John Koudela's arguments, that machines such as John described with somewhat longer word lengths, 24 bits or so, and with index registers and built=in floating point now exist but they are apparently not selling very well. Ben wondered why. He brought up the example of a machine built by ASI with a 24-bit word length and 2 microsecond memory as an example. The general consensus was that this machine is sort of a "kludge", and that is the reason that it is not selling.

We discussed peripheral equipment very briefly, mainly magnetic tape units, and reached the conclusion that most customers that have bought tapes from us are using them not for storage but to communicate with other machines, and therefore compatability is indeed a prime requirement for any tape system we build. One other suggestion by Gordon Bell was that we build a Jack Brown type Tape Unit. This is a cartridge tape unit with 20 track serial recording, approximately 1000 bits per inch. It would have low access time, simpler mechanics and electronics. Nothing definite was decided to whether we would go ahead on anything of this sort.

I think Ed Fredkin generated themost interest with his suggestion that we should build plug-in processors and plug-in memory modules that will truly allow people to expand their memories up to very large capacities and to plug in extra processors as more computing power is needed. He is talking about ultimate capabilities of millions of instructions per second executed on a number of processors each of which may be capable of doing only 200,000 or so instructions per second.

He proposed a machine using delay lines for storage with a possible delay time of say 15 microseconds with a storage capability of about 500 bits. In this machine all registers with the exception of memory buffer and memory address would be eliminated and storage would be accomplished within the delay lines themselves. Transferring bits from one register to another would be accomplished in external flip-flops and would require very little time in most cases since the registers would be stored in the delay line in an inter-leaved fashion. ie: bit 0 of pc, bit 0 of io, bit 0 of ac, bit 1 of pc, bit 1 of ac, bit 1 of io etc. Ed feels that the cost of building a machine like this would be lower than for a comparable built with our present techniques, however, we are not all convinced of this.

He feels that the computing center of the future will be comprised of large machines of this sort, that have a huge memory available so that all routines may be stored permanently with many users running programs simultaneously on their separate processor. There would be no splitting of programs so that part of one program would run on one processor and another part on another processor, just many users each running single programs on a lot of separate processors. These processors would be simple devices without built in high-speed multiply and floating point, etc. One argument against this is that lots of this large memory would be used up at a great rate for storing tables that would be necessary without the high speed features built into the hardware. Ed also feels that a considerable amount of computer time is spent

today in programming and that if each programmer had his own central processor available he would be much more efficient.

In conclusion the one thing that we all seemed to agree upon was that DEC, if it is going to maintain its place in the computer field must indeed build a new machine within the next few years, and that it must be completely new and different from machines that other people are building.

###

June 28, 1962

Plant Security - Identification Badges

L. Prentice

Bob Lassen

The following are some suggestions and comments regarding Identification Badges:

1. The badge system will never be completely successful until official company exit/entrances are established. All other entrances should be closed off to prevent people from entering or leaving the plant unofficially.

2. A trained receptionist should be assigned at each exit/entrance The receptionist should be responsible for issuing badges to Visitors, Contract Workers and DEC Employees who forget their permanent badge. Badges should be issued on a sign in, sign out basis - the company register is currently being used for this purpose.

3. Normally Visitor and Contract Worker badges should be issued on a daily basis however, there will be cases where it will be more practical to allow certain visitors and contract workers to keep their badges during extended stays with the company. This could be handled at the discretion of the "host" department head and he will assume responsibility for the badge.

4. We also have a few "permanent" contract workers who should be allowed to keep their badge at all times. Perhaps this badge would contain the person's name.

5. The Personnel Office should have the responsibility for all original badge issues and maintaining appropriate records. This would include ordering new badges, original issuing of badges to employees or receptionists (including temporary badges to newly inducted employees).

6. Enforcement of the system is the responsibility of: the receptionists (for people entering or leaving the plant), the supervisor (for people who may have slipped through unnoticed), the Personnel Office (for people who continuously forget or lose their badge) and the Plant Security Officer who should have the overall supervision of the system.

The system is now in operation and appears to be working reasonably well. If we tighten up some of the areas mentioned above, we should wind up with a good identification security system. It is my observation that our people are taking the system more seriously.

I suggest we meet in the near future to discuss our badge system. It is possible that others have strong feelings on the subject and they might wish to take part in such a meeting.

cc: K. Olsen
H. Anderson
S. Olsen
M. Sandler
R. Mills

dec INTEROFFICE MEMORANDUM

DATE June 26, 1962

SUBJECT LRL Shipment

TO Ken Olsen
Harlan Anderson
Stan Olsen
Ben Gurley
Bob Savell
Nick Mazzarese
Gordon Bell
Al Blumenthal
Ken Fitzgerald

FROM Bob Beckman

Attached is a copy of the shipping list for the LRL system and a picture of the system ready for shipment just before the movers picked it up. I don't think that there is any doubt but that this is the best job we've done yet in preparing a large system for shipment. There is no reason why all future shipments can't be as good or better.

Ken Fitzgerald has worked up a set of procedures for preparing a system for shipment. The actual work in preparing the LRL shipment closely approximated these proposed procedures. Definite written procedures of this nature can go a long way toward insuring the quality and appearance of future shipments, and at the same time will help to reduce the cost and time required.

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DIGITAL EQUIPMENT CORPORATION
146 Main Street
Maynard, Massachusetts

Shipping List
PDP-1C-12 as per LRL Specifications L1443A

To: University of California
Lawrence Radiation Laboratory
Livermore, California

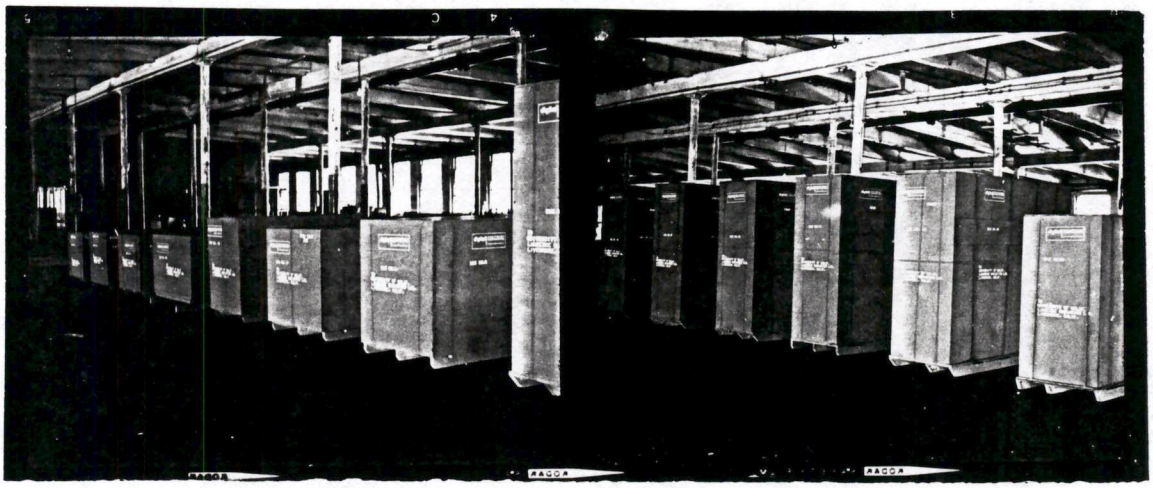
Via: Bekins Van Lines

Crate Number	Contents
1	DEC Tool Box, Photo-multiplier, Vought camera equipment, 2-110V 35 ft. power cables for Uptime reader.
2	Two power transformers, Tape Unit 50
3	Two power transformers, Tape Unit 50
4	Read-Write chassis, Tape Unit 50
5	Read-Write chassis, Tape Unit 50
6	Read-Write chassis, Tape Unit 50
7	Read-Write chassis, Tape Unit 50
8	Anelex Printer
9	Printer Control Type 62, Two lifting bars for Printer
10	PDP-1 Central Processor
11	Remington Rand Tape Control Type 52, Two Tape Unit Type 50
12	IBM Tape Control Type 52, Two Tape Unit Type 50
13	Table, Display Type 31
14	CRT Housing, Display Type 31
15	Control, Display Type 31
16	IBM Card Punch
17	Control, Display Type 30

DIGITAL EQUIPMENT CORPORATION
146 Main Street
Maynard, Massachusetts

Shipping List
PDP-1C-12 as per LRL Specifications L1443A

Crate Number	Contents
18	CRT Housing, Display Type 30
19	Card Punch and Reader Control
20	Paper Tape Reader
21	Paper Tape Spooler and cabinet
22	Paper Tape Punch
23	Computeriter
24	Miscellaneous inter-connecting cables
25	Five fans, Tape Unit Type 50 and Display Type 31
26	Typewriter Table
27	One Operator's chair
28	One Operator's chair
29	Fan-fold paper for punch, Typewriter paper, Miscellaneous supplies
30	Miscellaneous equipment and supplies
31	Miscellaneous Uptime equipment
32	LRL tapes
33	LRL acceptance test equipment
34	Uptime Card Reader Control
35	Uptime Card Reader



INTEROFFICE MEMORANDUM

June 26, 1962

TO: H. Anderson
M. Sandler
B. Gurley
N. Mazzarese
E. Harwood

FROM: Jack Smith

PROGRESS OF COMPUTER CONSTRUCTION

SYSTEM NO.	DEL. DATE TO CUST.	SCHEDULE DEL. TO CHECKOUT	SYSTEM WIRED* COMPLETE	COMMENCE CHECKOUT**
ADX - 2 (2192)	6/15/62	4/27/62	5/4/62	5/21/62
ADX - 6 (EN2184)	8/15/62	6/11/62	6/15/62	6/19/62
MIT (EN2290)	6/30/62	5/14/62	5/14/62	6/7/62
DEC (100-0368)		5/28/62	5/23/62	
(EN2239)		6/18/62	6/21/62	

* On the date listed the systems were completely wired and ready for Checkout. Modules were not available.

** On the date listed enough modules were received to begin checking out the system.

dec INTEROFFICE MEMORANDUM

DATE June 21st, 1962

SUBJECT

TO Ben Gurley

FROM Gordon Bell

Attached is a listing of Pros and Cons of On-Line Typewriter facilities.

cc: Kenneth H. Olsen
Harlan Anderson
Bob Beckman
John Koudela
Nick Mazzarese
Dit Morse
Bob Savell

ON-LINE TYPEWRITER PROS AND CONS

	Teletype Con	Teletype Pro	Soroban Con	Soroban Pro	Selective (IBM) Con	Selective (IBM) Pro	FIO-DEC Con	FIO-DEC Pro	Tele 8 Con	Tele 8 Pro
Character Set	Almost Adequate			Excellent		OK if Icon scientific (Stretch)		Excellent	Office Electric Character Set	
Design Status		Exists		Exists	Not Engineered			Marginally Engineered	Not Engineered	
Logic Packages		22		28 (25)	> 28		≈ 28		> 25	
Cost of Unit		1250	2000			1350	3500		2500	
Special Features	Teletype Corp. Sluggish	Paperfeed		Quiet	New Product	Fast, Popular, In, Paperfeed, Quiet	Everyone hates Flexo Out Noisy	Off/Line Punch & Reader Old Product	Teletype Corp. & New Product Quiet	Paperfeed
Reliability		1	4		3			2		1-$\frac{1}{2}$
Service	Unknown (We)		We & IBM			They		They	Unknown (We)	
DEC Code Cont.	No			Yes	No			Yes	No	
Availability		3-$\frac{1}{2}$ mo.		In Stock	5 mo.	say (60-90) days	None in Stock	3-$\frac{1}{2}$ mo.	4th $\frac{1}{4}$ - 1962	

INTEROFFICE MEMORANDUM

DATE 6/21/62

SUBJECT

TO H. Anderson FROM P. Bonner

Mr. Glantz, VO2-6200, Ext. 2286, of ITEK called today inquiring about your quote to them of 5 February 1962. I promised him that you would return his call on 6/21/62.

His purpose in calling was to state that currently ITEK doesn't have enough money to purchase a 16 Channel Sequence Break System, however, they want one and they do intend to purchase one. ITEK is interested in either purchasing a one channel Sequence Break System now and exchanging it later for a 16 Channel Sequence Break System; or, as an alternative, they propose to rent a 16 Channel Sequence Break System and pay for it at some future date next year when money is available. This would immediately give them what they ultimately want. However, by "going the one channel Sequence Break System route first" they wondered about applying the $1,800. against the 16 Channel Sequence Break System.

Also, Mr. Glantz wanted a further explanation of what would be housed in the extra cabinets on Item 6. I told him, unofficially, I thought Items 3 and 7 would be housed here and for final clarification it would be best for him to speak with you.

I believe Jim Myers has the ITEK file.

dec INTEROFFICE MEMORANDUM

DATE June 21, 1962

SUBJECT Minutes of DECUS Executive Board Meeting on Friday, June 15, 1962

TO Ken Olsen
Harlan Anderson ✓
Stan Olsen

FROM Elsa Newman

Present:

C. Walter, Presiding
J. Koudela
E. Fredkin
L. Buckland
E. Cronin
E. Newman (Proxy for William Fletcher)

Summary:

The following is a digest of action taken and items discussed:

1. Candidates Nominated for Offices:

A Slate of Nominees was agreed upon for offices of DECUS for the term beginning September, 1962. Voting will be by mail and results announced in next DECUSCOPE. Elected candidates will take office at the Annual Meeting. (See ballot for names of nominees.)

2. Annual Meeting:

The exact date of the Annual Meeting has not been fixed. The invitation from Mr. C. Walter in behalf of the Cambridge Research Center as Hanscom Field was extended. The Board expressed hope that an invitation from the West Coast might be forthcoming.

3. Revision of By-laws:

The Board is considering revision to existing by-laws on nominations and voting. Provision will also have to be made to permit individual memberships to vote if such a member is authorized by an installation member not wishing to exercise its installation voting rights.

4. Ballot for New Officers:

Elsa will send out ballot, invitations for papers, etc.

5. New Member Welcomed:

Accepted Individual Membership of:

George A. Paquette
United Aircraft Corporation
Research Laboratories
East Hartford 8, Connecticut

6. DECAL:

A brief discussion of documentation of DECAL followed the request of Mr. William Fletcher put to Elsa per phone conversation of June 14. Comment that MACRO was not relocatable was discussed. No conclusions were drawn.

# # #

INTEROFFICE MEMORANDUM

DATE June 15th, 1962

SUBJECT

TO Bob Beckman

FROM Kenneth H. Olsen

We have been postponing offering a maintenance contract to our customers for a long time. We have to get this out so I propose that you make a first pass rough draft at it and present it to the Works Committee on Monday, June 18th. This way you can get most of it done and get attitudes of people on the rest of it all at one time.

Kenneth H. Olsen

cc: ~~Harlan~~ Anderson
Ben Gurley

June 19, 1962

Subject: Meeting to Discuss Memory Production Control

Attendees: R. Hughes
J. Meyers
L. Rittner
J. Smith

It should be possible to quote accurate inviolable delivery dates on Type 12 Memory Modules. Control should also be close enough such that midnight requisitions out of the stockroom are not possible - irregardless of the rank of the requisitioners.

The purpose of this meeting is to set up a procedure whereby one individual will have complete control of memory module production and distribution.

Date: Wednesday, June 20
Time: 1:30 pm
Place: my office

Nick Mazzarese

cc: H. Andersen
B. Gurley
S. Olsen

INTEROFFICE MEMORANDUM

DATE May 16th, 1962

SUBJECT Module Control

TO Harlan E. Anderson

FROM Len Rittner

This is to note some thoughts we discussed yesterday on the module control problem.

1. To obtain accurate consistent information, to eliminate duplicate records and to establish controls and communications not presently available, we have initiated a mechanization of the Finished Goods status.

   a. A master deck of title cards is now available.

   b. A physical inventory has been taken and a stock status will be available in a few days.

   c. Allocation, reserve and in process information is being programmed and a complete stock status summary will be running in a few weeks.

   d. This system will be a prototype and can easily be adapted to pick up the raw materials inventory at a later date.

2. The module comptroller's position should be strengthened with ground rules from management on a percentage allocation for each product line or on a customer priority basis. Based on where the company wants delivery emphasis to be placed, the daily allocation of modules becomes consistent in the overall emphasis pattern. Without exception only the comptroller should allocate the individual modules.

3. Our present projections, both sales and production are probably optimistic. An obtainable projection should be set, approved each month and carefully adhered to. These become sales goals and manufacturing quotas.

   The quotas are broken down to a daily rate and strictly complied with. These rates are tightly tied into the labor and machine loading for each manufacturing operation. The schedule and the load must be completely interrelated.

4. The limits and budget for the inventories must be carefully explored. This is true of not only the module finished goods inventory but must be exploded out into the work in process and raw material inventory.

The G. E. method of inventory management should be utilized here. In any normal inventory, a relatively small number of items makes up the large amount of dollars in the inventory. The inventory is classified not by kind of item, but by dollars. By very careful control and scheduling of the relatively few high dollar items, inventory

investment is kept at a minimum consistent with the company's goals.

Len Rittner

INTEROFFICE MEMORANDUM

DATE June 15th, 1962

SUBJECT

TO Harlan Anderson
Jack Atwood
Bob Beckman
Gordon Bell
Dick Best
Ed Fredkin - Information International
Ben Gurley
John Koudela
Dit Morse
Elsa Newman
Stan Olsen

FROM Kenneth H. Olsen

It was formally decided on June 13th to discontinue all work on DECAL. As far as we can tell, DECAL makes a poor assembler and does not operate as a compiler. Everyone agrees that we can spend money indefinitely on improving DECAL, but no one dares express an opinion as to when it will be useful and no one even knows who would use it if it were done.

It has further been decided that we will, with all haste, do a bang-up job of publishing a complete description of MACRO. We will then ignore all other assemblers and compilers other than MACRO and all our programs, including all those which we distribute, will be in MACRO.

It has also been decided that we will no longer distribute copies of DECUS programs to DECUS members. We will limit our distribution of programs to a copy of MACRO and those maintenance programs which are useful. We should check all tapes before sending them out to make sure that they are nothing that will embarrass us. We should also set up the procedure so that we formally decide what we are going to send out and things are not sent out by any individual in the company who feels in the mood to do so.

Kenneth H. Olsen

INTEROFFICE MEMORANDUM

DATE June 13, 1962

SUBJECT Progress Report

TO Harlan Anderson

FROM Len Rittner

1. An introduction to the A,B,C inventory management theory was given to the Production Control people. Our raw materials inventory proved to follow a classic pattern. In a study I made, I found that 12 items (1% of all items) equaled 34% of all the dollars. Twenty-nine items (less than 2½%) of the items equaled 50% of all the dollars. By carefully controlling these few items, half of the inventory can be regulated.

2. An analysis into conversion of actual requirements to production job lots showed that we cannot use total modules produced per month against requirements for a break-even point of production equaling sales. Hundreds of units go into stores and have no present requirements. This is because requirements are converted into production lots, and these lots may be considerably more than the actual present needs. We are therefore building an inventory of modules even before many of our requirements have been met. As of the end of May, we had approximately 6,000 module units in finished goods inventory.

3. While 4495 modules have already been completed this month through June 12, my estimate is that only 10,000 units will be built this month as I see a descending trend developing.

4. Delivery dates should be assigned to all manufacturing job lots. This, in turn, will require manpower and facilities loads for each operation in order to arrive at the delivery date. I feel that this is a necessary immediate step that must be taken which will have far reaching effects on not only our deliveries, but also our whole concept of manpower planning.

5. We need better communications on the whole allocation problem between Sales and Production. One method may be periodic meetings to discuss the problem and update information. Another is the assignment of delivery dates as outlined above. Still another is to clearly assign the control and allocation of modules to one area. The physical finished goods inventory itself as well as shipping should be combined with receiving and production stores for consistency and savings of manpower and facilities.

# # #

OPE INGL 4244

OPR WHO R U OPR THIS IS MAYN 816 WANT INGL 4244 YES MIN MP

S ANA INGL 4244 MV OK

THIS IS DEC INGL 4244

6/21/62

GA PLS6/21/62 2.15 PM EDT

THIS IS DEC MAYNARD ....

MSG. NO. MAYN 150

TED JOHNSON FROM H. ANDERSON ....

NORTH AMERICAN AVIATION MEN INVOLVED WITH MINNEAPOLIS HONEYWELL ARE --

HARRIS STEINER

CHARLES WALLI

DO YOU KNOW ANY OF THEM.

END OR GA PLS

MIN PLS OK

SORRY KEN AND TED ARE NOT HERE. WILL CHECK WITH THE AND LET YX U KNOW

OK END OR GA

OK FINE TKS MUCH END

INTEROFFICE MEMORANDUM

DATE June 13, 1962

SUBJECT Progress Report

TO Harlan Anderson

FROM Len Rittner

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# # #

dec INTEROFFICE MEMORANDUM

DATE June 12, 1962

SUBJECT INTERRUPTION IN THE MANUFACTURING PROCESS

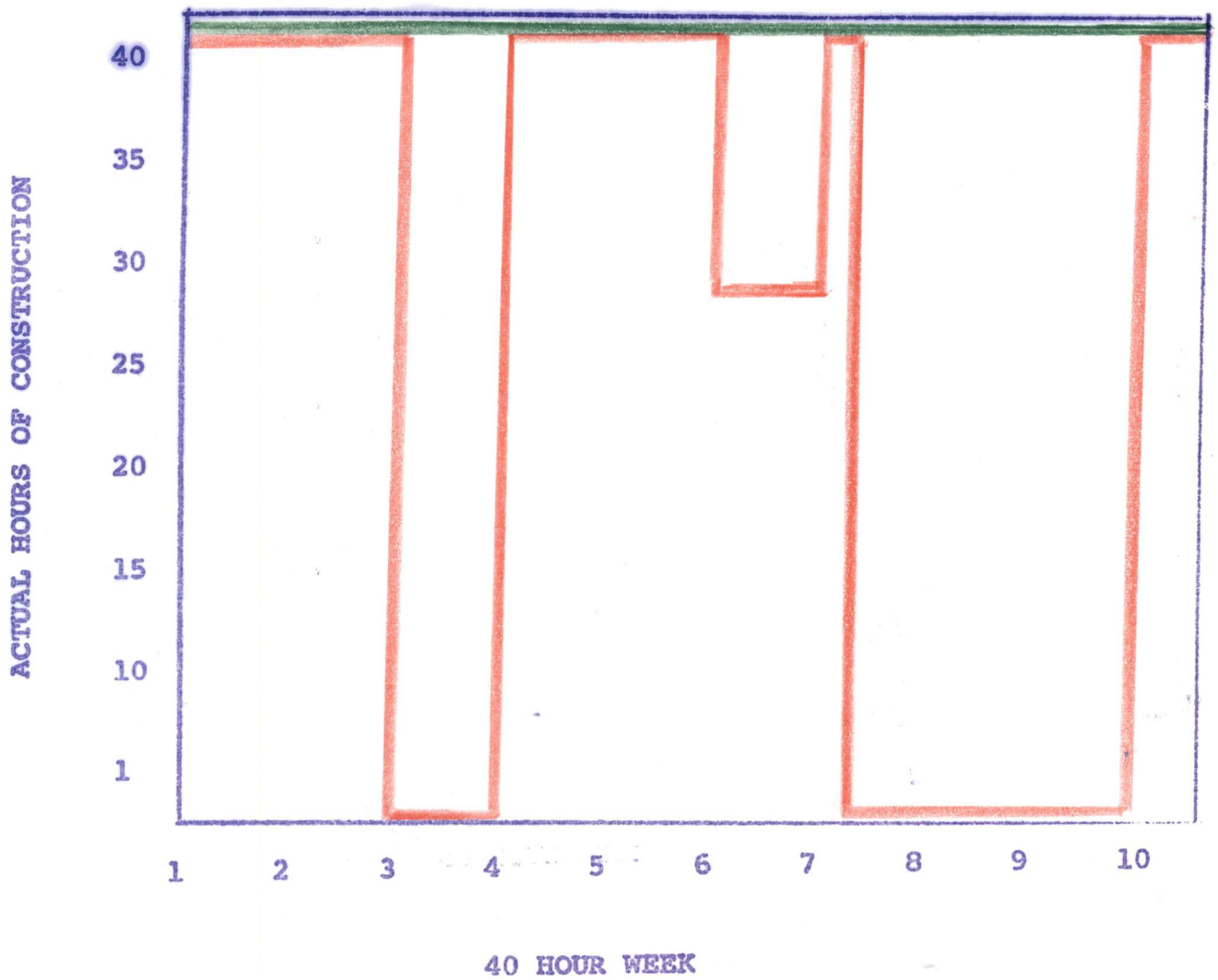
TO

K. Olsen
H. Anderson
M. Sandler
B. Gurley

FROM Jack Smith

Although our present schedule for delivery of Computers to Checkout is progressing satisfactorily, three weeks ago I felt it necessary to investigate the length of time it took to process a Computer from start to finish. I found that the complete process time up to the beginning of Checkout was approximately 9 weeks. This length of time is satisfactory at the present time because we do have the lead time. In the future such a long lead time may not be practical to our operation. This fact coupled with the fact that the cycle time should be reduced to shorten work in process time induced me to plot some rather interesting graphs.

I started with the assumption that once a Computer is started it should be worked on without interruption until completion. At all times some operation of the Manufacturing Process should be undergoing construction. Any interruption in the process increases work in process time and of course endangers the delivery date. I felt quite sure that the interruptions of the process were of a similar nature for each system. To find the areas of interruption, I used the attached graph plotting actual working hours of contruction per week against a standard work week.


ACTUAL HOURS OF CONSTRUCTION
40
35
30
25
20
15
10
1
1
2
3
4
5
6
7
8
9
10
40 HOUR WEEK

The ideal plot of course would be a straight line across the graph denoting the utilization of 40 hours of process time per week, green plot. In almost all cases, I plotted seven systems, there seemed to be the same areas of interruption. These interruption areas are denoted by the red plot. There were of course minor interruptions but I have only denoted the major areas. The interruption between the third and fourth week was investigated and I found that it was due to an insufficient number of inspection people to ring out machines. In each case a machine would have to wait until inspection people were available. A second inspection team is now being trained to increase this capability.

The second interruption area was found to be between the sixth and seventh weeks during final construction. This was being caused by the shortage of operation control circuits. The problem was lack of a set procedure for ordering these special circuits. A procedure has been written and put into operation.

Our third and most drastic interruption area was found to be at the very end of the process. This was due to non-availability of Readers, Punches and Typewriters. I have since taken over responsibility of this area and have set up procedures to eliminate the problem.

These interruption areas have of course been suspected for some time. A graph of this type brings them out somewhat more drastically and can also point out hidden areas of interruption.

It can be readily seen that the elimination of these interruption areas of the Manufacturing Process will greatly reduce the work in process time. Similar investigations are being plotted for Mag. Tape and Display construction.

dec INTEROFFICE MEMORANDUM

DATE June 11, 1962

SUBJECT Huston Fearless Building

TO Kenneth H. Olsen

FROM Loren Prentice

The plant consists of an L shaped brick building, the street side of the building is approximately 200 x 60 feet. The wing is approximately 160 x 60 feet, (wing has four floors). There is a boiler house on the south side of the wing, at the extreme distance from the street, and a new extension has been added between the wing and the boiler house, and a new area for offices, shipping and receiving. This area is judged to be approximately 40 x 80 feet, three stories high. This is on the northern end of the larger building and faces the street.

The main buildings were probably built prior to World War I, are brick and wood beam construction. The first floors are concrete, the other floors, or at least those that were visable were three inch pine plank. The new section at the north en d of the building, three stories high, is brick faced on the street side and is made of cinder block. The new sections of the building were probably built about 1945. The windows in the old building are wood and appear to be in reasonably good condition and have recently been painted. Windows in the new section are steel sash. There is a new section between the wing on the west side of the building and the old boiler house. This appears to be used for shops.

The boiler house has three boilers, two old , about 1928 to 1934, originally coal fired - now converted to oil, estimated 125 to 150 horsepower fire tube boilers. A new boiler approximately 1940 to 1950 is oil fired water tube, 150 to 200 horsepower. The main electrical power is brought in at the convergence of the two sections of the main building. Three transformers not over 2,000 amp a 220 v 3 PH.

The headroom in the main building on the first floor is approximately 12 feet. The first floors are concrete. The second and third floors appear to have nearly the same headroom but the fourth floor perhaps only 8 feet. The plant is served by a railroad siding, originally for at least bringing in coal for the boiler.

The plot area at the plant is small, somewhere in the vicinity of 3 to 5 acres and parking would be critical here. I believe that it would be difficult to get in more than 80 to 100 cars. This would require filling in a sump and removing the cooling tower which was apparently needed by the boilers at one time, (probably not needed now as the boilers are probably now only used for heating. Floor area is estimated at 1,000,800 square feet.

The main drawbacks to the plant site and area is that there is lack of expansion space around the plant and too large a floor space. The receiving and shipping area is rather small and somewhat difficult. I believe a large tractor trailer truck would hang well out into the street when it is being loaded and unloaded. Electric power into the plant appears to be inadequate even for present use.

This is very sketchy as we did not enter any section of the plant and only drove into the rear side to observe what we could through windows. We do not have a clear picture of the extent of the plant site, as there is no way to clearly define its boundaries.

CC: Harlan Anderson
Dick Mills
Ken FitzGerald

dec INTEROFFICE MEMORANDUM

DATE June 8, 1962

SUBJECT Accounts Payable

TO Harlan Anderson
Richard Mills

FROM Henry Crouse

The enclosed list concerns those invoices the Purchasing Department is withholding for payment and the reasons for withholding.

Each and every invoice withheld has had correspondence from Purchasing to the vendor requesting additional information or proof of shipment. Continuous follow-up and effort has been applied to minimize total dollars withheld.

In order to reduce the figures enclosed I suggest a review of general policy regarding authorization and its' limitations.

1 Enclosure

cc: Alma Pontz
Bob Dill

INVOICES WITHHELD FROM PAYMENT

June 6, 1962

Vendor	Voucher Number	Terms	Due Date	Reason For Withholding Payment	Total Amount Of Invoice
Wassell Systems	06527	1/10 N 30	1/25/62	Material rec'd on approval basis only; returned for full credit. Letters written requesting credit 3/23/62 and 5/23/62	$ 217.00
Sprague Electric Co.	08364	1/10 N 30	3/1/62	No record of receival for material. Letter requesting proof of delivery 5/25/62	$ 715.33
Chase Parker & Co.	08892	2/10 N 30	3/15/62	Material rec'd on approval basis only; returned for full credit. Letters written requesting credit 4/25/62 and 5/24/62; advised 5/31/62 credit is in process.	$ 404.94
Dickson Electronics	09709	5/15 N 30	4/5/62	Invoice is for incorrect material at incorrect price; hold for credit and rebill. Area sales office notified.	$ 540.00
Electro Motive Mfg.	09467	1% 10-25 Net 30	4/10/62	No record of receival for material. Letter requesting proof of delivery 5/29/62	$ 269.02
Electro Motive Mfg.	09774	1% 10-25 Net 30	4/10/62	No record of receival for material. Letter requesting proof of delivery 5/29/62	$ 89.86
Sears Roebuck Co.	10444	Net 10th	4/10/62	Material involved is replacement shipment; hold for credit since credit was not issued when original unit was returned. Letter 5/25/62.	$ 90.45
Teradyne, Inc.	10357	½/10 N 30	4/15/62	Instruction manuals not received with material; withhold payment until they are rec'd per Bob Hughes.	$ 6380.00
Tektronix, Inc.	09651	Net 30	4/21/62	No record of receival for material. Letter requesting proof of delivery 5/29/62	$ 242.92
American Standards Association	14054	Net 30	4/24/62	Material not rec'd as of 6/4/62	$ 1.50
Radio Shack Corp.	11269	2/10 N 30	4/29/62	Quantity rec'd disagrees with quantity billed, we rec'd more. Letter sent 4/30/62 and 5/24/62	$ 112.32
Radio Shack Corp.	11344	2/10 N 30	4/29/62	Quantity rec'd disagrees with quantity billed (we rec'd more). Letter sent 5/23/62	$ 4.15
Allied Radio Corp.	11478	Net 10	5/4/62	No record of receival for material. Letter requesting proof of delivery 5/29/62	$ 8.49
Allied Radio Corp.	11479	Net 10	5/4/62	No record of receival for material. Letter requesting proof of delivery 5/29/62	$ 5.10
Allied Radio Corp.	11480	Net 10	5/4/62	No record of receival for material. Letter requesting proof of delivery 5/29/62	$ 7.78
General Instrument	10520	Net 30	5/4/62	Material replacement shipment;hold for credit since credit not issued for material returned	$ 14.70
Amphenol Connector	10407	Net 30	5/6/62	No record of receival for material. Letter requesting proof of delivery 5/25/62. Area sales office notified.	$ 2360.00

Invoices Withheld From Payment Con't
June 6, 1962

Vendor	Voucher Number	Terms	Due Date	Reason For Withholding Payment	Total Amount Of Invoice
Atlas Tack Corp.	11720	2/10 N 30	5/7/62	No record of receival for material	$ 68.08
Durrell Electronics	12107	2/10 N 30	5/14/62	Material returned for replacement; hold for credit.	$ 500.00
Allied Radio Corp.	10404	Net 10	5/14/62	No record of receival for material. Letter requesting proof of delivery 5/29/62	$ 39.95
Shawsheen Rubber Co.	12190	2/10 N 30	5/17/62	Price incorrect on invoice; they will correct per telcon between them and Frank Kalwell	$ 39.20
Cramer Electronics	12415	2/10 N 30	5/20/62	No record of receival for material.	$ 13.60
Sprague Electric Co.	13790	1/10 N 30	5/27/62	No record of receival for material.	$ 962.35
Wm. Brand Rex	13824	½/10 N 30	5/27/62	No record of receival for material.	$ 131.94
Tektronix, Inc.	12191	Net 30	6/3/62	Quantity rec'd disagrees with quantity billed (we rec'd more). Letter sent 5/15/62	$12620.16
Methode Electronics	14233	1/10 N 30	6/3/62	No record of receival for material.	$ 3114.99
Clevite Transistor	14400	½/10 N 30	6/3/62	No record of receival for material.	$ 194.12
Lehigh Metal Prods.	14612	1/10 N 30	6/3/62	No record of receival for material.	$ 94.90
Cutter Wood Sanderson	14327	2/10thN 30	6/4/62	No record of receival for material.	$ 1250.00
Lafayette Radio	14417	2/10 N 30	6/4/62	No record of receival for material.	$ 799.20
Cutter Wood Sanderson	14492	2/10thN 30	6/8/62	No record of receival for material.	$ 169.49
Philip A. Hunt Co.	14502	1/10 N 30	6/8/62	No record of receival for material.	$ 318.00
De Mambro Electronics	14595	2/10 N 30	6/8/62	No record of receival for material.	$ 3.00
Allen Bradley Co.	14057	1 10-25N30	6/10/62	No record of receival for material.	$ 534.10
Phelps Dodge	14073	1 10-25N30	6/10/62	No record of receival for material. Letter requesting proof of delivery 6/5/62	$ 50.73
Cramer Electronics	14591	2/10 N 30	6/10/62	No record of receival for material.	$ 95.41
Hudson Lamp Co.	14607	2 10th	6/10/62	Checking price	$ 290.18
Sager Electric	14624	2/10 N 30	6/10/62	No record of receival for material.	$ 36.50
Standard Ind. Prods.	14628	½/10 N 30	6/10/62	No record of receival for material.	$ 84.90
Wales Strippit	14629	1 10-25N30	6/10/62	No record of receival for material.	$ 340.00
Micro Switch	12594	Net 30	6/11/62	No record of receival for material. Letter requesting proof of delivery 5/29/62	$ 1685.63
Vermont Research	13856	Net 30	6/17/62	Hold per Dick Best until unit is tested.	$13000.00
Hewlett Packard	14129	Net 30	6/18/62	No record of receival for material.	$ 1135.00
Tektronix, Inc.	14256	Net 30	6/22/62	Material returned; hold for credit.	$ 89.20
General Instrument	14128	Net 30	6/24/62	No record of receival for material.	$ 45.00
John Chatillon	14438	Net 30	6/28/62	Material going to DEC LA; TWX requesting them to advise us when they receive the material.	$ 74.97
Texas Instruments	14514	Net 30	6/28/62	No record of receival for material.	$ 3001.14
Texas Instruments	14515	Net 30	6/28/62	No record of receival for material.	$ 880.73
DuMont Labs.	14596	Net 30	6/28/62	No record of receival for material.	$ 1427.35
J.L.Hammett Co.	14501	Net	6/29/62	No record of receival for material.	$ 68.95
J.L.Hammett Co.	14604	Net	6/31/62	No record of receival for material.	$ 23.90

Invoices Withheld From Payment Con't
June 6, 1962

Vendor	Voucher Number	Terms	Due Date	Reason For Withholding Payment	Total Amount Of Invoice
Moore Business Forms	14616	Net 30	6/31/62	No record of receival for material.	$ 262.35
Federal Products	14602	Net 30	7/1/62	Unit not working properly-withhin guarantee. Letter sent 6/7/62.	$ 7.62
Reproduction Ref.Gde.	14621	Net 30	7/1/62	No record of receival for material.	$ 5.45
Texas Instruments	10754	------	------	CREDIT issued for wrong material at wrong price. Letter sent 4/19/62 and 5/15/62. Total amount of credit $11.96.	

TOTAL: $54930.91

Total Overdue Invoices: $31292.89
Total of those invoices for which we are not awaiting corrected invoices or credits and are overdue: no receival $9244.47

* * * * * * * * *

SUBCONTRACTING

Duralectra, Inc.	09436	1/10 Net 30	3/31/62	Material all rejected	$ 38.25
Duralectra, Inc.	09698	1/10 Net 30	4/5/62	Material all rejected	$ 20.70
Aluminum Anodizing	09820	Net 10	4/7/62	Material all rejected	$ 69.00
Nye's JapEnameLac	09900	1/10 Net 30	4/7/62	Material rejected	$ 304.00
Precision Screen	11998	1/10 Net 30	5/7/62	Material rejected	$ 112.00
Defiance	11793	1/10 Net 30	5/12/62	Material not received	$ 395.65
Defiance	11794	1/10 Net 30	5/12/62	Material not received	$ 206.68
Precision Screen	13756	1/10 Net 30	5/21/62	Material rejected	$ 60.50
Precision Screen	13757	1/10 Net 30	5/21/62	Material rejected	$ 37.50
Aluminum Anodizing	12555	Net 30	5/24/62	Material rejected	$ 28.40
Defiance	13961	1/10 Net 30	6/1/62	Material not received	$ 16.40
Defiance	13968	1/10 Net 30	6/1/62	Material all rejected	$ 28.70
Aluminum Anodizing	09572	Net 30	6/2/62	Material rejected	$ 61.95
Precision Screen	14681	1/10 Net 30	6/2/62	Material not inspected	$ 43.00
Defiance	14185	1/10 Net 30	6/3/62	Material all rejected	$ 552.12
Defiance	14197	1/10 Net 30	6/3/62	Material rejected	$ 666.96
Defiance	14196	1/10 Net 30	6/4/62	Material all rejected	$ 96.00
Defiance	14186	1/10 Net 30	6/4/62	Material all rejected	$ 402.24
Defiance	14187	1/10 Net 30	6/4/62	Material all rejected	$ 242.00

* * * * * * * * ** * * * *

Defiance	14303	1/10 Net 30	6/7/62	Material all rejected	$ 290.00
Defiance	14304	1/10 Net 30	6/7/62	Material all rejected	$ 148.00

Invoices Withheld From Payment Cont'd.
June 6, 1962

Vendor	Voucher Number	Terms	Due Date	Reason For Withholding Payment	Total Amount Of Invoice
Defiance	14305	1/10 Net 30	6/7/62	Material all rejected	$ 501.04
Defiance	14307	1/10 Net 30	6/7/62	Material all rejected	$ 472.80
Precision Screen	14567	1/10 Net 30	6/7/62	Material not inspected	$ 20.00
Precision Screen	14680	1/10 Net 30	6/8/62	Material not inspected	$ 97.00
Precision Screen	14682	1/10 Net 30	6/8/62	Material not inspected	$ 76.00
Precision Screen	14568	1/10 Net 30	6/9/62	Material not inspected	$ 8.00
Aluminum Anodizing	14546	Net 10	6/10/62	Material not inspected	$ 50.00
Aluminum Anodizing	14547	Net 10	6/10/62	Material not inspected	$ 5.00
Duralectra	14554	1/10 Net 30	6/10/62	Material not inspected	$ 12.50
Duralectra	14555	1/10 Net 30	6/10/62	Material not received	$ 64.50
Duralectra	14556	1/10 Net 30	6/10/62	Material not inspected	$ 18.00
Precision Screen	14569	1/10 Net 30	6/10/62	Material not inspected	$ 275.00

TOTAL	$5419.89
TOTAL OVERDUE	$3372.05
Total withheld which are received but not inspected	$ 624.50
GRAND TOTAL WITHHELD	$60,350.80

INTEROFFICE MEMORANDUM

DATE 6/8/62

SUBJECT Geotechnical Corporation

TO H. E. Anderson FROM Bob Beckman

I was glad to hear that Dave MacKenzie was happy with what Jack Shields and Don Sordillo did while they were there. I agree with the idea of checking with the customers and have already done some of this.

We've already started work on more and better write-ups for maintenance routines. I'll see that Dave gets Type ECHO and a few other things that are on hand presently, and they are already on our distribution list for this material as it becomes available.

The problem of what to do when reshipping a machine is something that will come up more and more often. I'll work up a set of instructions and recommendations to solve Dave's problem in this respect and while I'm at it, put it in reproducable form so that it will be available in the future. I'll also get together with Dave and make arrangements for one of our field maintenance people and Jim Burley to be in on the installation at the final site.

Finally, I think all our double precision programs are in DECAL, but I'll see what we can do for him in this area too.

6/11/62

P. S. I've been in contact with Dave about their current troubles. If necessary, someone will be going out to help them tomorrow or the next day.

INTEROFFICE MEMORANDUM

DATE

June 8, 1962

SUBJECT

Inspection of Systems

TO

Ken Olsen
Harlan Anderson
Stan Olsen
Dick Best
Jon Fadiman
Ben Gurley
Nick Mazzarese
Jim Myers
Ken Fitzgerald

FROM

Bob Hughes

System checkout sheets must be signed off before systems can be shipped out. These sheets are supposed to include voltage margins for all mounting panels in a given system; a place for the mechanical inspector to sign them off; a place for the electrical inspector to sign them off; then they are supposed to be signed by the responsible engineer, Dick Best, Maynard Sandler, and Robert Hughes.

Effective immediately, Ken Fitzgerald will not crate any systems which do not have systems checkout sheets signed by Dave Adams and Dick Gaboury.

INTEROFFICE MEMORANDUM

DATE 6/8/62

SUBJECT Field Report on June 7th

TO H. Anderson
S. Olsen
J. Koudela

FROM E. Newman

Visits To:

1. Cambridge Research Center, Hanscom Field
2. Electron Systems Division, Air Force Systems Command
3. Itek Laboratories, Lexington
4. J. Gilmore

Purpose:

1. To discuss contributions for July DECUSCOPE and September or October DECUS technical meeting.

2. To explore reactions to Nos. 1, 2, and 3 (distributed June issue on the visit).

Results:

1. Cambridge Research Center:

   Mr. C. Walter proposed Executive Board meeting at DEC for June 15th at noon. Elsa to make arrangements and see that other Board Members are notified.

   Mr. Walter will write: "President's Message" column for July DECUSCOPE giving all DECUS unfinished business and urging support of goals.

   A program write-up may be finished in time for July or August.

2. Electronic Systems Division, Air Force Systems Command

   After long and stimulating conversation with Dr. Hayes, several good suggestions evolved.

   Dr. Hayes will write "letter to Editor" stating that more emphasis be placed on contemplated or planned ideas in DECUSCOPE rather than proven and already published papers. He would expand this he said.

Dr. Hayes gave Elsa a schedule of an announced Symposium: "The Automatic Laboratory" to be held in September. Elsa asked for SCOPETRACE tape and got it. (Beverly had also asked for it)

Ed Fredkin was expected and he joined Elsa and Dr. Hayes for lunch. Elsa confirmed DECUS Board luncheon date. Mr. Fredkin was curious about news from W. Fletcher. Elsa will follow this through.

3. ITEK Laboratories

Left DECUSCOPES for (1) Greatorex, Group (2) Earl Pughe, Group

While waiting for Earle Pughe discussed DECUSCOPE content with Miss M. Morello. In course of conversation learned J. Gilmore, Adams Associates was there.

4. John Gilmore

Very pleased, "Primate Research" paper was deleted. I could not gather what specifically was causing him concern but "note" he mailed to me that very morning and which I received today indicates that Government procurement is not yet "in the bag".

Is there any reason for this concern? Is DEC out of the picture or does delivery of our PDP depend upon Adams Assoc. getting Oregon Primate Research Center sole source contract?

dec INTEROFFICE MEMORANDUM

DATE June 7, 1962

SUBJECT Report on trip to Germany, May, 1962.

TO Ken Olsen
c.c.: Harlan Anderson
Dick Mills
Stan Olsen
Dick Best

FROM Jon Fadiman

I spent the first five and one-half days, (May 3 - May 10) installing the Automatic Core Tester, Model 2113C (EN 2164) at Standard Elektrik Lorenz AG, 42 Hellmuth Hirth Strasse, Stuttgart, Germany. The department is MS/LPR, telephone number 89521, Building 58. I spent time with the following people there: Mr. Reiner (ext. 2792), who is the person most responsible for ordering the Core Tester from us. He is in charge of the section that is doing the work on Memory Cores and Planes and is the most knowledgable person there. One of the engineers who works for him is Mr. Irmisch (ext. 3106) who is going to do much of the work on core testing. The Engineer who built the Automatic Core Handler and who is most knowledgeable about memory core testing equipment is Mr. Schneider (ext. 3927). The other people concerned with our equipment are the Quality Control group. The head of this is Mr. Vogt (ext. 2302). Under him are Mr. Templ (ext. 2728) and Mr. Poshar, (ext. 2676). Mr. Templ is the person to whom we should address all future correspondence and parts for the Memory Core Tester. He and Mr. Poshar will be responsible for the maintenance of the Core Tester.

Installation of a system in Germany takes considerably longer than the installation of a similar system in the United States. The main reason for this is that the Germans must carefully check every specification that we write down that our system will meet. Thus, there is a great deal of demonstration work to be done and many measurements to be taken. Any errors or inconsistencies in the machine or in the drawings will be quickly noticed. In general, the installation went reasonably smoothly and the machine is satisfactory except for the drift with temperature of the -10 volt Reference Level Power Supply, Model 1562. We have already sent them a new plug-in-unit which will take care of this problem. They also found out that our current drivers drift approximately 10 ma upwards after setting them to a given value. This problem has been traced to the coarse amplitude control potentiometer and new potentiometers of a lower resistance value will be sent to Standard Elektrik within two weeks. At that time, the machine will be entirely satisfactory and they will pay us for the complete machine. I had to go back to Standard Elektrik for an extra day at the very end of my trip because there was a pulse missing in the pulse train and I could not convince them over the telephone that it was correct that this pulse was missing. However, when I demonstrated it to them in person, they realized that all was in order in the machine. I expect that Standard Elektrik will be happy with our system, and I only hope that the Handler which they have built themselves will not cause them too much trouble. They are a clever group of people with very exact methods and rigorous standards. However, they do not have much experience in the Core Testing business or in the Digital field. By the way, it should be noted that

all work was done in a mixture of German and English and that it is absolutely essential to know something of the language of the country in which we are installing a system. While it is true that many of the Engineers at SEL spoke English, others spoke no English and most of the conversations were in German. (WWB-BF-TEIS).

My next stop (May 11) was at Siemens & Halske, Balanstrasse 73, Munich 8. Telephone number is 4590800. I spoke there mostly with Mr. Gis who is the person responsible for core testing and plane testing. Also at the meeting were Dr. Magner, Mr. Reinil, Mr. Maier, and Mr. Bier. Siemens definitely wishes to purchase an Automatic Core Tester and an Automatic Plane Tester from us. However, our prices are high for them in Germany, and furthermore they are apprehensive about the fact that we do not have any permanent servicing organization in Europe. In spite of this, I think that the chances of selling at least one and probably two systems to Siemens are very good and should materialize in about 6 months. A DEC office in Germany would make this certain. Again the conversation was a mixture of German and English. Although Mr. Gis and I spoke good French, the other people spoke none, and therefore the other languages were necessary. We must send more cataloges to Mr. Gis and make sure that he is kept informed of all future developments in the Core Tester and Memory Tester field.

The next three days, May 14, 15, and 16, were spent at Philips Co. in Eindhoven, Holland. They have done a considerable amount of work on our Memory Tester to bring it up to the standards that they require and incidentally that we promised them. They have installed a dual bus system (a separate bus for positive and negative pulses) which we have already found to be a good idea and which we have incorporated in our newer Memory Testers. They re-positioned the sense switches so as to obtain a shorter lead length between the sense inputs, sense switches, and the sense amplifier. This is also something that we have done on later machines. They have rewired the X and Y lines between the output plug panel and the X and Y switches so as to achieve uniform lead length. This is also something that we have done upon their suggestion. Their one final complaint is that the current drivers drift after setting them to a given value. Their drift is between 2 and 8 ma out of 500. We made careful measurements and traced this difficulty to local heating in the coarse amplitude control potentiometer which is a value of 2,500 ohms. We are replacing this with a potentiometer of 250 ohms which will decrease this drift by a factor of approximately 10. This will be satisfactory. These parts are due in to DEC on June 1, and we will send out replacement potentiometers to Philips. As soon as these potentiometers are installed in the drivers (Philips will do this) and the current drivers no longer have the measured drift, they will pay us the remainder of what they owe us on this Memory Tester. However, they will subtract the amount for the work they have done. So far this totals $2,300. and will probably be about $2,500. when the job is finished. This is an entirely fair and rather low price for the R&D work which Philips has done on our Tester and there should certainly be no complaint on our part about accepting this charge.

We made some careful measurements on the Memory Tester, the results of which I will summarize below:

1. The dual bus give a much better wave form, particularly on the negative driver, and the linearity is better. For a 64 x 64 plane we are able to achieve a rise time of 0.2 microseconds with essentially no overshoot or droop and a good linear wave form. The fastest rise time we could achieve through the plane was 0.1 microsecond, which resulted in an overshoot of about 5%. At this rise time the output pulse from a single core driven by all 64 x 64 switches was 50 millivolts and the spread of the output pulse was 2.5 millivolts. Thus, this is an error of ±2.5% which is the very best we can achieve in our present machine. This same spread was measured at a rise time of 0.2 microseconds. The total indecision read at the MBR flip-flop output with the slicer control was 3.0 millivolts.

2. We then drove a full stack 64 x 64 x 53 planes. The half drive current was 275 milliamps. The rise time is supposed to be 0.2 microseconds. The best rise time we could achieve was 0.4 microseconds and in this case, the overshoot and bite were both equal to approximately 5% of the pulse amplitude.

The final decision from Mr. Sonnemans, the Purchasing Agent, was that Philips will accept the Tester and pay what they owe us as soon as the drift is fixed by the changing of the potentiometers.

I then spent about three hours discussing Memory Exercisers with Mr. Braicks and Mr. Vrolyk. Philips is just starting to make full memories and is interested in purchasing a Memory Exerciser which would be somewhat of a combination of the ME2207 and ME2211. I will send more information and prices on our Exercisers to Mr. Braicks. I think the chances of sale of an Exerciser might materialize about six months from now, provided that we maintain close liaison with Mr. Braicks. Language is no problem here; Engineers at Philips speak English, although German is necessary for purchases in stores, all phone calls, etc.

My final stop was at the Stemag Corporation (Steatit-Magnesia AG), on May 17. Their main factory is located at Porz, which is a town next to Koln, telephone number 3441. However, the Core work is now being done in the nearby town of Siegburg. The address is Wilhelm - Ostwaldastrasse, 17, Siegburg, Germany. The person in charge of all Core work and Core Testing and later Plane Testing work is Mr. Gunter Huwe. Telephone number here is 2451. Mr. Huwe is interested in the almost immediate purchase of a Ramsey Core Handler, Model CH60. After that, he will probably purchase an Automatic Core Tester, Model 2113. At present he has a very old Reese Current Driver system which does not work very well and works in conjunction with some logic which he himself built up. He would definitely like an Automatic Core Tester as soon as the money can be budgeted. A large order is expected soon from another company in Germany for Cores and when this comes in we should receive the order for the Automatic Core Tester. Much further in the future will be an order for an Automatic Memory Plane Tester 1516. Mr. Huwe is much impressed with our equipment, has seen it in operation at General Ceramics,

and will definitely put through purchase orders as soon as the volume of business at Stemag will justify the expense.

After leaving Stemag, I drove back to SEL in Stuttgart in order to clear up some confusion about one of the Core Tester programs. All this was taken care of satisfactorily on May 18, and SEL is now happy with our Core Tester.

The next item of business concerns the possibility of hiring a European Engineer to open a Sales and Service Office in Europe. I have spoken to three people who might be interested in such a job. The best man is Mr. Gunter Hüwe. He is an "Diplome Ingenieur". This means the equivalent of an American Masters Degree. He is about 30 years old and getting married in the next few months. He obtained his Degree in 1955 and has been working first as a Commercial Engineer, working in vacuum tube digital circuitry with customers, and then as head of the Core Development Department at Stemag with transistor circuits and magnetic cores. He is an experienced man with excellent background in Digital techniques. His main interest is in the Digital field and not in the core chemistry and this is one reason he would like to leave Stemag. He is a rather sophisticated man with a good knowledge of European electronics, and has many contacts throughout Europe, most of them of course in Germany, but also in other countries. His English is very good and he knows some French which he would perfect before coming to work for us. His recommendation is to open an office somewhere in the South of Germany, maybe in the Stuttgart or Munich area. His salary of course, would have to be commeasurate with his experience and also with the fact that he at present holds a responsible job. However, his interest is very definite and I am sure that he would be able to do an excellent job for us if we made him a good offer. His home address is as follows:

Porz-Wahn/Koln
Frankfurterstrasse, 97
Germany

The next man I spoke to is at present at Standard Elektrik. His name is Mr. Arndt Irmisch. His home address is Stuttgart-rot, Bockingerstrasse 30, Germany. He is also a Diplome-Ingenieur, with about three years working experience. At present he is working 40% for SEL and 60% on his own. He would like to devote this 60% to working for us to open an office, etc. Later if this became a full time jib, he would quit SEL and work full time for us. He has experience in the Core Testing, Memory Testing field and a good knowledge of Digital techniques. His English is fairly good and he speaks some French which he would definitely have to perfect before coming to work for us. He seems like a very intelligent man but is definitely much younger, much less experienced, and much less sophisticated than Mr. Hüwe. Of course, he also would come to us for considerably less salary, I suspect.

The third most likely candidate, is at present working for Philips. His name is Mr. A. F. Van der Gaag. His home address is Lupinelaan 31, Son, Netherlands. He is not a Diplome- Ingenieur, but is a graduate of a trade school which is approximately equivalent to a BS Degree here in the United States. He is a very intelligent man and particularly clever in the construction of Digital test equipment. He also has a fair knowledge of Memory Systems. He speaks fluent German and English, and good French. However, he does not have as much technical background or experience as the other people and he has not travelled widely, so he does not have the contacts in the European electronics world which the other two people already have.

Another possibility of course, is Mr. Béla Csonth. He is the Engineer responsible for the use and maintenance of our Memory Tester at Philips. He is a Diplome-Ingenieur with a considerable amount of experience. However, his interest in coming to us is more in the future, probably not until a year from now, and there have been no definite discussions concerning this between myself and Mr. Csonth. He is a very intelligent Engineer, extremely capable, whom we will definitely keep in contact with. Someday he may decide to come to the United States to live and might be interested in employment here. He speaks fluent French, German, and English. His home address is Montgomerylaan 587, Eindhoven, Netherlands.

This completes the report on this two and one-half week trip to Europe.

# # # #

bbb

dec MEMO

DATE June 7, 1962

TO B. Gurley

FROM Jack Smith

A 52 Tape Control Unit for MIT was delivered to off line Checkout today.

cc: H. Anderson

dec INTEROFFICE MEMORANDUM

SUBJECT REQUISITIONING PARTS FROM THE STOCK ROOM DATE June 4, 1962

TO All Project Engineers
All Department Heads

FROM Jack Smith

cc: K. Olsen
H. Anderson

It has been noticed that drawing of parts from the Production Stock Room has become a bottle-neck for people from other departments. Requisitioners seem to arrive at the Stock Room all at the same time and then must wait their turn to requisition out parts. There are times when there are 6 or 7 people waiting for parts. We realize that this is of major concern to you because of the valuable time being lost from your projects. In order to alleviate this problem we feel it would be a good idea if requisitioners could call in advance with their order, in return they would be given a pickup time. When they arrive at the Stock Room, their order would be waiting for them to pick up. If there are any problems in instituting this procedure please contact me.

dec INTEROFFICE MEMORANDUM

DATE June 1, 1962

SUBJECT **EMPLOYEE TERMINATIONS**

TO K. Olsen
H. Anderson
S. Olsen
R. Mills
M. Sandler
B. Charnock

FROM Bob Lassen

The following is a breakdown of employee terminations of employment from May 1961 to May 1962. For purposes of analysis, I have broken the reasons for termination into two basic categories; those over which we had little or no control and those which in some way are a reflection on the company.

Terminations Over Which We Had Little Or No Control

Child Care/Housework	12
Military Service	3
Travel/Commuting	3
School	1
Death or Health	7
Relocation	1
Marriage	1
Pregnancy	9
	37

Terminations Which In Some Way Reflect Upon the Company

Left Without Notice	3
Discharged	3
Continued Absence	3
Dissatisfied	8
Accepted New Jobs	9
Not Suited For Work (Mutual Agreement)	1
	27

Total Terminations May 1961 - May 1962 64 Male - 22 Female - 42

Observations

50% of those who were dissatisfied enjoyed the company and its environment but did not enjoy the particular work they were doing. The remainder were mal-contents and generally poor employees.

The major reason for employees leaving to take another job was to obtain a higher rate of pay. Secondary reasons were, to go into business and position advancement.

To reduce employee terminations, I feel we must do the following:

1. Tighten our selection process - analyze the applicant more carefully with respect to such things as home care problems, commuting, apparent adaptability to job, previous working background and interests.

2. More effective communication from all levels of management through supervisors to employees.
Recently, I have observed that we have some unhappy people, To the best of my knowledge this is not yet a serious problem however, these problems will undoubtedly increase if we fail to recognize and do something about them. These problems must come to light through feedback from the supervisor. Most employee problems should be solved by the supervisor however, unless the supervisor has been trained to cope with difficult situations and unless he receives continuous communication from management with respect to company activities, policies, plans and philosophy, he will not be effective in this area.

3. Continuous review of wages, fringe benefits, promotion policies and intangible benefits.
We have already taken major steps with respect to hourly salary reviews and some fringe benefits. I feel our weakest area is promoting from within. Because of our heavy need for people over the past year, I am afraid we have overlooked some of our own people because of individual departmental personnel problems resulting from heavy work loads. This is a joint problem which must be worked out between Departmental Supervisors, Managers and the Personnel Department. Individual recognition is an absolute must.

dec INTEROFFICE MEMORANDUM

DATE June 1, 1962

SUBJECT

TO Ken Olsen

FROM Ed Harwood

Regarding our conversation concerning some of the staff people, I have two suggestions which might be worth considering at this time:

1. Any staff member in the employ of DEC on June 1st of any year and who has been employed by DEC for 3 years or more as of June 1st of the current year will be eligible for 3 weeks vacation with pay.

2. Any staff member in the employ of DEC for 3 years or more will have his company insurance paid in full by DEC.

H. Anderson

F91

INTEROFFICE MEMORANDUM

DATE June 1, 1962

SUBJECT USE OF XEROX COPIER AND STENCIL NEGATIVES

TO Secretaries and Typists FROM Jack Atwood

We now have a new press designed specifically for fast, economical printing of letter-size and legal-size jobs. It is ideal for memoranda, manuals, form letters, office forms, and other routine work.

This press utilizes small, low cost paper masters - the kind which are easy to type, easy to correct and easy to draw on with a reproducing pen or pencil when you want to add lines or illustrations. To make these even easier to use, we are ordering a supply of masters preprinted with guide lines for memorandum and manual typing.

The addition of the press and the availability of the new masters should help us overcome two current operating problems:

1. Excessive use of the Xerox Copier - During May over 8,000 copies were made on this machine. This resulted mainly from its use for running from 25 to 100 copies (or more) of straight typewritten material. This type of copying is exhorbitantly expensive, not only because of the cost of the copies but also because it ties up valuable clerical and secretarial time on work which can be done much faster and cheaper on an offset duplicator.

2. Dependence on Offset Stencil Negatives - Too much work is now being done on stencil negatives. This is a relatively expensive method, since it requires the use of a metal plate for the press. Thus the total cost includes the price of the stencil negative, the price of the metal plate, and the cost of exposing and developing the plate. Practically all of this work can be done more easily and economically on paper masters.

Your cooperation in using paper masters and planning your work for the new Davamatic press instead of the Xerox Copier will be appreciated.

INTEROFFICE MEMORANDUM

DATE May 31, 1962

SUBJECT Amrad Project at Lincoln Laboratory

TO Stan Olsen FROM Dick Mills

As mentioned to you this morning, through my contact with John Adams who is an engineer with Lincoln Labs. in the Radiometer Division, I was notified last night that the Receiver Group, which I gather John is concerned with in some way, is building a computer under the Armad Project at Lincoln and will be using DEC modules for the job. John called me to give me this information and also to give me the names of the two men deeply involved in the project, who may be calling on us for information and counseling at various points along the way. This project is to run for two (2) years and will be "substantial" in the use of digital modules. We should pay special attention to the following two men, who also have asked for our new Modules catalog.

Dr. John Perry
Mr. Gerald McCulley

The address given me was - B370
Lincoln Laboratories
Lexington 73, Massachusetts

I wish I could be more explicit about the Amrad Project, but to date haven't been able to uncover what this stands for. My impression from John was that this has something to do with space shooting.

# # #

Copy: Harlan Anderson ✓

dec MEMO

DATE May 29, 1962

TO B. Gurley
E. Harwood
J. Myers

FROM Jack Smith

Once again I must caution everyone concerned that System #9000-4133 which has been assigned to MIT has not received modules. Required delivery of moduleswas 5/7/62. Our present schedule calls for this System to be shipped in June. We are now in grave danger of not shipping this machine in this scheduled month.

cc: H. Anderson

DAP 984

INTEROFFICE MEMORANDUM

DATE May 29, 1962

SUBJECT MODIFICATIONS AND INVENTORY CONTROL

TO
K. Olsen
H. Anderson
M. Sandler
B. Gurley
E. Harwood
A. Blumenthal
B. Hughes

FROM Jack Smith

It was decided at our meeting yesterday that the modification and inventory control of reader, punches and typewriters would be the responsibility of the Production Department. In the past the modifications have been the responsibility of Bob Hughes. This morning I assigned a man to be trained in these modifications. He should be able to resume full responsibility in about two weeks. Currently we are three sets of in-out equipment behind.

dec INTEROFFICE MEMORANDUM

DATE May 29, 1962

SUBJECT

TO K. Olsen
H. Anderson
M. Sandler
B. Gurley
A. Blumenthal

FROM Jack Smith

Our Computer scheduling program of two Computers per month is progressing very well. A control board is set up in my office with all the necessary information on schedule date and schedule progress. In order to present information on Computer scheduling and to review our progress I would like to hold a meeting at 2:00 P.M. the first and third Wednesday of each month. I would like the meeting to be in my office where we could review the control boards. If this is not to everyone's convenience, the board is mobile and the meeting could be held elsewhere. If I do not receive negative replies to the suggested meeting, I will consider it accepted and schedule the first meeting for 6/6/62.

DATE May 22, 1962

SUBJECT Status of PDP-4 Project/Request for Review

TO Ben Gurley
Ken Olsen
Harlan Anderson
Stan Olsen
Richard Mills
Dick Best

FROM Gordon Bell

Introduction:

I would like to review the PDP-4 project relative to production, sales, and engineering. The goal is to form a plan which can be carried out within the framework of DEC organizational policies (regarding growth, management, etc.). The most important factor in the formation of a plan is assumptions regarding sales for a certain production rate, (or production, assuming a certain sales rate). Therefore, I would like to discuss the sales-production schedule for the coming fiscal year in order that a profit and loss statement and general forecast plan can be made.

Prototype/Programming Status:

At this time, the PDP-4 prototype is ready to be turned over to the computation group of DEC for general internal use. The Anelex Line Printer is to be connected by June 15, and a Magnetic Tape System and Card Reader must be connected prior to June 15. A Card Reader/Magnetic Tape/Printer, PDP-4 should enable most of DEC's computational problems to be solved including addressing, payroll, and inventory control. A second DEC machine will be available July 7, for operation with the module testing operation. At this time, module testing with machine, though relatively straightforward, requires a large amount of peripheral equipment, design, and programming effort.

The MIT summer people, will devote time to module testing, DECAL modification, (PDP-1), PDP-4 software, and DEC computation problems.

Production Status:

The second PDP-4 will be ready for checkout in 2 weeks. The schedule is:

	From Production	Module Delivery	Customer Delivery
Foxboro-Nabisco	June 7		July 31*
DEC-Modules	June 21		July 1
Corning	July 5		Sept. 15

*Final delivery, actual delivery is July 1 to Special Systems Group for integration of system.

Group Functions:

PDP-4 Group:

1. Coordinate the manufacture of the standard PDP-4 according to a schedule derived by the PDP-4 group. Checkout the PDP-4 and integrate checkout with Quality Control.

2. Provide consultation in special applications.

3. Supply a Project Engineering Group* and specifications to Sales department.

4. Apply standard DEC I/O equipment to PDP-4.

5. Provide documentation and documentation control.

6. Design special equipment for PDP-4 (including Mag Tape Systems and Input-Output Equipment) when necessary.

7. Provide backup to field service department.

8. Provide initial training class to Sales department.

The Sales Department:

1. Proposal negotiation/sales/order processing.

2. Customer liason.

   a) Programmer training
   b) Machine care training
   c) Field service during warranty

3. Distribute programs, maintenance manuals, etc.

4. Special applications, Project engineering*.

5. Shows/displays.

6. Advertising, printing, etc.

Magnetic Tape Group:

1. Deliver operating type 50 Tape Units, and type 52 Tape Control.

2. Consult (or design) special tape control.

I/O Group:

1. Deliver I/O equipment including scopes, card equipment, printers, etc.

Production:

1. Manufacture wired mounting panels.

2. Manufacture stock items: power supplies, cabinets, consoles, etc.

3. Manufacture and test modules.

4. Order necessary manufactured parts (readers, core starters, etc.).

Special Systems Group:

1. Apply the PDP-4 to special problem, and be responsible for complete system (given, PDP-4 at a preassigned time).*

Engineering:

1. Design all modules, power supplies, power controls, memory systems, and system components.

2. Documentation.

a) Provide mechanical drawings
b) Provide documentation storage
c) Control documentation changes

Accounting:

1. Do Cost Accounting to predetermined specifications.

Mechanical Design:

1. Provide consultation to Drafting department, and be responsible for mechanical prototype design.

*May be handled by a project engineer within computer group, sales, or special systems group.

Present PDP-4 Group:

Gordon Bell - Project leader, Documentation controller, special design, group planning.

Dit Morse - Programming, special applications, sales.

Steve Lambert - Project Engineer, coordinator system aspects of PDP-4, work on system design, work with checking programs.

Dave Pinkney - Technical controller, design checkout procedures, responsible for reliability of PDP-4.

Bill Colburn - Production liason, provide working drawings to production, handle delivery of PDP-4 to checkout.

Larry Conley - Work on production details, assist in programming.

Al Yurkstas - Documentation.

Bill Kellicker - (on loan to Drum System) - integration work, production testing.

George Rice - (Sales) - Liason with sales, project engineer for Nabisco system including literature and manuals.

Bob Buyer - (Engineering) - F-41, F-45 descriptions.

Summary:

I would like decisions made regarding PDP-4 in order to proceed with future production-Sales plans. These plans are particularly vital, considering that approximately 3-5 summer programmers will be with us.

24 May 1962

Scientific Method

Dick Best

Judith Ebner

May I first give you a very brief introduction to how I use language and point out the difference this makes in my approach to anything in which I engage.

First....I try to make my language have as close a resemblance to what I am talking about as is possible. Mostly I try to use verbs instead of nouns since I recognize that I am talking about a process ...a continuous active world of events...therefore nouns or labels do not serve me very well since they are static whereas verbs denote action, and so more accurately describe the event.

I try to date and index my statements thereby keeping them as much in tune with what I am talking about as possible.

Third I try to realize that no matter how much has been said, there is always more to be said. This would apply to talking about a person, thing or event since all are a part of a total process and in a constant state of change; there is always more to be said. And so I add etc. to all my sentences.

This is, of course, an oversimplification, of the scientific method which I am applying.

However, taking this thinking as a base...DEC becomes the total organism...under constant change. The Information Retrieval Center (Library is the static label) is a part of this organism through which information flows. The people involved in this operation must be aware of the need for having information flow being more important than just storing it. They must be interested in and aware of the need of searching for information. Research must seem necessary to them...not a nuisance. They must constantly be aware of the total organism (DEC) and think how a bit of information is related to the total organism and through whom it must flow in order to serve the best overall purpose.

The following pages and exhibits will show what is presently a part of (Library) Information Retrieval Center; projects still to be done; suggestions and floor plan as to how to organize the new section; a proposal of an engineering service which would affect a saving in valuable engineering time...no doubt affect drafting, etc., etc. Also, how many people of the above type, would be needed to carry out this total service. (In fact, you very rarely find them; so they would have to be trained...but you would have to start with a "research-type-thinking-person".)

dec INTEROFFICE MEMORANDUM

H-3.9.

DATE May 22, 1962

SUBJECT Ampex Tape Unit

TO Ken Olsen
Ben Gurley

FROM Roland Boisvert

I am presently gathering all the information available on the Ampex unit. As a first estimate, I think it will take about a month to get the unit back in suitable running condition.

From all reports we should have no trouble with the present unit at 37 1/2 inches/second. This speed is more than ample for the application in mind.

The representatives of Ampex who have seen the unit here have asked us to trade it in for their new TM-4 solid state transport. The amount they are asking is $3500 and our Ampex. This unit is a TM-2 redeveloped into solid state circuits. The head has been considerably improved but mechanical features are the same.

Proposed Tape Projects:

The primary project I feel we should consider at this time is a tape control for the IBM 729 IV tape unit. At the present time, company knowledge of how the tape control 52 functionally works in conjunction with the PDP-1 is limited to a few individuals. To bring myself more into this end of the system, I am attending the school by Bob Beckman on the computer. After this I would like to attend IBM customer engineering school in Chicago. I feel at this time the company will have somebody who is completely familiar with the IBM tape systems. I think you will agree that this is quite desireable. In addition, I think this is a much better approach to designing a tape control for IBM tape units than just buying the OEM's and starting from that point.

The National Security Agency has offered a 729 IV to us for development of tape control for a price consideration on the tape control.

As for projects projected further in the future, there are several pieces of conversion equipment such as card to tape, tape to card, etc. that should be considered.

I think we should also investigate your previous idea for a single capstan, slow and rugged type tape unit of our own. With many companies now selling component parts such as clutch assemblies this is definitely an area to be considered.

dec MEMO

DATE 5/22/62

TO Harlan Anderson FROM Ted Johnson

It would appear that Datamation is quite unaware of our existence. The May edition neglects to mention the PDP-1 installed at MIT (page 29) and their editorial comments are significant in their omission of mentions about the PDP machines. We should be in next month's article on computers in the medical field.

Ted

dec INTEROFFICE MEMORANDUM

DATE May 21, 1962

SUBJECT SUMMER EMPLOYEES PROGRAM, PRODUCTION

TO K. Olsen
H. Anderson

FROM Maynard Sandler

cc: S. Olsen
R. Mills
R. Lassen

As we have done in previous summers, we plan to hire a number of people for "summer work only". Our open vacation plan means that we must augment our capabilities if we are to maintain production levels.

The areas which we must cover are:

1. Janitors and Maintenance
All of our janitors will qualify for two weeks of vacation this year. We should have three or four young boys to help with plant cleanliness-three of last year's summer boys are returning.

Raytheon will move out and our Building #5 move program will require 5-6 helpers. We already have one and have applications for several additional boys.

2. Assembly
I would like to plan on 20-25 girls for Assembly and Inspection work. At this time we have 6 girls already returning or newly hired. Offers have gone out to additional girls and we have at least 9 other good prospects.

3. Production Control and Stockroom
The fiscal year end inventory and vacations pose a special need for help in this area. One accounting school student and one industrial engineering student have been hired and I want to add two summer clerks and a stockroom helper to this group.

4. Wiring and Test
I plan to use summer students in wiring and test to ease the vacation burden. I believe 5-6 boys could be used here to good advantage. We already have 2

SUMMER EMPLOYEES PROGRAM, PRODUCTION (con't.)

boys on file who might fit this category.

I have talked with Personnel about my thoughts on the criteria for choosing from among the summer job applicants. We should weigh favorably those young people who:

(1). Have done well in school
(2). Are taking courses of study which may be of value to us
(3). Seem to be earnest and sincere about their education and this opportunity to earn
(4). Are children of our good employees. Good workers are usually good parents.

MEMO TO : See Distribution FROM: S. Olsen

SUBJECT : 1962 Vacation Schedule DATE: May 17, 1962

In order to allow sufficient time for processing vacation pay, departmental vacation schedules must be submitted to the Accounting Department by Friday, June 1, 1962. Attached you will find printed vacation schedule forms for this purpose. Please list the name of each employee in your department and indicate their planned vacation periods by placing an "X" in the appropriate square. If an employee does not plan to take a vacation, please indicate by drawing a line through the squares opposite his name. The amount of vacation pay to which each employee is entitled will be determined by the Accounting Department.

If a subsequent change is made in an employee's vacation schedule, the Accounting Department must be notified two weeks in advance.

DEC VACATION POLICY

1. Employees who have been employed three months or more on July 1 are allowed a vacation.

2. DEC Vacation Year (for determining the amount of vacation accrued) runs from July 1 to June 30.

3. Vacations are accrued at the rate of 5/6 of a day for each month of employment commencing from the employee's starting date.

4. An employee who has been with DEC one year or more shall receive a vacation of 2 weeks with pay equal to 80 hours pay at his then current straight time rate. Each accrued day of vacation shall be paid at the rate of 8 hours pay.

5. Vacations are scheduled by the supervisor and may be scheduled between June 15 to September 30. Exceptions to this are to be referred to the Personnel Department.

Distribution:

K. Olsen
H. Anderson
J. Atwood
R. Best
M. Sandler
B. Gurley
R. Melanson
R. Mills
H. Crouse
J. Fadiman
L. Prentice

dec MEMO

DATE May 17, 1962

TO B. Gurley

FROM Jack Smith

A "52" Tape Control Unit for MIT will be completely wired 6/18/62.

cc: H. Anderson

dec INTEROFFICE MEMORANDUM

File

DATE May 17th, 1962

SUBJECT

TO Harlan Anderson

FROM Kenneth H. Olsen

I received a telephone call on Wednesday, May 16th, from Melvin Gardner who I knew when we were undergraduates at MIT. He is now with Baer Stearns & Company who are investment brokers. He asked if we would be interested with a merger with Electro Instruments Company in California. I told him that we were not, but he is going to send their literature along anyway. They are now a 9-10 million dollar outfit and are making money again. They are, however, short of management. I told him that we are too.

Kenneth H. Olsen

dec INTEROFFICE MEMORANDUM

DATE May 16, 1962

SUBJECT STATUS OF SUMMER EMPLOYMENT

TO Harlan Anderson FROM Barbara G. Charnock

SUMMER ENGINEERS, ACCEPTED

Name	Supervisor	Dept.
Edson de Castro	Dick Best	
Frederick Shirley		
Prof. Edwards		
Robert S. Fabry	Gordan Bell	Programming
Robert Saunders	" "	"
Alan Kotok	" "	"
Stephen Piner	" "	"

OFFERS OUT, NOT ACCEPTED TO DATE

Ronald Leonard
Frederick Jancewicz
Robert Whitefleet

dec INTEROFFICE MEMORANDUM

DATE May 16, 1962

SUBJECT STATUS OF SUMMER EMPLOYMENT

TO Harlan Anderson FROM Barbara G. Charnock

JOB OFFERS MADE AND ACCEPTED TO DATE

Name	Supervisor	Dept.
Carol Austin	Gordan Bell	Engineering
Julie Cole	" "	"
Robert Passerello	Maynard Sandler	Maintenance
David Mc Elvein	Maynard Sandler	Production
Robert Hawkins	" "	"
Douglas Packard	" "	"
DICK BANKS	" "	"
Susan Packard	Maynard Sandler	Assembly
Doris Blaisdell	" "	"
Carolyn Cunningham	" "	"
Diane Mitrakas	" "	"
Bonney Smith	" "	"
Antoinette Hickey	" "	"
Carolyn Sweatt	Jack Atwood	Advertising
Diane M. Shaw	" "	"
Maryann Sawyer	Ed Simeone	Accounting

JOB OFFERS MADE AND NOT ACCEPTED TO DATE

Constance Lowell	Maynard Sandler	Assembly
Linda Treyz	" "	"
Judith De Grappo	" "	"
Joyce Wilkes	" "	"
Linda Nelson	" "	"
Gardner Gay	" "	Testing

PEOPLE MAYNARD SANDLER WANTS OFFERS TO GO TO

Karen Carson	Maynard Sandler	Assembly
Joan Wheeler	" "	"

dec INTEROFFICE MEMORANDUM

DATE May 16, 1962

SUBJECT STATUS OF SUMMER EMPLOYMENT

TO FROM

PEOPLE MAYNARD SANDLER WANTS OFFERS TO GO TO

Mary Dacey	Maynard	Sandler	Assembly
Gail Beauregard	"	"	"
Rosemary A. Melora	"	"	"
Estherae Carey	"	"	"
Marie Ann Bergeron	"	"	"
Donna Dolan	"	"	"
Barbara Hatch	"	"	"

May 15, 1962

REQUESTS FOR PERSONNEL

S. Olsen

Bob Lassen

The following technician and wireman needs have been reported to me by the Engineering Group.

Technicians

R. Hughes - 9
G. Gerelds - 2 (includes one replacement)
G. Bell - 4
R. Boisvert - 1
16 Total

Wiremen

G. Bell - 4
G. Gerelds - 1
5 Total

We currently have seven technicians who have accepted our offers as a result of Wentworth recruiting. Four more are yet to be heard from.

I have three or four additional candidates from other schools to whom offers have not been made. Our people have expressed an interest, particularly George Gerelds and Roland Boisvert.

If the above requests are going to be approved, we should make offers immediately or we stand a chance of losing them.

Steve Lambert and I are going back to Wentworth on May 16 in hopes of attracting one or two of their top men who thus far have not taken the bait.

May I have your answer as soon as possible with respect to the approval or disapproval of the above request.

cc K. Olsen
H. Anderson

dec INTEROFFICE MEMORANDUM

DATE May 15th, 1962

SUBJECT

TO Gordon Bell
Bob Beckman
Ben Gurley
Stan Olsen
Harlan Anderson

FROM Kenneth H. Olsen

Gordon Bell has suggested that we use a PDP-4 as our internal accounting computer. This does have several interesting advantages. It costs less and it might be the machine which we someday will suggest for this type application.

Using a PDP-4 for this application seems to be a good idea, but no one is clear just as to what this machine will be used for and what its relationship will be to the prototype PDP-1. Before making a final commitment, I would like to hear from Gordon as to how he thinks the machine should be used and I would also like to hear the same from Bob Beckman on the prototype machine. I think that each should assume a reasonable amount of equipment. I would suggest the following list of equipment for each of the machines.

Prototype PDP-1

1. One type 51 tape control.
2. One type 58 handler.
3. One Burroughs card reader.
4. One 16" oscilloscope.
5. Maybe, one color display.

PDP-4

1. One tape control.
2. One type 50 tape handler.
3. One 523 card reader.
4. One anelex line printer.
5. One 16" display oscilloscope.
6. One 523 card punch.

In addition there should be two more type 50 tape handlers which can be used on the machine which needs them the most. I think that we should give the PDP-1 first pass at the Burroughs card reader because they are almost ready to use it. But, if they don't appear to have a good proposal or are not ready to use it right away, we may give it to the PDP-4.

We should include in the proposal time for modernizing the order code of the PDP-1 prototype. We should probably immediately order the list of In-Out equipment

which we want. It would be good to get as much of it delivered before July 1st, so that we can take this years depreciation on it.

Kenneth H. Olsen

dec INTEROFFICE MEMORANDUM

DATE May 15th, 1962

SUBJECT Capital Equipment definition.

TO Dick Mills
Henry Crouse

FROM Kenneth H. Olsen

I suggest that we need a simple and commonly agreed on definition of Capital Equipment. It is very important that the people who buy the equipment understand what will be capitalized. There are many things which we are buying now which the people putting in the order do not believe is Capital Equipment, but after payment is made, the Accounting Department defines it as such.

I don't claim to know what this definition should be, but it would seem to me that any purchase beyond $200.00 is Capital Equipment. It would also seem to me that anything which is Capital Equipment should be able to be found a year later. Only by shelving it, it indeed comes to a large amount of money, and the parts get mixed up with interchanges and some never get used because they come almost as requisite parts, only to move from one building to another and some end up never being used again. All one can say about shelving is that we bought that much, paid for it, and unless someone stole it, it is still in the building, but no one can possibly prove that we still have it.

The $35.00 gray cabinets which we buy in large numbers now are so cheap and so flimsy that I can't imagine this being Capital Equipment, even though we do buy them in fairly large dollar quantities. Electric clocks are also somewhat doubtful. There must be some value at which it is not worth capitalizing them even though the total purchase order comes to over $200.00.

There also has to be some feedback as to what the Accounting Department has defined as Capital Equipment so that people have a chance to make corrections. For example, we have some odd $500.00 worth of heat sinks on our Capital Equipment list. From the Accounting Departments point of view this seems reasonable because that much plumbing should be capitalized, but in truth this is raw material components which go into the power supplies for our PDP computers. If accountants are the only ones who look over the Capital Equipment list we might develop even stranger bits of Capital Equipment. If our auditors were suspicious that we were trying to inflate our profits, they would be very critical of some of these decisions.

I suggest that each month we list all our Capital Equipment acquisitions in the Bi-Weekly Report and suggest that people who do not agree with the category in which these items are put, speak up.

In addition, I suggest that we have special purchase orders and special purchase requisitions for Capital Equipment. We now have the Purchasing Department sign many

purchase orders which appear to be straightforward, but if these are different or at least rubbed stamped with large red letters, they would receive more respect and we could insist on all of these being signed by certain people.

Before we approach the end of the year, I think we should go over our definitions of Capital Equipment to make sure that we have them all because I am quite sure that many of the items are gone now and that our Capital Equipment account is unduly inflated. This might be very small from a percentage point of view, but I think it would be worth the effort to go over it.

Kenneth H. Olsen

cc: Harlan Anderson
Bob Dill
Alma Pontz

dec INTEROFFICE MEMORANDUM

DATE May 15, 1962

SUBJECT PRODUCTION EXPEDITING

TO K. Olsen
H. Anderson
S. Olsen
M. Sandler

FROM Jack Smith

During a meeting 3 weeks ago, it was decided that Production expediting could be done directly by Production personnel. Bob Maroney and Bill Brackett who place most of the Production Orders have also been expediting those orders and by calling the sub-contractors directly much time is being saved. Henry and I are making the choice of sub-contractors.

As hoped this new system ---Production personnel expediting directly with the source--- is proving successful as can be seen by a more rapid receipt of incoming stock of standard power supplies and mounting panels, etc. The time saving factor here is no doubt the direct expediting by Production to source.

At an informal meeting with Maynard, Henry and me, it was decided that at the present time the typing and processing of Purchase Orders would remain with Purchasing.

dec INTEROFFICE MEMORANDUM

DATE May 11, 1962

SUBJECT Potter Instrument's Model 906 Tape Handler

TO Harlan E. Anderson
Ben Gurley

FROM Henry J. Crouse

Potter Instruments has the following discount schedule for the Model 906 Tape Handler:

1 - 4	Net
5 - 9	3
10 - 19	5
20 - 29	10
30 - 39	15
40 - 49	17
50 - 69	18
70 - 99	19

Delivery schedule is ten weeks at this date.

cc: J. Smith
J. Brown
D. Mills

dec INTEROFFICE MEMORANDUM

DATE May 10, 1962

SUBJECT PDP-4

TO B. Gurley
G. Bell

FROM Jack F. Smith

cc: K. Olsen
H. Anderson

It was agreed at our meeting of May 12th to construct three PDP-4 systems. Delivery dates of systems to Checkout June 7, June 21, and July 5.

I have taken the following steps to assure these delivery dates.

Assignment of EN and JN

PDP-4-2	Foxboro	EN 2210	JN 100-1284
PDP-4-3	Dec #2	EN 2286	JN 100-4759
PDP-4-4	Corning	EN 2287	JN 100-4760

We are currently wiring the first system here at DEC. The second system will also be wired here. Wiring will not begin until May 24th on the second system because of expected engineering changes during the next two weeks. The third system will most likely be wired by an outside vendor.

I have received a new modified print of the operator control panel from Drafting. A requisition has been written for the construction of (3) panels, required delivery date May 24th. This required delivery date has been confirmed. Art work has been checked and is available for silk screening.

To date the new end panel has not been designed. What I plan on doing is having Scott mark up a print and rework a standard end panel which will arrive May 17th. I have talked to Scott and there seems to be no problem here.

Requisitions for cabinets have been written with required delivery dates of May 24th, June 7th, June 14th. These dates have been confirmed, which will enable plenty of time for the installation of equipment.

PDP-4 (con't)

Our biggest problem seems to be with the delivery of the Digitronics reader 2500. Presently we have on order two readers, the first of which has a delivery date of June 15th. This date is not adequate and I am trying to move it up; you will be informed of any additional changes.

The table has not been redesigned. Scott is now working on the redesign and is confident that it will be ready on time.

Power supplies have been ordered and are available. Cables have been ordered and will be available.

I plan on meeting with Jim Myers on the module requirement tomorrow.

dec INTEROFFICE MEMORANDUM

DATE May 9, 1962

SUBJECT

TO K. Olsen
H. Anderson
B. Gurley
G. Bell

FROM Steve Lambert

Charlton Walter and three others from AFCRL visited the plant late yesterday, May 8th, to see the progress being made on the two CRC machines. He seemed to be pleased with everything that he saw with exception of the Color Display. He was disturbed over the fact that the Color Display takes 250 micro seconds to display a point. Another thing that bothered him was the convergence of the red, green, and blue. The third problem was that the red did not look like a pure red.

We had working for him today: the precision display operated by the tester; info exchange between the two CRC computers; Mag. Tape 52 on one computer; Mag. Tape 51 on the other computer; F-M A-D transfer; and Color Display operated by the display tester.

I mentioned to Charlton the possibility of generating a new display which would have built into it a character generator, operational amplifiers that would generate curves, circles, lines, etc. In addition it would operate through the use of a high speed channel where two word transfers would be requested. These words would contain the necessary info for generating display commands.

Eunice Cronin mentioned that AFCRL may order another Tape Control 52 and that they have also decided to purchase a standard black and white display.

While talking with Charlton, he hinted that AFCRL may order another PDP-1 in the near future.

dec INTEROFFICE MEMORANDUM

DATE May 9, 1962

SUBJECT Visit to Wentworth Institute

TO Kenneth Olsen
Stan Olsen
✓Harlan Anderson
Ben Gurley
Bob Hughes
Gordon Bell

FROM Steve Lambert

On Monday, May 7, 1962, I visited Wentworth Institute--the purpose being to investigate the need for Laboratory Modules in the Electronics Class.

The gentlemen with whom I spoke were Mr. Powers, Assistant Head of Electronic Department, and Mr. Kain, Instructor, Semi-Conductors. I also spoke to Placement Directors, Mr. Nickerson, and Mr. Linton.

Mr. Powers and I had a lengthy discussion on the use of modules for classroom demonstration purposes and laboratory experiments. He mentioned that Bob Lassen and Bob Hughes had discussed sending some Classroom modules for the use of demonstration during lectures. I tried to find out what Mr. Powers had in mind as to types of modules he would like to receive. His response was that he really didn't know what he wanted, although he had general ideas on what might be necessary. In discussing the course involved in teaching Digital principles, it became evident that Mr. Powers would most likely need sets of Laboratory modules for use in laboratory experiments.

Not knowing what we had available, I suggested that we send Wentworth 20 modules of whatever we could obtain so that the instructors could get used to our logic symbols and methods.

While talking to Mr. Kain, he mentioned that Digital had sent him a large quantity of transistors and he expressed his appreciation for them. They have already been put to use by the students for various laboratory assignments.

Wentworth now has a Heathkit Analog Computer and a Minivac Training Computer for Lab. use. Approximately one-third of their systems class is devoted to Servo, Analog and Digital principles. However, by giving them Laboratory modules possibly more time may be devoted to Digital principles alone. The Systems class consists of four hours of lecture and four hours of lab. per week.

One good reason for sending Digital modules to Wentworth is to inspire students to look at Digital as a future job prospect.

INTEROFFICE MEMORANDUM

DATE 5/8/62

SUBJECT Partial Organization Charts

TO Internal PDP Distribution List FROM Computer Sales Group

Due to some degree of confusion regarding the specific names of various groups and personnel associated with these groups at Bedford Air Force Base (Hanscom Field) the attached partial organization charts have been assembled.

Group I

A.F. Systems Control (AFSC)

↓

Electronic Systems Division (ESD)

↓

Operational Analysis Laboratory (OAL)

Machine: "Universal Controller"

Key Personnel: Dr. Herbert Rubenstein
Mr. Charles R. Brown
Dr. Richard Hayes

Group II

A.F. Cambridge Research Laboratories (AFCRL)

↓

Electronic Research Division (ERD)

↓

Computer & Mathematics Sciences Laboratory (CMSL)

Machine: Dynamic System Simulator

Key Personnel: Mr. Charlton M. Walter
Miss Eunice C. Cronin

Communications Sciences Laboratory (CSL)

Machine: 1. Binary Storage Rack
2. Logical Connector
3. System Module Kit

Key Personnel: Mr. Weiant Wathen-Dunn
Lt. Neil Jagoda
Lt. Philip Lieberman

INTEROFFICE MEMORANDUM

DATE May 8, 1962

SUBJECT DECUSCOPE SCHEDULING

TO Elsa Newman

FROM Jack Atwood

CC Harlan Anderson
Stan Olsen

It will be necessary for us to establish very simple but fairly firm ground rules with respect to DECUSCOPE copy preparation if we are to integrate your project with the work we are doing for other people.

I propose the following schedule to be effective with the next issue:

Major portion of the draft copy for IBM Executive typing - not justified but to approximate final column widths	12 working days before date of issue
Balance of draft copy for IBM Executive typing - as above	9 working days before date of issue
Approved draft copy for justified typing to final column widths	7 working days before date of issue
Final additions and changes for justified typing - as above	5 working days before date of issue
Approved mechanicals ready for camera	4 working days before date of issue

This would enable us to handle the job from start to finish in a manner that would be most helpful to you as the editor and to us as the publishers. You would always have typed copy in the most usable form for editing purposes, and we would receive the copy and any alterations in easy stages at the proper times for painless production.

The schedule is limiting in that it provides for only four "consultations" during which copy can be submitted. On the other hand, I think you will find it easier to gather your material together and present it to us in this manner than to go in search of typing assistance wherever you can find it and make as many trips to the "printer's" as you now do.

INTEROFFICE MEMORANDUM

DATE

May 7th, 1962

SUBJECT

TO

Harlan Anderson
Dick Best
Ben Gurley
Bob Hughes
Dick Mills
Stan Olsen
Maynard Sandler

FROM

Kenneth H. Olsen

I met Ed McLaughlin who is heading up the group which Raytheon left in the old mill. He said that he tried to talk his management into keeping that floor when they gave up the lease last year, but he lost the argument. Now he is taking over a lease on half of the floor below and is looking for bids to fix it up. He feels it will cost $30,000.00 - $40,000.00 to paint it and put in fluorescent lights.

I feel a little guilty taking advantage of their unwieldy large organization, but not enough to sacrifice any of our plans. If they can get the work done, they plan to move down the first or second week of June, which means that we can take over our area fairly soon. They have a lot of equipment to move down and set up and we offered to allow them to go through our area.

They have a large temperature testing oven that they used to use for checking out klystron tubes. This unit has large heaters in it and a dry ice cooler. There are several compressors with it and two brown recorders. The Air Force is going to put this up for bid and I suggest that we consider bidding for it. It cost them $750,000.00 to install it and it might sell for $10,000.00. I doubt it is worth $10,000.00 but we should bid what we think it is worth. It will probably go as junk except that some of the compressors are worth some money.

They also have equipment in the tin shed on the outside of the pond. This is on rented land, but I think they will open up the shed with all of its contents for bid. Most of its contents is probably radar type equipment. We will be put on the bidder's list. Maynard Industries will bid on the shed and its contents.

The people at Raytheon will enter through the present entryway and go down to the floor below. This disrupts our plan for security through the door, but I am not sure that there is anything we can do about it.

Alongside the cafeteria they have a fire-proof storage area for their inflammable liquids. It is a water-proof floor and asbestos panel walls. We might consider salvaging this for our own use.

Kenneth H. Olsen

dec INTEROFFICE MEMORANDUM

File

DATE May 4th, 1962

SUBJECT

TO Gordon Bell

FROM Kenneth H. Olsen

Dr. Ervin from Mass General Hospital called late on Thursday. He is still very interested in this computer and is more or less holding back CDC on the assumption that we will come across. However, he realizes that he is the gift receiver and, therefore, not in a position to pressure us and so he only hints at the need to come to some conclusion.

While we have been doddling on the medical computer question, CDC has sold a computer to the Albert Einstein College of Medicine and UCLA. If Mass General gets a CDC computer, I think they'll have the medical field pretty well sewed up.

MGH has some young programmers who are full of ideas as to how to convert programs from one computer to another. Dr. Ervin asked if we could have one or two of our people listen to their ideas to see whether they are worth pursuing. I asked him to have the men call me next week and I will arrange a date with Gordon Bell and Dit Morse. Dr. Ervin is going to be in California for two weeks and so one of the programmers will make the arrangements. The man's name is Bill Lennon.

I feel that we should consider the possibility of hiring James Nortman to head our medical work. This man seems to have the qualifications and interests which would be ideal for this type job.

Kenneth H. Olsen

cc: Ben Gurley
Harlan Anderson
Stan Olsen

dec INTEROFFICE MEMORANDUM

DATE May 3, 1962

SUBJECT Raw Materials Stock Status

TO File

FROM L. R. Rittner

Before we go into a full-fledged stock status on tabulating control, there are several policy and procedure decisions that have to be made. If we don't make them at this time, it will mean doing and re-doing the whole stock program at some future date, which would be somewhat inefficient. Very basic questions involved go into things such as the part numbering system, which seemingly has to be revised, so that it's a partially coded number, and strictly numerical. This ties in with the purchase specification program, and also the advisability of having stock books and cross references between stock parts, and vendor and other types of numbers. Also involved is the decision involving the changing of the source documents, changing, for example, the many stores requisitions that we have hopefully into one form, two at most. Also, the handling of receiving reports which should be tied in with the purchase order

and purchase requisition, rather than having a blank one the way we're doing it now. These and other areas should be resolved first before we get into a full-fledged stock status. It is my opinion that the ramifications of this stock status are pretty widespread. It involves more than changing of some source documents and the part numbering systems and goes beyond that into the whole procedure of handling engineering information that's released to manufacturing, the manufacturing processes, etc.

We should define our over-all objectives and plans and state the long-range program for material management, and then go into our stock status and other material tools.

# #

0000	MISCELLANEOUS AND DEPARTMENTAL		
803	NEW EMPLOYMENT APPLICATION	102	1000
807	SALARY REVIEW FORM	10	140
814	NOVEMBER TELEPHONE DIRECTORY		
815	DECEMBER TELEPHONE DIRECTORY		
816	JANUARY TELEPHONE DIRECTORY		
822	PURCHASE ORDER FOLLOW UP	10	10500
823	ACCOUNTS PAYABLE TAB CARD	10	280
824	VENDOR ADDRESS TAB CARD	10	290
1000	PUBLIC RELATIONS		
1106	ENTERPRISE INDUSTRIAL EDITION AD		
1206	OCTOBER PGEC RELEASE		
1208	NOVEMBER RELEASE A		
1209	DECEMBER RELEASE A		
1210	JANUARY RELEASE A		
1211	NOVEMBER PGEC RELEASE		
1212	DECEMBER PGEC RELEASE		
1305	NOVEMBER PGEC MAILING		
1306	DECEMBER PGEC MAILING		

1505	2ND EMPLOYEE HANDBOOK	10	20700
1508	DECEMBER ON LINE		
1509	JANUARY ON LINE		
1912	1962 CHRISTMAS CARD		
1913	FIFTH ANNIVERSARY PINS	10	20100
3000	SALES PROMOTION		
3210	1962 NEREM PUBLICITY		
3211	1962 CMMM PUBLICITY		
3213	1962 FJCC PUBLICITY		
3214	1963 EEE PUBLICITY		
3217	NOVEMBER RELEASE B		
3218	NOVEMBER RELEASE C		
3219	NOVEMBER RELEASE D		
3220	DECEMBER RELEASE B		
3221	DECEMBER RELEASE C		
3222	DECEMBER RELEASE D		
3223	JANUARY RELEASE B		
3304	NEW REPLY CARD	15	500
3314	OCTOBER GENERAL MAILING		

3318	NEW COVER LETTERS	15	400
3319	POSTAGE METER SLUG		
3327	1962 NEREM MAILING		
3329	NOVEMBER SALES MAILING		
3331	1962 FJCC MAILING		
3332	1963 EEE MAILING		
3333	DECEMBER SALES MAILING		
3334	JANUARY SALES MAILING		
3335	NOVEMBER GENERAL MAILING		
3336	DECEMBER GENERAL MAILING		
3337	JANUARY GENERAL MAILING		
3338	PHARMACEUTICAL HOUSE MAILING		
3416	1962 FJCC DISPLAY		
3419	1962 CMMM DISPLAY		
3420	1962 NEREM DISPLAY		
3422	LITERATURE CARTONOCRATES	50	9000
3428	1963 EEE DISPLAY		
3513	NEW TRAINING MODULE CATALOG	BO	30101
3514	SYSTEMS BROCHURE	FO	10000

3515	NEW PDP01 BROCHURE	F1	12000
3521	INTRODUCTORY BROCHURE	A0	10500
3529	PDP04 CONTROL APPLICATIONS FOLDER	F0	45000
3530	NOVEMBER CATALOG INSERTS		
3531	CRT 30 BROCHURE	F0	13030
3532	CRT 31 BROCHURE	F0	13031
3533	COLOR DISPLAY BULLETIN	F0	13033
3534	LOW SPEED MAG TAPE BULLETIN		
3535	OF LINE UNIT BULLETIN		
3536	MT 1521 BROCHURE	F0	15210
3537	PEPR SPECIFICATIONS		
3538	CD 53063 BULLETIN	D5	31630
3539	DECEMBER CATALOG INSERTS		
3540	JANUARY CATALOG INSERTS		
3541	VHF MODULES BROCHURE	C	80000
3806	DIGITAL QUOTATION FORM	500	12000
3807	PROPOSAL COVERS	50	1300
3822	WCO STYLE COMPUTER LOG	60	4000
5000	TECHNICAL INFORMATION		

5531	NEW PDP01 MANUAL	FO	15300
5538	PDP04 MANUAL	FO	45000
5539	PDP04 MAINTENANCE MANUAL	FO	47000
5546	MEMORY EXERCISER 2207 MANUAL	FO	22071
5549	PDP01 INSTALLATION PLANNING MANUAL	FO	18000
5550	MAINDEC 1 MANUAL	FO	39010
5552	CRT 30 MANUAL	FO	15030
5553	SCHEMATIC BOOK COVERS AND INSERTS	250	1000
5554	FORTRAN MANUAL	FO	37000
5555	PDP04 PROGRAM LIBRARY	FO	61000
5556	ALGOLODECAL MANUAL PDP01	FO	35600
5557	DDT PROGRAM MANUAL		
5558	EXPENSIVE TYPEWRITER PROG MANUAL		
5559	LP 62 MANUAL	FO	15062
5560	OCTOBER REPLACEMENT SCHEMATICS		
5561	NOVEMBER REPLACEMENT SCHEMATICS		
5562	DECEMBER REPLACEMENT SCHEMATICS		
5563	MEMORY BUFFER 2010 MANUAL	F2	1010
5565	BCD APPLICATION NOTE	E	40000

5566	CRT 30C MANUAL	F1	50303
5567	CRT 31 MANUAL	F	15031
5568	CARD PUNCH 40 MANUAL	F	15040
5569	CARD READER 41B MANUAL	F	15041
5802	PERIPHERAL EQUIPMENT MANUAL COVERS		
5901	PDP04 INSTRUCTION CARDS	F0	46000
5902	VHF CONFERENCE PAPER		
6000	INDUSTRIAL DESIGN		
6707	WEST COAST OFFICE SIGN		
6804	NEW LETTERHEAD DESIGN	10	911
6805	TEST DATA CARD DUMMY	22	8190
6807	PDP01 MODULE LABEL DESIGNS	25	20500
6811	NEW DIGITAL CARTON		
6812	NEW BUSINESS CARD DESIGNS	100	1111
6813	SBB PACKAGING DESIGN	50	1900
6814	DANGER STICKERS DESIGN	25	20600
6816	DEBIT SHIPPING MEMORANDUM	10	10400
6901	LOBBY REDECORATION PLANS		
6903	IDENTIFICATION CARD DESIGN	10	130

6905 EQUIPMENT LOGOTYPES

7000 GRAPHIC ARTSOPHOTOGRAPHY

7927 PROTYPE LINE SPECIMENS

8000 GRAPHIC ARTSOPRINTING

8505 NOVEMBER DECUSCOPE

8506 DECEMBER DECUSCOPE

8507 JANUARY DECUSCOPE

8899 TEST DATA CARD BLANKS 22 8190

8903 BIWEEKLY REPORT 10026062

8904 BIWEEKLY REPORT 1109062

8905 BIWEEKLY REPORT 11023062

8906 BIWEEKLY REPORT 1207062

8907 BIWEEKLY REPORT 12021062

9000 GRAPHIC ARTSOPRINTING

9816 PDP04 PROGROM LIBRARY FORMS 50 3700

dec INTEROFFICE MEMORANDUM

DATE May 3, 1962

SUBJECT Stock Status of DEC Modules

TO File

FROM L. R. Rittner

The first thing we should do is set up a master deck of cards for the DEC modules. This master deck should include the very basic things, such as the official description of the module, the module number and the IBM code. This master deck can be used for all runs that are made in the future for whatever purpose on modules. – complete

The second step is to make up a quantity stock status. This should be a very basic tool that will record the balance on hand which we'd pick up from a physical inventory, the receipts into finished goods stores which we should probably pick up from the job lot sheets in manufacturing, the withdrawals which ← not using yet - not available will be the actual stores requisition taking modules out of stores or customer invoice, and by simple tabulation, have the tab machines come up with a new balance on hand. – Complete

The third step is one in which we can get a little bit more sophisticated

and get involved in such things as setting up planned requirements, these requirements broken out by where the unit is going to be used, which computer or system is going to use them, reserve requirements, availability, in-process and manufacturing, going into job lot sheets, numbers, operational numbers, horizontal time sequence and other items as required. — plans about done here

The basic point, however, is to do this in a series of steps rather than attempt to accomplish the whole thing at one time. It's most important that we allow enough flexibility in the system, however, to take care of the future things we want to do with it. Because of this, we want to check the amount of space we have on the IBM card, and the amount of machine availability to take care of all the programs we have in mind, even though only a small part of it is used at the very beginning.

One point that we should look into is the possibility of using the withdrawal cards themselves from reserve requirement cards. This may not be possible if we don't know the quantity to be issued in advance. The card should be coded,

however, to show exactly where it's being used, so we can break this out by need, which, of course, will have a direct relationship to the date that the unit is to be delivered. If it's not an internal system or computer, perhaps this can be coded by customer number, or if not the customer number, by priority of delivery.

On the design of the cards themselves, some of the things we should have room for are: 5 digits for module number; 3 digits for quantity; 5 digits for where unit is used; 5 digits for cost of the unit (2 decimal places); 5 digits for manufacturing lot number (the in-process); 6 digits for the source document code and number; approximately 25 digits for description; 5 digits for either date or period required; 2 digits for manufacturing lot quantity; and a 3-digit IBM code. This gives us approximately 64 places to be used.

On the withdrawal slips themselves, we are presently using several documents called, (1) "Requisitioned from Finished Goods," (2) "Modules for Systems and/or Computers," and (3) the "Customer Order." We should give some thought to the standardization of one type of withdrawal for consistency purposes.

done

~~also checking mat'l out of Stock Room~~
~~Job Lot Sheet~~
~~SR now~~
~~1/2 slips with stores~~
~~1/2 slips out of stores~~

Picking up the starting balance is fairly simple, as we simply take a physical inventory. However, in picking up the requirements, this is somewhat of a problem in that there are several different types of input information that are utilized here. A construction requisition can be used, as well as an internal purchase order, a sales order, a break-out sheet for a computer, plus there may be other possibilities, too. Again, we should have some kind of consistency in our input information in determining what our requirements really are. It looks like there may be some advantage in getting the thing moving so that some type of report comes out in the very near future, and this will give the principals encouragement to go further and get involved in some of these more complex areas of allocation, horizontal time sequence, and the like. One other thing that we should look into is the possibility of using something else other than the job lot sheet, as this seems to be problematic at the moment. One way of doing this would be to take from our master deck of description cards of modules and run some of these in advance, give these to the production control people, and this would go

along with the lot sheet. All that would have to be written on there would be the lot number and the actual quantity that was completed. This same card obviously could be used for the other program that we're working on in determining the average time to do different lots, where the only missing information there is the quantity per job lot.

# #

DESCRIPTION	MODULE #	OLD BALANCE	REC'D (+)	WITHDRAWALS (-)	=	NEW BALANCE
BLANK LAB MODULES	950	3				3
BLANK LAB MODULES	951	2				2
CLAMPED LOAD RESISTORS	1000	15				15
CLAMPED LOAD RESISTORS	1001	18				18
CLAMPED LOAD RESISTORS	1002	17				17
	1003					
INVERTERS	1103	174	50	84		140
INVERTERS	1104	64	1	9		56
INVERTERS	1105	366	107	98		375
DIODE	1110	208		43		165
DIODE	1111	25				25
DIODE	1113	23				23
DIODE	1115	33				33
	1117	31				31
THREE BIT PARITY CIRCUIT	1130	10				10
DIODE	1141	23				23
BINARY TO OCTAL DECODER	1150	12		5		7
BINARY TO OCTAL DECODER	1151	131				131
FLIP FLOP	1201	155	84	97		142
DUAL FLIP FLOP	1204	50		20		30
FLIP FLOP	1209	142		45		97
QUADRUPLE FLIP FLOP	1213	64	86	10		140
	12451	00000		1		1 CR
DELAY ONE SHOT	1304	42	20	19		43
DELAY LINE	1310	8				8
DELAY LINE	1311	17		3		14
	1330					
VARIABLE CLOCK	1404	25		3		22
CRYSTAL CLOCK	1406					
PULSE GENERATOR	1410	111	70	15		166
LEVEL STANDARDIZER	1501	2				2
LEVEL STANDARDIZER	1502	29		2		27
DRUM SENSE AMPL	1537					
DC SENSE AMPL	1538					
PEAK DETECTOR & SLICER	1539	21		5		16
SENSE AMP FOR CORE MEMOR	1540	109	59	1		167
GATABLE RECTIFYING SLICER	1542	13	28	1		40
SENSE AMPLIFIER	1546	40		1		39
DIFFERENCE AMPLIFIER	1547	14		1		13
DUAL GAIN DIFF AMP	1549					
X10 AMPLIFIER	1550	13				13
SENSE AMP FOR CORE MEMOR	1552	48	29			77
DISPLAY PREAMPLIFIER	1553	27				27
X10 AMPLIFIER	1554	5		2		3
RECTIFYING SLICE AMP	1555	31				31
SLICE AMPLIFIER	1556	21				21
LIGHT PEN AMPLIFIER	1559		19	1		18
DIGITAL TO ANALOG CONV	1561	7		1		6
10 VOLT REFERENCE SUPPLY	1562			1		1 CR
DIGITAL TO ANALOG CONVS	1563	20				20
DIGITAL TO ANALOG CONVS	1564	9		2		7
BCD DIGITAL TO ANALOG CON	1566					
DISPLAY PREAMPLIFIER	1567					
DIGITAL TO ANALOG CONV	1568					
RANGE GATE INTEGRATOR	1569					

RESERVE REQUIREMENTS (-)	IN PROCESS (+)	MINIMUM POINT (-)	= AVAILABLE
120	20	10	30
60	0	10	-14

IN THIS EXAMPLE IN PROCESS IS CONSIDERED "AVAILABLE"

INTEROFFICE MEMORANDUM

DATE May 3, 1962

SUBJECT

TO Brad Towle

FROM Jon Fadiman

c.c.: Lee Butterworth
Harlan Anderson ✓
Dick Whipple

We have received a purchase order from General Electric Co. in Syracuse, New York, for a Memory Tester, Model 1516H, EN 2238.

This system is due for shipment on or before August 17, 1962. The Purchasing Agent is Mr. Joe Schill, and Engineer in charge is Mr. Ed Koenig.

All modules have already been ordered by Lee Butterworth.

# # # #

bbb

dec INTEROFFICE MEMORANDUM

DATE May 2nd, 1962

SUBJECT CDC Visit.

TO Harlan Anderson
Roland Boisvert
Jack Brown
Ben Gurley
Bob Savell
Stan Olsen

FROM Kenneth H. Olsen

I received a call from William Jenkinson, the local manager from Control Data today. He would like to try to sell us their pneumatic magnetic tape handler and their other devices such as the Hawley printer and the tape-to-card-to-printer combination device they have.

I invited him to come at 3 o'clock on Thursday, May 3rd. Anyone who is interested in hearing his sales pitch should come along.

Kenneth H. Olsen

dec INTEROFFICE MEMORANDUM

DATE May 2nd, 1962

SUBJECT

TO Harlan Anderson

FROM Kenneth H. Olsen

When I was at the MIT conference for local company presidents last fall, I met Mr. W. T. Handle who is chairman of the Industrial Liaison Office at MIT. He had been talking with Jay Forrester lately and said he would like to move on from MIT into industry and Jay suggested that he talk to us with the possibility of joining us here. I told him that we didn't have any definite openings, but that we would very much like to talk with him. He is coming out next Wednesday, May 9th at 8:30 a.m. and it would be good if you could spend a little time with him at that time.

Kenneth H. Olsen

dec INTEROFFICE MEMORANDUM

DATE MAY 2, 1962

SUBJECT

TO "Mothers"

FROM Maynard Sandler

Last November we started the Mothers' Shift as an experiment. Because all of you did so well your group has grown from the original 10 to 25.

Your supervisor, Dick Mangsen, has been working longer and longer hours and we have now chosen Thelma Patterson as his assistant to help out with job assignments and paper work. Thelma previously had been employed as a payroll machine operator and spent some years in Production Control work, so we feel she is well-qualified for her new assignment.

I know you will continue to make a fine contribution of your interest and energy to our work here at DEC and that especially you will continue to give your supervisors your utmost cooperation.

Maynard Sandler
Production Manager

cc: R. Anderson

dec INTEROFFICE MEMORANDUM

File

DATE April 30th, 1962

SUBJECT

TO Harlan Anderson FROM Kenneth H. Olsen

On Thursday, April 26th I received a call from Mr. O. M. Spaid from Internal Inspection Company, Summit, New Jersey asking if we would join with them in a bid to the government for running feasibility studies and supervisoring computing installations overseas. I told him that we are not well suited for that type job and that they would do better looking to someone like Charles Adams Associates or Bolt, Beranek and Newman. I told him that if he asked advice from our people, they would always suggest that they build it themselves or that it was impossible.

I gather he heard of us from American Research and Development but, he did not know them well enough to have their name straight.

Kenneth H. Olsen

dec INTEROFFICE MEMORANDUM

DATE April 27th, 1962

SUBJECT

TO Harlan Anderson

FROM Kenneth H. Olsen

Bob Hughes of ITT called on Thursday, April 26th to ask if we were going to be in San Francisco. He would like to meet with us and talk about a personal matter. I told him that I wouldn't be there, but that you can speak for both of us.

I told him that you would be glad to have dinner with him and I suggested that he ask you to show him where Omar Khayyam's restaurant is.

Kenneth H. Olsen

dec INTEROFFICE MEMORANDUM

DATE April 27th, 1962

SUBJECT

TO Harlan Anderson
Ben Gurley
Stan Olsen

FROM Kenneth H. Olsen

I had a call from Jack Gilmore on Thursday, April 26th. Adams Associates has been approached by Friden Corporation to see if they wouldn't be a vehicle for renting Flexowriter typewriters. They knew that we were approached and turned down the project, but Adams Associates were thinking of going into the systems business and thought that this would be a good start. They are thinking about having the typewriters painted their own color and put Adams name on it.

Jack asked if we would let them know who our customers are so that they could offer to rent Flexowriter typewriters to them. I told him that, in general, we would be willing to do this, but there might be areas in which we would do business with competitors which we may be reluctant to do it and he understood this. I told him that I would call him back if you had any negative reactions to this.

The monkey farm would like to rent the PDP computer and so Charles Adams is thinking of purchasing it and renting it to them. I don't know how Adams plans to make money with their systems division, but I do think they know arithmetic and they probably know what they are doing. It can't help but do good for us.

Kenneth H. Olsen

INTEROFFICE MEMORANDUM

DATE April 27, 1962

SUBJECT Anelex Printers

TO Ken Olsen
H. Anderson

FROM R. Mills

The two (2) Anelex Printers we have received have been charged to our 130 Raw Material Account - one to be used on the LRL machine (EN 2078) and the other to be used on the DEC machine (EN 2126). The net effect on our P & L for the fiscal year ending June 30th, will be to have the DEC Anelex Printer in Work in Process Inventory versus the unit being charged off to an EN 1000 account. If there is a possibility that we receive a PDP-1 customer order, which will take the DEC unit and also, provided it will be shipped before June 30th, the result will be to have both units charged against Cost of Sales.

# # #

dec INTEROFFICE MEMORANDUM

DATE April 27, 1962

SUBJECT Meeting at CRC

TO Harlan Anderson
Ben Gurley
Gordon Bell
John Koudela

FROM Steve Lambert

-

On April 25, John Koudela and I went to a meeting at the Cambridge Research Center, AFCRC. The meeting concerned all contractors who will be working with the 2 PDP computers. Present were Wolf Associates, Adams Associates, and representatives from O.A.L. and from the Cambridge Labs. The meeting was held in Charlton Walter's office.

Topics of discussion were what assembly system would be used. The outcome of the discussion was in favor of using DECAL. A major portion of the time was spent on flicker free displays, and Charlton Walter suggested that they buy an ITEK Disc File along with a display.

I suggested that it was possible to attach to the second memory, which they are getting, a high speed channel system connected to a display that would sweep the second 4K memory. At the same time, another high speed channel would read in data from Mag. tape to this memory, thus the display would be operated at a repetition rate of 35 msec. Charlton Walter would like to know more about such a system, and he is interested in displaying 100,000 points or close to 100,000 points flicker free.

The breakdown was that Adams would write the display programs and Wolf would write outline and execution routines. Ed Fredkin was also present, but did not receive any contract. The meeting adjourned at noon.

I spoke to Eunice Cronin about the delivery dates of the two computers and she stated that CRC could not accept these computers at DEC due to a clause in the contract, and due to the fact that they are not able to get a room. She would like to have us keep the computers at DEC long enough to check our every option on the computers and she also said that acceptance must be made at CRC.

COMPANY CONFIDENTIAL

To: K. Olsen
H. Anderson

From: R. Mills

Plant Space

	Floor No.	Square Feet	Date Leased	Rental Cost Per sq. ft.	Rental Cost Annual
Building #12	1	8,500	4/1/59	.36	3,060.
	2	8,600	8/27/57	.42	3,600.
	3	8,500	4/1/59	.36	3,099.96
Building #3	3	4,000	4/1/59	.36	1,440.
	3	4,000	4/1/60	.30	1,200.
	3	5,000	10/1/60	.30	1,500.
	3	10,000	4/1/61	.30	3,000.
Building #4	3	13,000	7/14/61	.50	6,500.
	4	13,380	7/14/61	.41	5,500.
Building #5	4	48,000	7/1/62	.50	32,500.
	4	17,000			
	5	68,000	5/31/62	.32	21,000.
Total		207,980			$ 82,399.96

Note: Average cost per square foot = 37.6 ¢

April 26, 1962

To: ALL EMPLOYEES

From: Kenneth H. Olsen

Subject: Parking April 25th, 1962

We have been concerned for some time that our employees have had to park their cars three deep in the very limited parking area in front of building 12. This has not only meant delays in leaving at night, but has also meant that people have been called out during the day to let other people out of the lot. We thought we had solved this problem by moving much of our facilities to building 5 where there is unlimited parking available, however, people are still parking three deep in building 12. It must be that they do not realize that the parking is unlimited and easy at building 5 or else they do not realize that it is close, or closer, than building 12.

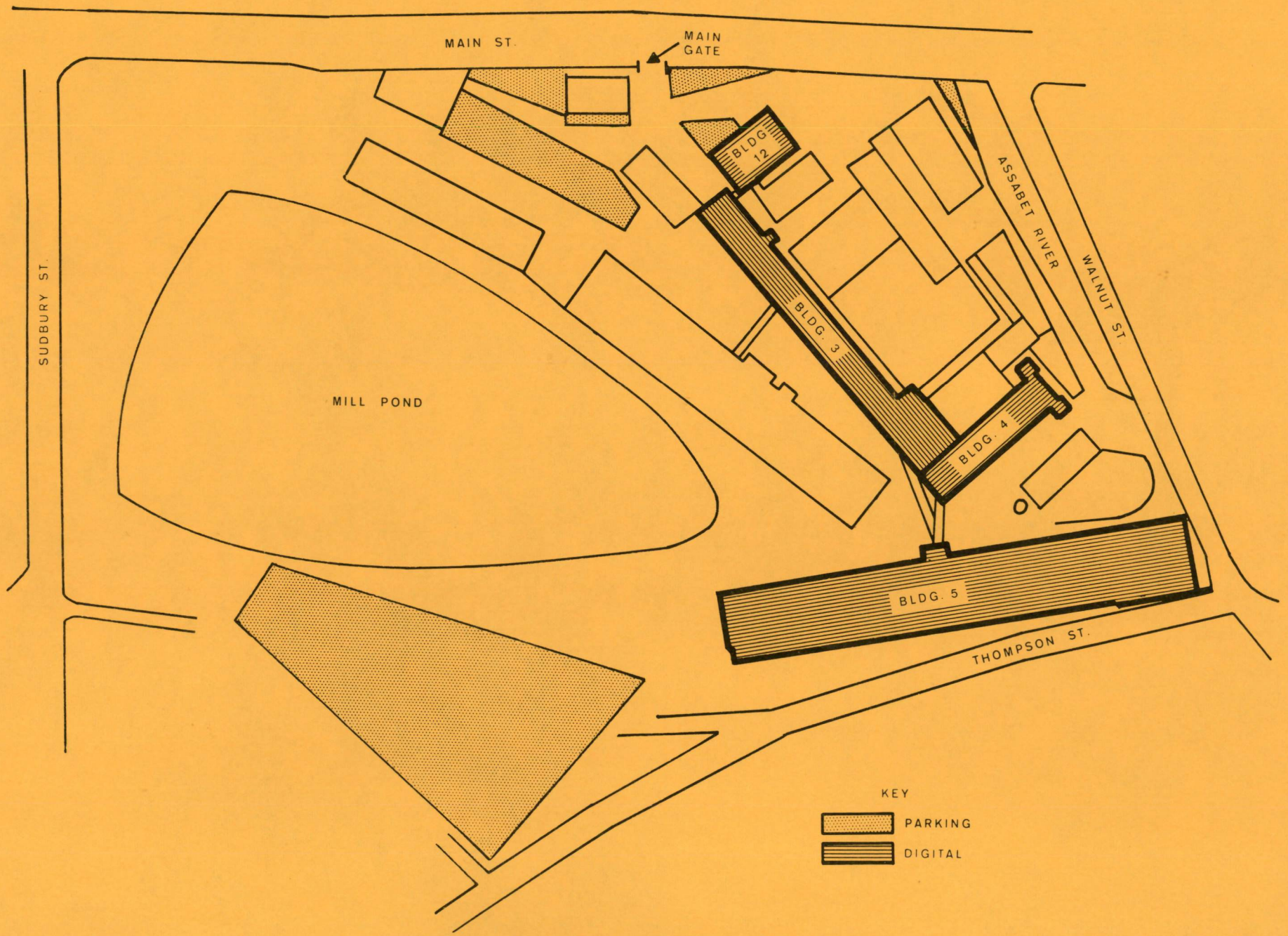
We are enclosing a map which will show where the new parking area is for those who do not realize where it is, and too, to try to convince everyone working in buildings 4 and 5 that it is indeed most convenient. It is definitely closer for all the people in building 5. For those working in building 4, and parts of building 3 it is closer if one considers the extra stairs used if he parks in front of building 12.

For your own convenience, and the convenience of those who have to park in front of building 12, we would urge everyone to try to park in the lot near building 5.

Bradley Container Company has complained that DEC employees are using their parking lot. I told them that I was sure that our employees would not do this because it is definitely marked as private property, but I did agree to remind all our employees of the fact.

Kenneth H. Olsen

DIGITAL EMPLOYEES PARKING MAP



File

To: ~~Harlan~~ Anderson
Jack Atwood
George Brown
Henry Crouse
John Culkins
Ken Fitzgerald
Stan Olsen
Loren Prentice
Maynard Sandler
Jack Smith

From: Kenneth H. Olsen

April 24th, 1962

Subject: Company Security Proposal

On Monday, April 23rd we met to talk about company security problems. It is obvious that we are much too lax in our security and have to enforce it much more vigorously. In July, the Purchasing Department will move over to building 5 and so, in general, the company will have only two entrances, the main one in building 12 and the one near the shipping dock in building 5. We are, however, going to put the prototype computer in the large classroom on the top floor of building 4 and we are going to have a separate entrance to that so that we can allow outsiders to have access to that room and not to the rest of the company.

We will allow out only a very limited number of keys, and those who have to work nights, will check out individual keys that will be on very large markers so that although the temporary keys are given out freely they will not be easily forgotten and no one will put them on their own key ring.

Loren Prentice will be responsible for all our security, but he, in turn, will use other people to carry out the work. I think that Brad Towle should continue to be the dispenser of temporary keys. It should be someone in the Sales Department because the temporary keys should be readily available, but they should be called back immediately after use.

We have broken down the outside doors into four groups:

1. Front door of building 12 and the door from the fifth floor of building 3 to the Machine Shop in building 4.

2. Front entrance of building 5 and the two entrances from the elevator shaft to the center of building 5.

3. The Computer Room in building 4.

4. All side doors and elevator shafts.

There will be sub-master keys which will open all four groups and will be given to a small number of people. Those needing access to only one group will be given only that key. There will be temporary keys made up for all four groups, but it will be in only extremely rare cases that a temporary key will be needed for group 4. If people need a key for group 1 and 2 on a temporary basis, they will be given two temporary keys and then they will have access to the whole plant.

In addition, there will be several inside key groups. These will all be opened by the grand master key. The inside groups are as follows:

5. Manufacturing.

6. Advertising.

7. Tool Crib.

8. Finished Goods.

9. Archives.

We would also like to have a master lock system and a sub-grouping lock system for all our gray cabinets and for all our file cabinets. The emergency is not as severe on these, so we can let it slide a little while.

Most doors which would possibly have to be opened for emergency, but which we don't want opened normally, we are going to have installed with alarm type locks. In order to get through these locks one has to break glass which allows the door to be opened, but also sets off an alarm. If they are opened with a key, they work like any other lock. The following doors will have this type lock.

1. Between the Machine Shop and the fifth floor of building 3.
2. Walnut Street end of the fourth floor of building 5.
3. Walnut Street end of the fifth floor of building 5.
4. Elevator tower door on the fourth floor of building 5 and elevator tower on the fifth floor of building 5.
5. Front fire escape fourth floor of building 5.
6. Front fire escape fifth floor of building 5.
7. Stairway between floors three and four at main entrance of building 5.
8. Between Computer Room and Sheet Metal Shop of building 4.
9. In door to be added at present Purchasing entrance.
10. Door by Drafting Department.
11. Door in building 3 to General Radio area.
12. Door in building 3 to Country Store.
13. Side door on first floor of building 12.

For this long list of bell type locks we perhaps should order a spare even though

they cost $60.00 each. All of these, but the first two, are in key group number 4.

Also, in key group number 4 are padlocks to be put on the following areas:

1. Shipping door on the first floor of building 12.

2. Door to the hoist in the second floor of building 12.

3. Elevator near the eating area in building 3.

4. Elevator on the far end of building 3.

5. Elevator on the third floor of building 4.

6. Elevator on the fourth floor of building 4.

Loren Prentice is going ahead and buy the alarm type locks and he will settle on a master keying system.

As a temporary measure, Loren is immediately going to change the locks in building 5 and the main door in building 12 so that they all open on the present standard door key.

Kenneth H. Olsen

dec INTEROFFICE MEMORANDUM

DATE April 23, 1962

SUBJECT PDP - 1C 3

TO Ben Gurley
Gordon Bell
Harlan Anderson

FROM Steve Lambert

The following sequence break priority assignments have been made for PDP - 1C 3 and for (CRC).

Sequence	0	Not Used
"	1	Address = tape control 52
"	2	Paper tape reader return
"	3	A - D Lab. 6 inputs through diode mixer
"	4	Information exchange Input from other computer
"	5	Not used
"	6	Job done Mag. tape 52
"	7	Information exchange out
"	10	Light pens Diode mixer with 6 possible inputs
"	11	Not used
"	12	Paper tape punch
"	13	Not Used
"	14	Type in type out Six (6) possible inputs through diode mixer
"	15	Not used
"	16	Left for 12 bit clock every 4 seconds (Time sharing)
"	17	Left for clock input every 20 msec. (Time sharing)

dec INTEROFFICE MEMORANDUM

DATE April 19, 1962

SUBJECT

TO Harlan Anderson ✓
Stan Olsen
Ben Gurley
Dick Best
Maynard Sandler
Al Blumenthal
Loren Prentice

FROM Kenneth H. Olsen

We have striven to have an unusually high illumination level in most working areas. Even though the cost is high, we feel this is a good investment, because it makes the mill look bright and pleasant. However, one interesting disadvantage develops. Some areas which are not as bright as others give the impression of being dark, even though their level may be well above standard. Because there have been some complaints about the level, we had our electrician, Bernie Joyce, make a survey of the plant to check on the illumination level.

The following list gives the result of Bernie's survey in which he used a Weston light level meter, held at about bench level. The conclusion is that there are only two areas which have low light level. They are Jack Smith's office and my own office. I suggest that for the time being we consider increasing the level in these two offices only.

The recommended light levels start at about 5 - 10 foot candles for corridors, and for areas in which very close work is being done, they recommend between 50 and 100. We have over 50 in almost all areas. Our mechanical inspection has a level of 125 at the bench level, and drafting has between 125 and 150.

Kenneth H. Olsen

Attachment

LIGHT LEVELS: All readings taken at bench level during daylight hours.

	Area	Light Level
Building 3:	Computer Assembly	80 - 125
	Cafeteria	40 - 90
	Ramps and Passageways	20 - 100
Building 4:	L. Prentice Office	70 - 100
	Machine Shop	50 - 100
	Library	55 - 80
	Auditorium	75 - 100
	Model Shop	70 - 80
	Engineering	50 - 80
	Purchasing	50 - 70
	Drafting	125 - 150
	Blueprint Room	75 - 100
Building 5:	M. Sandler Office	90 - 110
	Assembly Bench Area	70 - 110
	Production Control Office	60 - 80
	Stockroom	50 - 70
	Testing Area	50 - 80
	Quality Control Oscilloscope Area	10 - 15
	" " Bench Area	70 - 100
	Test Equipment Headquarters	70 - 90
	Mechanical Inspection Work Bench	125
	" " " Area	90
	Mag Tape Checkout	80 - 90
	Main Corridor	15 - 30
	Final Checkout	50 - 80
	A. Blumenthal Office	50 - 80
	J. Smith Office	40 - 50
Building 12:		
First Floor -	Shipping	40 - 60
	Reception Room	125 - 150
	K. Olsen Office	40 - 50
	IBM Room	70 - 100
	Accounting	80 - 100
	Personnel	40 - 80
Second Floor -	Bench Area	70 - 100
	Office Space	70 - 100
	Open Desk Area	60 - 100
Third Floor -	Stairs	30 - 60
	Work Area at Desks	80 - 100
	Mailing Work Area	90 - 125

dec INTEROFFICE MEMORANDUM

DATE April 19, 1962

SUBJECT Display Booths

TO Jack Atwood
Harlan Anderson
Stan Olsen

FROM Kenneth H. Olsen

Several years ago, I designed a display booth and with some amount of effort, proved that we could make one cheaper than we could have one made outside. This might have been a great disservice to the company. The result of our success in making this booth has initiated a company policy that we make all booths. Now we postpone construction of the booths until the last week, and we are very free in adding frills, making changes in the booths, and adapting them to the current ideas.

I suggest that we change our policy now, and that we purchase all booths. This will have several advantages. We would be forced to make our decisions well ahead. We will have an exact cost on all the novel ideas and frills that we might request. We will also know whether or not it's worth making a new booth, because we'll have a price tag on it. If someone wants to propose a booth made here in the house, he could then present drawings and sketches and prices, and we can see how they compare with the outside.

I suggest that we clean up the odds and ends that we now have around the plant, and that we then end up with two or three 10' booths, one 20' booth, and one 40' booth. These should be general purpose booths that we don't feel obligated to modify for each show. We should then take space at trade shows which will fit our standard booths, and not try to do anything tricky like the EJCC last December.

We should always have the display booth set up two or three weeks before the shipping date, so that we can correct for things we don't like. The booths we used in the IRE Show and the one now going to the Spring Joint Computer Conference looked quite homemade, but only in details which could be readily fixed up if we had a few more days. I am very reluctant to criticize these booths, because people worked so very hard and such very long hours at the last minute to do them. But on the other hand, if we started them earlier and simplified our ideas, we could avoid some of these long hectic hours before the show.

Kenneth H. Olsen

dec INTEROFFICE MEMORANDUM

DATE April 19, 1962

SUBJECT

TO Jack Atwood

FROM Kenneth H. Olsen

I received a call today from Bob Cesari, our patent lawyer, about our new catalog. He says that our copyright notice is in the wrong place and, therefore, our catalog may not be copyrighted. He says that the law is very specific in saying that it should be on the title page or on the page following the title page. Next time we print the catalog, we should be careful that it is in the right place.

Kenneth H. Olsen

CC: Harlan Anderson
Stan Olsen

INTEROFFICE MEMORANDUM

DATE April 19, 1962

SUBJECT BBN Meeting on DECAL

TO Ken Olsen
✓H. Anderson
B. Gurley
B. Beckman

FROM R. Mills

I talked with Dave Mittleman this morning regarding a meeting with them on final settlement on DECAL programming. Doctor Labate is away for the rest of the week but Bill Pickett called later and confirmed a Tuesday, April 24th meeting at 3:00pm at their place and Doctor Labate will be there.

Dave was at a loss to understand why we should feel that a meeting was necessary in order to settle the DECAL matter since it appeared to be a pure obligation of $10,000. in our letter which we would be obligated to pay and that would be the end of it. All I said was, that under the circumstances we didn't feel that we were obligated to pay the full $10,000. due to amountsthat had already been expended. After this, he agreed that we should have a meeting.

# # #

dec INTEROFFICE MEMORANDUM

DATE April 19, 1962

SUBJECT Executive Page Line - 214

TO K. Olsen
✓H. Anderson
S. Olsen
M. Sandler

FROM E.B. Towle

In-Plant Calls: Dial 214 - The person calling will be waiting on the line.

Outside Calls: The plant operator will be waiting on 214 to announce the call and connect you with the person calling.

Busy Signal: The page line is in use, please dial Operator.

INTEROFFICE MEMORANDUM

DATE April 18th, 1962

SUBJECT Gold plated eyelets for test equipment.

TO Harlan Anderson
Stan Olsen
Jack Smith

FROM Kenneth H. Olsen

Because we have been having trouble consistently with the electrical contact in our test equipment patch cords I would like Henry Crouse to find out what it would cost to have our patch cords gold plated and to have our eyelets gold plated.

In addition to the simple contact between the eyelet and the banana pin we also have suffered because of the connection between the eyelet in the wire and because of the flux inside the eyelet. I would like Henry to find out what it would cost to have special eyelets made exactly like our present eyelet, but which have a tab for soldering or for spot welding leads on the back side of the panel.

Kenneth H. Olsen

cc: Henry Crouse

dec INTEROFFICE MEMORANDUM

DATE April 17, 1962

SUBJECT Report on Results of Newspaper Employment Advertising

TO K. Olsen
H. Anderson
S. Olsen

FROM Bob Lassen

Attached is a summary of people who were hired in February and March of 1962 and by what means they were contacted.

Out of a total of 73 hires, 34 were as a direct result of newspaper advertising. There is no way of measuring how many of the others may have first learned of our company through newspaper advertising.

For several weeks Alec Stevens and I have been evaluating the effectiveness of newspaper advertising and we have instituted some cut backs particularly in the Boston Globe Basically we have eliminated a few of the local papers and we have confined the Globe to Mechanical, Technical and Drafting people only. We have also reduced Globe advertising to every other week. I feel very strongly, however, that the Boston Globe employment section is widely read by non-professional people. Our interview response from the Globe over the past several months has been good.

I do feel however, that we can do an even better job in selecting the most effective media This can be done by constantly reviewing the results - perhaps on a monthly basis.

We are also starting to learn that certain areas provide particular types of help. Although the attached summary gives no credit to Worcester and Lowell papers, we have found that these areas have served us fairly well in the past with respect to Mechanical and Drafting people Although the interview response in these areas is fairly good the quality of the applicant leaves something to be desired therefore we probably can save money by being more selective in these two areas.

It is my opinion that newspaper advertising is effective and that it is necessary if we wish to hire sufficient numbers of competent people to fill our growing needs.

In view of the above and in view of the findings on the attached summary sheet, I propose that we continue employment advertising on an increasingly selective basis as we gather more facts and that we budget ourselves to a maximum average of $3,500 per month. We should bear in mind that the amount of money spent for employment advertising will largely depend upon the urgency of our need for new people.

In passing it is interesting to note that the fees charged by an employment agency for the 34 people hired through newspaper advertising would have amounted to approximately $4,000. However, most agencies do not effectively handle lower levels of hourly and clerical people.

cc: R. Mills
M. Sandler
J. Atwood

People Hired in February and March 1962

	Agencies	Employee Contact	Friends	Radio	Schools	Local Papers	Boston Globe	Worcester and Lowell Papers
Assemblers (includes Mother's Shift and Quality Control		4	9			9	1	
Mechanical			1			6	1	
Clerical	2		1	1	2	5		
Customer Service		1					1	
Sales		1						
Application Engineers	2							
Technicians and Wiremen		2	1		3	4	4	
Electrical Engineers							1	
Purchasing						1		
Shipping/Receiving		1	2			1		
Accountant	1							
Len Rittner	1							
Programmer		1						
Production		2						
Technical Writer		1						
Totals	6	13	14	1	5	26	8	0

dec INTEROFFICE MEMORANDUM

DATE April 17, 1962

SUBJECT

TO B. Gurley
E. Harwood
H. Crouse

FROM Jack Smith

cc: H. Anderson
D. Mills

My present schedule calls for the delivery of 1 typewriter, 1 reader and 1 punch on the following dates.

4/20/62
4/30/62
5/2/62
5/11/62
5/25/62
6/8/62
6/22/62
7/6/62
7/20/62
8 /3/62
8/17/62
8/31/62

This does not include spares.

dec INTEROFFICE MEMORANDUM

DATE April 17, 1962

SUBJECT

TO B. Gurley
E. Harwood
H. Crouse

FROM Jack Smith

cc: H. Anderson
D. Mills

Our present schedule for the delivery of Potters is inadequate. Below is listed required delivery of Potters.

Immediately	ADX-5 #4	dark blue
4/23	ADX-2 #1	dark blue
4/23	BBN	grey
4/23	ADX-2 #2	dark blue
4/23	ADX-2 #3	dark blue
5/9	ADX-3 #1	dark blue
5/9	ADX-3 #2	dark blue
5/9	ADX-3 #3	dark blue
5/28	JPL #1	grey
5/28	JPL #2	grey
6/4	ADX-6 #1	dark blue
6/4	ADX-6 #2	dark blue
6/4	ADX-6 #3	dark blue
6/11	ADX-7 #1	dark blue
6/11	ADX-7 #2	dark blue
6/11	ADX-7 #3	dark blue
6/28	Adams	grey

Beyond this point we do not have in house orders to build Mag Tapes but we plan to build at least one per week for stock.

INTEROFFICE MEMORANDUM

DATE April 16, 1962

SUBJECT PDP-1 Prototype Scheduling

TO PDP-1 Distribution List
All Prototype Users

FROM Bob Beckman

The following procedures have been established for the scheduling of the PDP-1 Prototype.

1. Until further notice the Prototype will be scheduled on a weekly basis. Schedules for the following week will be published on Friday afternoons. Copies of the schedule will be posted on the Computer Room bulletin board and by Ben Gurley and Al Blumenthal. These posted copies are for information only and "write-in" scheduling on the posted copies must be included on the master schedule to be valid. The master schedule will be retained and updated by Customer Relations.

   It is anticipated that scheduling may eventually be on a daily basis.

2. Requests for computer time must be submitted on the established form. A copy of this form is attached and additional copies are available from Customer Relations and from the supply maintained in the Computer Room. It is important that all pertinent information be included on this form. In cases of conflict the information on the form may determine which user has priority. DEC employees requesting time for customers or potential customers should make the requests in their own name with appropriate comments.

   Unless specifically requested, no confirmation of time assigned will be made other than the published schedules. Individual confirmation of time must be justified in the "comments" section of the form. Telephone number (or DEC extension number) should be included even though no specific confirmation is requested.

   Requests for computer time must be submitted to Barbara King of Customer Relations by 9:00 A.M. on the Friday preceding the week involved. Requests may be submitted as far in

advance as desired, but actual schedules will be established on a week by week basis. A separate request form must be used for each calandar week (i.e. a request for time on a Tuesday of one week should not be included on the same form with a request for time on Thursday of the following week).

3. Contact Barbara King on Extension 346 for changes or additions to published schedules. Such changes and additions must be kept to a minimum and will be on a "first come, first serve" basis.

4. Prototype users are invited and encouraged to make time swaps and other arrangements with other users on an individual basis. Questions that cannot be resolved by the master schedule will be referred to Bob Beckman.

Every effort will be made to satisfy everyone. However, to paraphrase a bit, "You can satisfy some of the people all of the time, etc." The intention is to provide adequate, efficient use of the PDP-1 Prototype.

####

REQUEST FOR COMPUTER TIME

Requested By _____ Date _____

Affiliation _____ Project _____

Purpose:
- ☐ Demonstration
- ☐ Program Checkout
- ☐ Preparation of Programs for Distribution
- ☐ Production Run
- ☐ Equipment Checkout
- ☐ Other _____

Day	Date	Amount of Time	Approximate Time Desired				Specific Time Desired (Use only if necessary)
			0000-0900	0900-1200	1200-1800	1800-2400	
Monday							
Tuesday							
Wednesday							
Thursday							
Friday							
Saturday							
Sunday							

Round-trip travel time to Maynard _____

Latest date computer could be used for this project _____

Time assigned should be confirmed. ☐ Yes ☐ No Telephone _____
(Call will be placed between 1600 and 1630 on day preceding use.)

Person to notify if schedule is changed _____

Comments: _____

_____

_____

dec INTEROFFICE MEMORANDUM

DATE April 16, 1962

SUBJECT Initial clean-up of Prototype Computer Room

TO PDP-1 Distribution List
All Prototype Users

FROM Bob Beckman

The attached memo dated April 23 will go into effect on that date. The week of April 16 will be devoted to an initial clean-up of the Computer Room.

Anyone who has material in the Computer Room that they want to keep is requested to remove it by Wednesday of this week. On Thursday all material left in the Computer Room will be placed in a temporary circular file which becomes permanent on April 27.

Those people who are occupying space in the file cabinets in the Computer Room are requested to re-examine their need for this space and to contact Barbara King on Extension 346 if they wish to retain it.

####

INTEROFFICE MEMORANDUM

DATE April 23, 1962

SUBJECT Cleanliness and upkeep of Computer Room

TO PDP-1 Distribution List
All Prototype Users

FROM Bob Beckman

In order to improve working conditions and the appearance of the Prototype Computer Room, the following procedures have been established. The cooperation of all concerned will be appreciated.

1. All Prototype users are requested to remove all of their material after each use of the computer. The console table and the other tables provided should be cleaned off and all unwanted type-outs and tapes placed in the wastebasket. A limited amount of space is available for storage of materials between use of the computer. Anyone desiring such storage space should contact Barbara King on Extension 346.

2. The Computer Room will be cleaned each morning by building maintenance personnel. Their instructions are to remove all loose material from the console and other working areas. Recognizing the possible value of material inadvertently left behind, type-outs, tapes, etc. collected during the clean-up will be placed in temporary storage and retained for approximately one week before final disposal.

3. Coffee cups, cokes, ashtrays, etc. must be kept off of the console table.

If everyone will cooperate with these few simple rules, it will make a big difference in the appearance of the Computer Room and provide a much more pleasant place in which to work. Any suggestions as to how to further improve the condition of the Computer Room will be appreciated.

####

INTEROFFICE MEMORANDUM

DATE April 16th, 1962

SUBJECT

TO Jack Atwood
Henry Crouse

FROM Kenneth H. Olsen

I feel that I have lost touch with the expenditures in the Advertising Department. I was quite shocked to see that in February we spent $6,898.00 on advertising for job applicants and in March, we spent $6,433.00 for the same. In order to develop more feeling for the expenditures in the Advertising Department I would like to cancel all open purchase requisitions and now do this purchasing with the conventional purchase requisitions.

I would like to see justification for any future employment advertising. I would like to know how many people we hired during February and March that we attribute to the $13,331.00 we spent during that period.

Kenneth H. Olsen

cc: Stan Olsen
Harlan Anderson
Bob Lassen

File

INTEROFFICE MEMORANDUM

DATE April 16th, 1962

SUBJECT

TO Loren Prentice
John Culkins
George Brown

FROM Kenneth H. Olsen

I stopped in Sunday afternoon at the plant and was very surprised to find the shipping door on the first floor of building 12 completely unlocked and the elevator door on both ends of building 3 unlocked. This points up the need for an immediate security plan. I would like Loren Prentice to meet with who ever he feels is necessary and to propose a workable and consistent plan. This plan should be put down on paper and then we should have a meeting later this week to approve it.

I also noticed that the power was off on the first floor of building 12 and all the coolers and clocks were off. I am very sympathetic with the problem because when I tried to turn the power on it wasn't at all obvious how this should be done. When we have the meeting on security, I would like also to have George Brown prepare a proposal for how we turn power off in building 5 and John Culkins do the same for the other buildings. We may want to re-do some of the wiring in order to make it easier. As a minimum, we should have the boxes labeled and a memo posted at various places indicating how it should be shut down.

If someone needs help in preparing notes or memos, my secretary will be available to do this.

Kenneth H. Olsen

cc: HarlanAnderson
Stan Olsen
Dick Mills
Maynard Sandler
Bob Lassen
Jack Atwood

INTEROFFICE MEMORANDUM

DATE April 13th, 1962

SUBJECT Memory Testing Review Meeting

TO Harlan Anderson
Dick Best
Jon Fadiman
Ben Gurley
Stan Olsen
Dick Whipple

FROM Kenneth H. Olsen

The Special Systems Group has been quite autonomous and very successful and as a result has not received its share of attention from the company officers. We should set up periodic meetings to review the problems and successes and questions of this department. I would like to call a first meeting for Tuesday, April 17th in my office at 10:00 a.m.

We would like to discuss the status of the Japanese market, the status of the Phillips Machine and our present and future position in the memory testing market in this country. We would also like to talk about any other problems or ideas which you may care to discuss. Also, we should bring up ideas for new developments which we should pursue.

Kenneth H. Olsen

INTEROFFICE MEMORANDUM

DATE April 13th, 1962

SUBJECT Quality Control Review Meeting

TO
Harlan Anderson
Dick Best
Ben Gurley
Bob Hughes
Stan Olsen
Loren Prentice
Maynard Sandler
Jack Smith

FROM
Kenneth H. Olsen

Since we reorganized the Quality Control Department we have not met to review the policies and actions of the committee. I would like to set up a meeting for 10:00 a.m., Monday, April 16th in my office to review the status of the Quality Control Department.

I would like all those who have responsibility connected with Quality Control or who have complaints for the Quality Control Department to come to this meeting.

Kenneth H. Olsen

dec INTEROFFICE MEMORANDUM

DATE April 13th, 1962

SUBJECT Drum System Review Meeting

TO Harlan Anderson
Gordon Bell
Dick Best
Ben Gurley
Ted Johnson
Stan Olsen

FROM Kenneth H. Olsen

The drum systems have suffered from the lack of a customer with an absolute deadline. As a result, many things have been let slip and no one appears to have real confidence as to the complete status of these systems. I would like to call a meeting for 10:00 a.m. on Wednesday, April 18th in my office to review the status of this.

At this time I would like to have a list of all the jobs to be done on these projects and a schedule laid out and individuals assigned to each of the jobs. The result of this meeting should be that we will all have complete confidence that everything is under control or at least, we all should be conscious of what the problem areas are.

Kenneth H. Olsen

File

April 9, 1962

Girl's Softball League

K. Olsen
H. Anderson
S. Olsen
M. Sandler
R. Mills

Bob Lassen

I have been approached by members of the General Radio Company asking us to participate in a local informal girl's softball league. The basic purpose of the league is to provide employee recreation and the philosophy is "every girl gets to play".

General Radio has done a wonderful job over the years in building a healthy employee dedication to their company. Their expanding recreational program has done much to create this very desirable spirit.

As we grow larger and busier we are in grave danger of becoming more and more divorced from our people - their feelings and their well being. I think it would be wise to take a cue from General Radio now while we're still young and start building an employee morale program through company sponsored recreational activities.

I propose we take part in this girl's softball league and other forthcoming worthwhile activities. This activity should be sponsored by DEC and we should provide the necessary equipment. (Uniforms are <u>not</u> necessary).

If approved, I will take care of the details in setting up a committee and finding a suitable coach (male) to assist the girls who may become interested.

OK by me

Andy

INTEROFFICE MEMORANDUM

File

DATE April 6th, 1962

SUBJECT

TO Ken Olsen
Harlan Anderson
Maynard Sandler
Jack Smith

FROM Ben Gurley

The following are our production plans for computers beyond those for which we have orders.

For Shipment	Basic PDP-1	Type* 52	Type** 50	Type 10 M/D	Type 12	SBS	Display 30	15 Mem Ext Control
August	2	1	3	1	1	1	1	1
September	2	1	3	1	1	1	1	1
October	2	1	3	1	1	1	1	1
November	2	1	3	1	1	1	1	1

In addition to the standard PDP-1's, we want one typical ITT machine for September and October.

* Tape Control
** Tape Unit

INTEROFFICE MEMORANDUM

DATE April 6th, 1962

SUBJECT

TO Harlan Anderson
Dick Best
Russ Doane
Ben Gurley
Stan Olsen
Barbera Stephenson

FROM Kenneth H. Olsen

There will be a meeting in my office on Thursday, April 12th at 9:00 a.m. concerning megacycle line of modules.

Kindly mark your calendar accordingly.

Kenneth H. Olsen

dec INTEROFFICE MEMORANDUM

DATE April 6, 1962

SUBJECT Negotiation Meeting On the CRC Logical Connector

TO Fixed Price Contract Audit File
USAF

FROM R. Mills

This morning at 10: O'clock, Mr. Geary, Price and Cost Administrator, Mr. Balboni, possible Contract Administrator for this contract, and Mr. O'Donnell, Team Captain on Negotiated Contracts, came here to discuss the three items which arose from Mr. Louis Green's audit of our rates used in submitting Form - DD-633-4. The discussion centered around the philosophy of advertised vs. negotiated contracts, then leading thru with their disagreement with our application of SG&A expenses on the cost of sales vs. their porposal of manufacturing and engineering overhead. They also discussed the deduction from SG&A for advertising and contributions. We contended that the advertising expenses were not those disallowable under the ASPR 15-205.1, as these are technical instruction manuals and catalogs vs. pure advertising media of a radio or magazine nature. They also questioned our application of SG&A against purchased materials but our discussion never really got very heavy in this regard as our counter proposal was to remove from this purchase request and cost analysis all standard proprietary items of DEC and then submit a Form DD-633.4 for only the remaining items of a special nature. They did not want to accept this today, but preferred to think it over with another meeting later.

I believe there was some doubt in their minds as to whether or not we were a major manufacturer of standard items but after their plant tour, they were thoroughly convinced that we were and the comment of Mr. Geary upon leaving was that, " I'm sure we'll have no trouble with this".

✓ cc: Harlan Anderson

dec INTEROFFICE MEMORANDUM

DATE April 5th, 1962

SUBJECT

TO Ben Gurley

FROM Kenneth H. Olsen

Last week during the IRE show when we visited ITT, we offered to send one of our key people to Paris to make sure the machine was set up right and in good operation condition. This person probably should be you. We don't want to have you spend too much time getting involved with the uncrating and some of the problems which you can't help any more than anyone else can. We probably should wait until they have the machine operating before you go, but, you should get there soon enough so that you can be of some help.

I think you should go ahead and get a passport and perhaps get a reservation for the time which you would like to go. Stan Olsen, Jon Fadiman and Dick Best have gone through some of the red tape involved in getting a passport so you can take some hints from them.

You had better polish up on your French!

Kenneth H. Olsen

cc: Stan Olsen
Harlan Anderson
Nick Mazzarese

INTEROFFICE MEMORANDUM

DATE April 5, 1962

SUBJECT LOBBY REDECORATION

TO Ken Olsen
✓Harlan Anderson
Stan Olsen
Dick Mills

FROM Jack Atwood

This is a rough estimate of the cost of redoing the lobby in Building 12 as shown in Jim Lozouski's sketches:

	Materials	Labor	Total
Translucent ceiling	$ 395	$165	$ 560
Walls and booth	250	150	400
Cork flooring	220	50	270
Furnishings	800	25	825
Total	$1665	$390	$2055

The ceiling is a two-part plastic ceiling designed so that dirt and insects falling on the top panel are not visible through the bottom panel. The materials figure includes foil for the present ceiling, translucent tile, accoustical tile for the border, metal supports for the tile, and hangers for the supports. The labor figure is the vendor's quotation for installation by his crew.

The materials figure for walls and booth provides for a mixture of wood panelling and painted sheet rock. This figure also includes the cost of converting the north wall into a showcase for modules and accessories. The labor figure is an estimate of the cost for contract carpentry.

Cork is the first choice for flooring because of its resistance to wear, especially with respect to high heels, and its ease of maintenance. This type of flooring would look well under most conditions, and it would provide a safety factor in wet weather which is entirely lacking in asphalt or rubber tile.

The figures for furnishings include two new groupings for the outside wall, auxiliary seatings along the north and south walls, chairs for the operators, and a planter box on the south wall. The labor cost is a wild guess at what we might have to pay to have the bricks for the planter slapped into place.

file

dec INTEROFFICE MEMORANDUM

DATE 4/4/62

SUBJECT Systems Design Corporation

TO Harlan Anderson
Stan Olsen

FROM Ted Johnson

Systems Design Corporation in Las Vegas, Nevada is a new group of ex-ITT people who have communicated with me on some possible applications of PDP Computers and the possibility of representing our modules in that area. The following are summaries of my discussions with Mr. Charles Pettis by phone on 4/2/62.

1. Service Bureau Data Processor

They are interested in a new computer for processing department store sales data. See the attached letter. Their present largest prospect is one chain store which is rapidly expanding to the point where it might have as many as 90 point-of-sales registers. They have another large prospect in Salt Lake City. The latter customer would require a machine capable of processing more than 999 items and performing some sales analysis. Pettis has been thinking in the direction of a 70 to 90 thousand dollar machine, 18 to 20 bit word and 4K of memory with an expandable feature.

2. PDP or Special Computer Systems for Hotels

Pettis feels there is a strong market in local hotels for installing central data processing equipment to total customer bills from data received from any hotel charge stations, (keyboard input and printed invoice output). There is also a requirement for up-dating present room status systems which would present some graphic display information to the room clerks indicating the status of all the rooms in the hotel, (occupy, ready-to-rent, not yet cleaned). Figures he used for a system of this type were $60 per room and typical hotels included approximately 1,000 rooms. These two possibilities might be incorporated into one central processing station.

3. Representatives

They indicated an interest in representing our product to local cusomters, principally EG&G and Reynolds Electric. I indicated our policy of direct sales from this office.

SYSTEMS DESIGN CORPORATION

125 North Ninth Street - Las Vegas, Nevada - Du 2-3037

ENGINEERS AND MANUFACTURERS

March 21, 1962

Digital Equipment Corporation
8820 Sepulveda Boulevard
Los Angeles 45, California

Attention: Sales Manager

Gentlemen:

As we maintain a full sales staff who call on large industrial and government contractors, we very often receive requests to supply your products.

Some of these people such as Reynolds Electric and EG&G have been buying as OEM accounts, which of course they should not be doing as they hold AEC contracts. Even though this has been the practice in the past, they realize the need for a local firm who can handle their orders, as many times the time requirements don't allow them the use of normal correspondence and therefore they must revert to long distance telephone calls which has drastically increased their purchasing costs.

We are in a position to supply their needs and if suitable arrangements can be made we would be very glad to represent your products on a local level.

At present we represent such firms as ITT Industrial Products Division, Industrial Electronics Engineers, Inc., and many other fine lines, in addition to contracting for complete systems involving Microwave, Closed Circuit Television, data processing and related fields. Our staff also includes three engineers who are utilized in research and design of new systems as required.

We feel that we are in a position to increase your sales with both parties making a reasonable profit. If you would like to work with us, please send complete catalog data, including pricing and discount schedules.

Hoping to hear from you soon, we remain,

Very truly yours,
SYSTEMS DESIGN CORPORATION

John W. Wolfe
John W. Wolfe
Sales Manager

JWW/sp

SYSTEMS DESIGN CORPORATION

125 North Ninth Street - Las Vegas, Nevada - Dr 2-9057

ENGINEERS AND MANUFACTURERS

March 28, 1962

Digital Equipment Corporation
8828 Sepulveda Boulevard
Los Angeles 45, California

Gentlemen:

We are in receipt of your brochure on the PDP-1 Data Processor.

We are contemplating the establishment of a service bureau for Las Vegas and are now running a survey on small computers to use in this service.

The local processing market is almost entirely in the form of punched tape with one large chain store presently processing out of state, about 100,000 store items per week. The tape is the product of Monroe - Sweda point-of-sales registers.

The required printed page output is an accumulation and sorting by item, of department store sales. The point-of-sales tapes can code up to 999 item numbers with sell price.

The required processing is merely a total by item number summary, on a daily, weekly, and 30 day accumulative basis.

The present processing is being handled by a Monroe Distributape which of course cannot really be considered a computer.

We are seeking a computer with input from punched tape and output to printed page, expandable to card and magnetic tape input and output as the need arises. For this reason we have ruled out the Distributape as not being flexible enough.

It would please us to receive your rental and sell prices on your PDP-1 or your comments on how the PDP-1 would fit into a service bureau. We would like to talk to your representatives concerning the possibility of establishing a PDP-1 as a service bureau computer.

Sincerely yours,
SYSTEMS DESIGN CORPORATION

Charles D. Pettis
Charles D. Pettis
President

CDP/sp

INTEROFFICE MEMORANDUM

DATE 4-4-62

SUBJECT Procedures for Updating PDP-1 Module Chart Drawing No. B20074

TO			FROM
	K. Olsen	J. Koudela	P. Bonner
	H. Anderson	P. Bonner	
	B. Gurley	A. Hall	
	A. Blumenthal	N. Mazzarese	
	R. Savell	B. Beckman	
	G. Bell	L. Prentice	
	J. Brown	J. Myers	
	E. Harwood	S. Lambert	
	B. Reed	T. Johnson - W. C. O.	
	M. Sandler	R. Melanson	

As of this date, any and all known changes relating to the PDP-1 Module Chart Drawing No. B20074 should be submitted to E. Harwood. Ed, in turn will submit these updatings to R. Melanson who will incorporate these changes on the chart thus necessitating periodic re-issuing of the chart. Succeeding printings of the chart will be governed directly by the rate at which changes occur.

The goal of this system is to keep this chart as current or as up to date as possible for both engineering and sales purposes.

Changes will only be accepted and incorporated by Roger upon written or verbal authorization by Ed.

dec MEMO

DATE April 17, 1962

TO B. Gurley
E. Harwood
H. Crouse

FROM Jack Smith

cc: H. Anderson
D. Mills

We presently have (16) memory stacks in stock. These stacks will satisfy our commitments through ADX-7 including spares that have been ordered with the machines. This stock will be depleted 6/8/62.

Module Types	Power Supply Types							Power Control Types				Other Power Supplies
	721	728	734	775	777	778	779	811	812	813	814	NUE-EQR 60-6B
Central Processor		8	1									
Basic Memory Module				1								
Reader Punch Typewtr.		1										
Mul. & Divide Type 10												
Memory Module Type 12		1		1								
Memory Ext. Ctr'l Type 15												
H.S.C. Type 19												
Seq. Brk. System Type 20												
CRT Type 30	1				1			1				1
Light Pen Type 32												
Card Punch 40-523					2			1	1			
Card Reader 41-523												
Mag. Tape Type 50		1			1							
Mag. Tape Type 51					1							
Mag. Tape Type 52					3							
Line Printer Type 62			1		1							1
			2		2							
Unit Price	$305	220	215	455	260			241	335			777

STD. PDP-1

OPTIONAL EQUIPMENT FOR PDP-1 COMPUTER

B-60074 1 of 2

Module Types	STD. PDP-1		OPTIONAL EQUIPMENT FOR PDP-1 COMPUTER																Unit Price
	Central Processor	Basic Memory Module	Reader Punch Typewtr.	Mul. & Divide Type 10	Memory Module Type 12.	Memory Ext. Ctr'l Type 15	H.S.C. Type 19	Seq. Brk. System Type 20	CRT Type 30	Light Pen Type 32	Card Punch 40-523	Card Reader 41-523	Mag. Tape Type 50	Mag. Tape Type 51	Mag. Tape Type 52	Line Printer Type 62			
1103	73	7			7	10	3	8											$108
1104	48	1			1		1	2											89
1105	81			10			3	1											98
1110	6					10													68
1111	11			2				8											68
1150	9																		150
1151						1													150
1201	32			5															133
1204	19																		173
1209	17			1		4	2												168
1213		1			1														154
1304	1														1				130
1310	9	1		3	1														91
1311	3			6															78
1410	1																		60
1539														4	4				112
1540		18			18														141
1542													3						122
1549													4						189
1559										1									145
1562									1	(The rest of the units used are part of the type 30 display)									140
1564									2										180
1567									2										480
1607	26	1		10	1	17	6												130
1669			5						3				1		5				39
1684	11					13													125
1685	7						5					1			8				128
1701	1																		105
1703			2								1								30
1705									1										185
1972		32			32														200
1973		2			2														130
1976		16			16														55
1978		3			3														55
1982		5			5														146
4105	2		7				3				1	1	5	2	13	6			44
4106	3		2					2			5	1	1	1	10	5			49
4110	2		5													1			43
4111			1											1	4				43
4112	1												3		3				68
4113	9		3	2				4			14		2	4	15				68
4126			1					4				1			6	2			68
4127														2	9	6			68
4128			9					16						2	14				40
4129	10						17												40
4139																1			55
4150																1			90
4151															1	2			90
4201			2								1								69
4202															9				84
4209	2		3												2				79
4213									5		21				5	1			96
4214	1		9					16	1			1		4	11	2			96
4215														2	2	5			90
4301	2		7					1	2		1		2	2	16	6			80
4303															3				91
4401	1														1				72
4407															1				160
4410	6		5								1					3			41
4514													4						65
4603	25		5				10	7	2		2	3		1	14	15			89
4604																18			92
4667																1			53
4677									5										62
4680			6																60
4681			3								27								75
4688									1										65
4700																120			168

INTEROFFICE MEMORANDUM

DATE April 4th, 1962

SUBJECT

TO Dick Best
Ben Gurley
Jon Fadiman
Stan Olsen
Harlan Anderson

FROM Kenneth H. Olsen

Holly Rising of Mitre Corporation (Crestview 4-9586) called me last week to see if we were interested in making a 2 microsecond memory for him. He had already talked to several other manufacturers and he found their prices were much too high. When he called back, I told him that we were interested, but, it would take us a while to decide on what approach we should take and to figure out whether we have the manpower or not. Ben thought we should very carefully consider this because it is so much in line with what we wanted to do anyway and so I invited them out to meet with us on Thursday, April 5th at 1:30 pm.

They want about 22 or 24 bit word length and 4,000 words. He would need about two of these units.

I think it would be a good idea if we looked over what cores are available and what transistors would be used to see if we should encourage this any further.

Kenneth H. Olsen

INTEROFFICE MEMORANDUM DATE: April 3, 1962

SUBJECT: Foxboro Specifications Meeting Thursday, March 29, 1962 - For Nabisco

TO: Ben Gurley
Ken Olsen
Harlan Anderson
Robert Beckman
Jon Fadiman

FROM: Gordon Bell

Ben Gurley, Jon Fadiman, George Rice and I met with Saul Dinman and Ralph Gymon of Foxboro.

We agreed on the technical specifications and a revised copy will be shortly forthcoming. Dick Sonnafild, manager of the Digital Systems Group of Foxboro, wrote the clauses of disagreement regarding acceptance, maintenance, and warantee and they are:

ACCEPTANCE

Prior to shipment, DEC will satisfactorily demonstrate the operability of the system on the vendor's premises. The operability will again be demonstrated upon arrival at the Natick plant.

System acceptance will be demonstrated by the running of a system program in conjunction with a system simulator to be supplied by Foxboro, Natick. The test will be run at Natick.

MAINTENANCE

DEC will provide service and parts for maintaining the digital equipment while it is at Natick on an on-call basis.

WARRANTY

The warranty period starts from the arrival of the equipment at its final destination in Chicago and is the standard DEC warranty.

I propose:

1. The acceptance test must be run at DEC according to our criteria, or specified by Foxboro.

2. Interface tests can be made either with the Foxboro Simulator or on a simplified DEC simulator - tester at DEC.

3. Warantee begins with delivery.

Revised specifications are to be forthcoming and a meeting is to be held on Thursday, April 5, 1962.

INTEROFFICE MEMORANDUM DATE: April 3, 1962

SUBJECT: Adams Associates Proposal for PDP-4 Utility System

TO: Ben Gurley
Harlan Anderson
John Koudela
Harrison Morse

FROM: Gordon Bell

The following proposal was sent to me by Jack Gilmore.

A price will be forthcoming which is supposedly $30,000 - $40,000 and represents 10 - 14 man months.

Ed Fredkin entends to propose an assembly program and writeup.

The enclosed proposal is sent without comment for future use in decision making.