

digital

INTEROFFICE MEMORANDUM

DATE: April 3, 1967

SUBJECT: PDP-9 PRODUCTION

TO: Pete Kaufmann
John Jones
Ed Harwood
Nick Mazzaresse
Stan Olsen

FROM: Ken Olsen

I would like to make you five people, with Pete Kaufmann as chairman, a committee to study the production rate of the PDP-9.

The question I would like to have you answer is, "What would it cost to get back to the original production rate of 45 this quarter and 60 each following quarter?" The cost should include the dollars, people stolen from other projects, the delay in the 8/1 if Ed Harwood's crew stayed on the 9 for a longer period, etc.

Please answer this particular question, and then, quite separately, add value judgments, or other reasons for not doing this.

This will probably take only one meeting and so I would like to ask for the results very quickly. If it is convenient, I would like to have the meeting after the Marketing Committee meeting on Wednesday, April 5th, to discuss this.

Ken

ecc

digital

INTEROFFICE MEMORANDUM

DATE: April 3, 1967

SUBJECT: PDP-9 DELIVERY PROBLEMS

TO: John Leng

FROM: /Ken Olsen

I sympathize with your problems on the PDP-9, and I am embarrassed by some of them. However, for comfort, do think of the IBM salesmen who have gone through this several times during the last two years, and particularly with the 360-67 where they had to go to their customers and tell them they couldn't be made at all.

I think you were commenting on two separate problems. First of all, the build up is not as fast as we originally expected. I think we will help that significantly by re-allocating resources.

The second problem is that you are unhappy with the steady state production rate. This is limited simply by our confidence in various parts of the organization, including the subsidiaries, to solve their problem if we grow that fast. If we double our size next year, I don't want four times as many field service problems, nor do I want to keep people so busy that they can't take time to learn our accounting system or to follow up on their own budgets.

Will you make a list of problems and weaknesses of the European operation and what you plan to do with them in the next two years. If you convince me that you have these well under control enough to increase the size of deliveries, I will increase the production rate of the PDP-9.

Ken

ecc

DATE: April 5, 1967

SUBJECT: Organization Announcement

TO: Engineering Newsletter
Sales NewsletterFROM: Ken Olsen

For several months now, the Executive Committee has been considering ways to optimize our organizational structure. We have several activities which have been in a temporary position within the organization, and several other activities which we think should be changed. We now have a plan which we are very enthusiastic about, and which we feel accomplishes the goals which we have set out to accomplish.

The PDP-8 and its successors, the PDP-9 and its successors, and the PDP-10 and its successors appear to be the three major computer product lines within the Company in the future. To receive due attention, it was decided to assign one of these to each of the Vice President, Group Managers. Nick Mazzaresse will supervise the PDP-8 and PDP-8/S, Stan Olsen will supervise the PDP-9, and Win Hindle the PDP-10.

Loren Prentice has supervised several activities directly under the President on a temporary basis until we decided which Executive Committee member each should be assigned to. It was decided that Win Hindle will supervise the IBM compatible Tape Transport, and Nick Mazzaresse will supervise the Mini-Disc. Loren will continue to supervise Process Engineering, Mechanical Engineering, and Drafting under Pete Kaufmann. Ed Harwood will move to Pete Kaufmann's area where he will supervise Computer Production Engineering. Pete Kaufmann will, in addition to Computer Production Engineering, Mechanical Engineering, Process Engineering, and Drafting, continue to supervise all production activities.

In addition to the PDP-8 and PDP-8/S, Nick will continue to supervise Display, Special Systems, A-D, and Mini-Disc. In addition to the PDP-9, Stan will also be responsible for the engineering of the Plastic Module, and will continue responsibility for Modules, Traffic, Model Shop, Library, Module Quality Control, and Printed Circuit layout. Win will, in addition to the PDP-10, supervise Digital Test, LINC, Programming and DECUS, Personnel, Training, and IBM Tape.

Harry Mann will continue to supervise Accounting, Data Processing, Systems and Procedures, Plant Services, Security, Technical Writing, Printing, Photo, Art, and Office Services.

Ted Johnson will continue to supervise National Sales, Foreign Sales, Field Service, and Direct Mail.

This leaves no line responsibility in the President's office; however, the Chief Engineer and Public Relations will continue to be staff functions directly under the President.

ecc

Ken

digital

INTEROFFICE MEMORANDUM

DATE: April 7, 1967

SUBJECT: UNIVERSITY OF OREGON

TO: Nick Mazzaresse
Mike Ford
John Jones
Bill Long
Stan OlsenFROM: Ken Olsen

I received a call on Friday, April 7th at 4:30, from Prof. Donald Wells of the University of Oregon. He is very unhappy because we are many months late on the delivery of a link to tie our PDP-6 to the IBM 360. Our people who visited him told him their project has been delayed continuously by management here at Maynard because more important things have come up. He said our engineer who is out there working on their project was called back to go to England because there was something more important than the University of Oregon. He implied that they have little confidence in the man we have there; that he is making little headway and is using their expensive 360 time to become educated.

Prof. Wells said that they get many inquiries from other schools who want to use a system like this but he has to suggest that they don't because it isn't working out well.

He is going to the University of Manitoba next year where a LINC and a number of PDP-8's are on order. He feels he is going to have to recommend that they cancel their order.

I promised to call him back on Monday, April 10th, to tell him what we will do about it. His number is: Area Code 503 - 342-1411, extension 1965.

Ken

ecc

digital

INTEROFFICE MEMORANDUM

DATE: April 10, 1967

SUBJECT: AUTOMATIC CONVEYOR SYSTEMS, INC.

TO: Nick Mazzaresse
Mike Ford
Allan TitcombFROM: Ken Olsen

I received a telephone call from Mr. Jacob Nevo, President of Automatic Conveyor Systems, Inc. in Boston, telephone 426-4580. He is working on developing systems for automatic parking of cars, unloading of ships, and automatic conveying within Navy ships.

He sees a great future in the automatic parking of cars. In one small lot with two PDP-8/S's he can park 246 cars, and can see installing 50 to 60 of these systems per year in New York City alone.

He is very disappointed that we do not propose a whole system to him, but have, instead, offered only to sell the computers to him. Westinghouse and Honeywell have proposed a whole system -- 3 C's will supply the computer and Honeywell will do the systems work. He would like us to make ties with the systems house and bid the whole system.

Maybe we should ask Foxboro if they would like to do the systems work. We would then have an operation parallel with Honeywell. I told him that I would call him back on Wednesday, April 12, to tell him what our plans are.

I'm not saying that we should seriously consider this, but when I had no information I had to at least tell him that we would consider it. The girl that answered the telephone answered by giving their phone number, which leads me to believe that he is renting a desk in a building along with many other one-man companies.

Please let me know what you want me to tell him on Wednesday.

Ken

ecc

digital

INTEROFFICE MEMORANDUM

DATE: April 10, 1967

SUBJECT: BUDGETS

TO: Win Hindle
Stan Olsen
Nick Mazzaresse

FROM: Ken Olsen

clearer
As you present your budget on Friday for this next year, will you also calculate some ratios for the next year, and also make an estimate for last year so that we can use it for reference. The two ratios I would like to see are return on technicians and return on engineers. This will be the profit before taxes divided by the engineering or technician man years.

For those products which use components from other product lines, like PDP-8's, I think they should subtract out the profit normally made by that product.

The third ratio which would be interesting to see would be the profit per sales dollar after the profit and sales dollar of the components have been removed. For example, what is the profit on the special system after we remove the sales dollar of the PDP-8?

Ken

ecc



INTEROFFICE MEMORANDUM

DATE: April 14, 1967

SUBJECT: PHOTOGRAPHS FOR ANNUAL REPORT

TO: Executive Committee Members
cc: Ken Gold
Elliott Hendrickson

FROM: Ken Olsen

Please generate a list of photographs that you would like to see in the annual report. List those shots that have been taken already and those that you think should be taken. Ken Gold can get a land camera picture of those you suggest, and then, if they look good, we can have George Lord take good pictures. As soon as we have this, we can start making the layout for the annual report. This year we propose having it done early.

Ken

ecc

digital

INTEROFFICE MEMORANDUM

DATE: April 14, 1967

SUBJECT: COMPANY RECORDS

TO: Executive Committee Members

FROM: Ken Olsen

At our meeting on Monday, April 24th, I would like to have each member of the Executive Committee report on what he is doing to keep duplicate documents of all critical records somewhere outside the mill. At one time we had a carefully laid out system for keeping all documents so that if we lost the mill we could start up again reasonably efficiently. We haven't checked on this system for a while, and I think it would be good for each of us to look into those areas for which we are responsible and make a report at that time.

We initially kept particularly good care of those documents which gave records of our accounts receivable. Secondly, we kept records of all our technical documentation so that we could start the products over again. We should now also keep equally good records on our testing equipment, such as the automatic module testers.

The microfilm machine we used to use was very simple and people could keep track of their documents with very little trouble. I believe we sent the film to Remington Rand where they were developed and filed, and we never bothered looking at them, and wouldn't bother unless we had a fire. If we ever had a fire we would have all the drawings, all the purchasing information, and everything we bought so that we could get back into the business fairly soon.

Perhaps Harry should also explain to us at that time what would happen from a financial point of view if we lost the mill. We are covered by insurance in a number of ways, but we should figure out just what would happen so that we could make some preparation.

Last week a large mill burned down in Peabody and it is rather sobering to watch a large mill go.

Ken

ecc

digital INTEROFFICE MEMORANDUM

DATE: April 14, 1967

SUBJECT: MODULE RECORDS

TO: Stan Olsen

FROM: Ken Olsen

Please set up a system by which all module documents are microfilmed and kept safe from fire. This should include all historical documents and all the records that Dick Best keeps.

Ken

ecc

digital

INTEROFFICE MEMORANDUM

DATE: April 14, 1967

SUBJECT: COMPUTER CHECK-OUT AND FIELD INSTALLATION REPORTS

TO: John Jones
cc: Dick Best

FROM: Ken Olsen

Dick Best is keeping the file of Computer Check-Out Reports and the corresponding Field Installation Reports. I think it would be a good idea if you ask Dick to present these to the Marketing Committee in a summarized form so that we all have a picture of the results of our quality control program.

digital

INTEROFFICE MEMORANDUM

DATE: April 14, 1967

SUBJECT: PROJECT ENGINEER FOR INTERCONNECTION SYSTEM

TO: Dick Best

FROM: Ken Olsen

I don't quite understand all that Bob is saying here, but it seems to me that this should be your responsibility. If it makes sense to you, will you write a statement in the Engineering Newsletter saying that you are responsible for this and what your plans are for accomplishing it.

Ken

ecc



INTEROFFICE MEMORANDUM

DATE: April 11, 1967

SUBJECT: Project Engineer for Interconnection System

TO: Ken Olsen

FROM: Bob Savell

It seems to me that Drafting symbology and standards, module connector blocks, back panel wiring, standard FLIP CHIP modules and automated drafting all form one large interdependent system that should be the direct responsibility of one individual. At present this responsibility is divided between a large number of individuals and committees. No single individual, or even a single committee, at present seems to understand how all the pieces inter-relate.

I propose that Dick Best is the one who comes closest at present to understanding the whole system, and that he be responsible for insuring that the many people and committees working on the various pieces of the system in fact do develop a consistent workable system.

The committees can provide useful input as to what's needed, but I firmly believe that unless one person is made responsible, the resultant system that will evolve will do so very inefficiently.

bwf

digital

INTEROFFICE MEMORANDUM

DATE: April 14, 1967

SUBJECT: 16-BIT COMPUTER

TO: Stan Olsen

FROM: Ken Olsen

Will you make out a schedule for developing and budgeting for the 16-bit computer. If this could be done before the SJCC, I think it would help clarify people's thinking as they spend the week at Atlantic City.

Ken

ecc

digital MEMO

DATE April 17, 1967

TO Members of the Executive Committee FROM Ken Olsen

Attached is a copy of a letter that we sent to Senators Kennedy and Brooke, and Maynard's Representative Philbin. I also sent a copy to Ben Kessel, Vice President and General Manager of Honeywell's 3 C's Division saying that if Honeywell had the same feeling that perhaps he or someone else might like to send a similar letter.

ecc

April 12, 1967

The Honorable Edward W. Brooke
Room 107
Old Senate Office Building
Washington, D. C.

My dear Senator Brooke:

Our firm has encountered an international issue that we believe you could influence if you were aware of it. Digital Equipment Corporation designs, manufactures, and sells advanced computers and related equipment throughout the world. Some 25% of our total corporate sales are outside the United States.

Because our computers are used extensively in scientific research, the funds to purchase them come from Government sources, especially in foreign countries. For sometime in England and France, there has been pressure to use the funds to purchase local computers rather than U. S. manufactured computers. Despite this pressure, which has been initiated to encourage computer developments within national boundaries, Digital has successfully sold machines because of very favorable price and performance characteristics.

Recently the West German Government has begun to exert the same type of influence on computer purchases, particularly at German universities, by offering larger grants to research professors if they will purchase German-made computers. Thus, although our computers are admittedly superior and lower priced, we are losing sales because of this Government influence.

It is our understanding that a U. S. policy objective is to have West Germany purchase U. S. goods in order to ease the balance of payment problems incurred by the large number of troops stationed in West Germany. Also, it is evident that the German Government does not want to purchase military products from U. S. manufacturers. We feel that an excellent case can be made for having the German Government ease its pressure against the purchase of U. S. computers (and presumably other non-military products) in return for the U. S. maintaining its current troop levels in West Germany.

If you believe this is a worthwhile policy objective, we would appreciate your help in proposing it in the appropriate Government agencies. I'm sure you know how important the computer business is to the economy of Massachusetts. In addition to the several large computer manufacturers within the Commonwealth, there are a multitude of

The Honorable Edward W. Brooke

- 2 -

April 12, 1967

manufacturers and programming firms who supply materials and services to the computer industry.

I have written this same letter to Senator Edward M. Kennedy and Representative Philip J. Philbin in the hope that the Massachusetts delegates can work together in discussing this suggestion.

Sincerely,

Kenneth H. Olsen
President

KHC:ecc

COPY

digital

INTEROFFICE MEMORANDUM

DATE: April 17, 1967

SUBJECT: MEASURING THE PERFORMANCE OF MANAGERS OF FOREIGN SUBSIDIARIES

TO: Ted Johnson

FROM: Ken Olsen

Attached is a note that Harry wrote which I think should be signed by the three of us and distributed. Read it carefully to see if it is clear, and add any suggestions you may have to clarify or simplify it.

Ken

ecc

MEASURING THE PERFORMANCE
OF MANAGERS OF FOREIGN SUBSIDIARIES

The most significant measure of accomplishment of a Subsidiary Manager is the number of dollars of business booked per dollar of sales expense. Business booked includes net sales price of equipment sold, rental income, and maintenance and service income. Sales expense includes salaries of salesmen, their travel and business expenses and other allocated sales overhead.

Evaluation of this measure of accomplishment is made by comparing the result of each subsidiary with those of other subsidiaries and field offices. ~~In addition, comparison of this figure with budget is vital.~~?

Another measure of accomplishment of a Subsidiary Manager is the aging of accounts payable to the Parent Company. The standard of performance is that all accounts should be paid within 60 days of invoice date. An alternate measure of the effective use of assets is the number of dollars billed to customers per dollar of assets being used by the business. Assets include cash, accounts receivable from the subsidiary's customers, inventory on hand and in transit, and capitalized items (leasehold improvements, equipment, etc.). In this case, also, comparisons with other subsidiaries and budgets will form the basis of evaluation.

Other measures of performance are of great importance, but at present will be judged qualitatively rather than quantitatively. Included are market penetration, field service effectiveness, customer satisfaction, and development of a capable staff.

K. Olsen

Harry Mahan
Fred Johnson

digital

INTEROFFICE MEMORANDUM

DATE: April 24, 1967

SUBJECT: TECHNIQUE FOR PLOTTING COSTS

TO: Bob Collings

FROM: Ken Olsen

We should develop a technique for plotting costs broken down into two categories -- those which are assignable to present operation and those which are assignable to future operations. If they are broken down this way, we can then visualize the change of efficiency in time in a somewhat better way. When growth stops, many costs should disappear because we are now spending significant amounts in training people for the future.

Ken

ecc

digital

INTEROFFICE MEMORANDUM

DATE: April 25, 1967

SUBJECT:

TO: Ted Johnson

FROM: Ken Olsen

Regarding the memo Harry wrote explaining our financial figures of merit for subsidiaries that we were going to distribute over yours, Harry's and my signature, will you please, instead, review it with Harry, John Leng and Ron Smart next week and then we will publish it as a Company document.

Ken

ecc

digital

INTEROFFICE MEMORANDUM

DATE: April 25, 1967

SUBJECT: SLIDES OF DEC PRODUCTS

TO: Jim Jordan
cc: George Lord

FROM: Ken Olsen

It might be a good idea for you to start a collection of slides showing the evolution of product design at DEC. If we start now, we can probably still get slides of all our products. For those that we are missing, we probably could get by visiting a customer or by having one of our field service people take them.

This should be a very interesting and useful collection to have, and we could review it periodically. It should include the main stream of design, and also the tangents we have gone off on periodically. Things like the color display would be good to take now because we won't have them on hand very long. BBN has a good PDP-1 with the original design.

Part of this collection, of course, would be a set of pictures of our current product line. I would like to have the history, and particularly the current product line, always ready for my slide projector. Then when my visitors ask questions, I can always show them what we are doing.

Ken

ecc

digital

INTEROFFICE MEMORANDUM

DATE: April 25, 1967

SUBJECT: REPORTS ON PERSONNEL TURNOVER

TO: Bob Collings

FROM: Ken Olsen

There are a few more items that should somehow be covered in our reports on personnel turnover by group so that we can identify when something is wrong in a particular area. Backlog, of course, and somehow we ought to keep track of the sales calls made. There are enough reports generated by the salesmen, but if we counted the calls this might be of some indication. We should keep a record of all customers lost, unhappy customers, and orders that we bid on and lost. We should also keep a record of the bids we make because this also is one of the earliest predictions of business in the future.

Ken

ecc

digital

INTEROFFICE MEMORANDUM

DATE: April 25, 1967

SUBJECT:

TO: Henry Crouse
cc: Harvey Shepherd

FROM: Ken Olsen

It seems to me that years ago there were several manufacturers who made single column typewriters that typed on paper tape. Some of these typed paper strips that were then pasted on forms to make telegrams, and others, I believe, typed on the edge of 5-hole punched paper tape. These probably were made by Teletype, Klein-schmidt, or Soroban and like companies. Will you collect forms on this for me.

With a machine like this, our Program Library could type the label on the leader of each paper tape as it is being punched and it would eliminate the need for separately typing labels and adhering them. There would also be less chance for error because the program would type the title. Some of these machines may not work because they are made for 5-hole and we use 8-hole.

If we use the telegram tape producing machine, we would still have to paste the label on, but this may be easy if we produce it and paste it on during the loading operation. If we can type directly on the tape, we might be able to make tapes by the mile and cut them apart after verification.

Ken

ecc

digital

INTEROFFICE MEMORANDUM

DATE: April 25, 1967

SUBJECT: CHROME CASTINGS

TO: Jim Jordan

FROM: Ken Olsen

While making my annual survey of appliances, I noticed an interesting manufacturing approach that General Electric has on their stoves, clothes washers and driers. They have developed a technique for making good looking chrome castings to cover the glass plates. Some of these are small and used on each end with sheet metal on the top and bottom, all of which are plated in such a way that they appear to be one piece. Others are very large and cover all sides of the glass plate.

There is a possibility that General Electric is having these made by somebody, and maybe we should have the front part of our computers cast in the same way. They are so well finished that when they are chrome plated they look exactly like the sheet metal.

Ken

ecc

info. copy to Bob Collinge 4/28/67

digital

INTEROFFICE MEMORANDUM

DATE: April 27, 1967

SUBJECT: REPORTS ON CUSTOMER ORDERS

TO: Ted Johnson
cc: Harry Mann
Win Hindle
Stan Olsen
Nick Mazzaresse

FROM: Ken Olsen

I am reluctant to ask for more reports from you because I feel your group gets so involved with reports that it ties them up for too long a period, but I feel we need more reports even if it means cutting out some of the more elaborate ones we are talking about doing.

There are two reports I would like to have you do monthly. The first is a list of specific orders which we are working on. I would like to have this in chart form, the first column giving the customer and name of the order, description of the equipment, quantity, and date when we started working on it. Then across the long part of the sheet a column for each month, where each month we would enter a note saying what the status is. From this I would get a feeling for what happens to the orders we are working on.

I request information from the managers directly under me, or ask them to do specific things, and very often get no response. I am terrified at the thought that customers request things from our people and get the same reaction. This chart will point out what is happening to those specific orders we are going after.

If we group them by sales office, we could also get a feeling for the number of orders each office is going after.

The second report which I would like to have updated each month is a listing of all orders we have with special engineering involved. I would like to have listed the nature of the order, date of the order, delivery date, and what engineer is in charge. I would also like to have a column on this chart for each month so that we can see the status of these. I am very disappointed with the calls I get from customers where they feel we have almost forgotten their order when something specific is involved. Maybe we should also have a column to list which engineer approved the taking of the order.

Ken

ecc

digital

INTEROFFICE MEMORANDUM

DATE: April 28, 1967

SUBJECT: U. S. NEWS AND WORLD REPORT MAGAZINE

TO: John Leng
cc: Ted Johnson
Harry Mann

FROM: Ken Olsen

While you are here, will you look over some copies of "U. S. News and World Report" because I think maybe you should subscribe to it. It gives a concise picture of the European market as seen from the American point of view.

Ken

ecc

digital

INTEROFFICE MEMORANDUM

DATE: April 28, 1967

SUBJECT: CUSTOMER COMPLAINTS

TO: Dave Denniston

FROM: Ken Olsen

Don't bother sending me notes about letters or telephone calls that I get from customers. 80% of customers that complain to me are nuts and I don't take them very seriously.

Ken

ecc

copy Bob Savell 7/26

digital

INTEROFFICE MEMORANDUM

DATE: May 1, 1967

SUBJECT: ANOTHER VERSION OF DECTAPE II

TO: Roland Boisvert
cc: Gordon Bell

FROM: Ken Olsen

Here is another idea for a real cheap version of DECTape. The goal is to make it as inexpensive as possible. We want to accomplish this by making all compromises which can be made to significantly lower the cost. The most significant compromise is to have all the information flow serially. This not only makes the transport less critical, but, above all, makes the control very simple.

By eliminating the amount of tape, we can make a dramatic simplification over the capstan-driven one you have discussed. If we have 18 channels of information, as compared to the DECTape 3 channels, we would need 1/6 the length of tape to store the information. When we put 1/6 less tape on the reel, we can then drive the reels from a synchronous motor and we should be well within plus or minus 5% of speed control. This then eliminates the need for a capstan.

I would mount the tape reels on shafts very much like the LINC tape is mounted. On each of these I would put a clutch which would be driven by one synchronous motor. These clutches would drag during their off position. This then would allow us to keep the same configuration that we now use for DECTape.

Another variation that might work would be to drive one of the capstans with a Slo-Syn motor and the other with a torque motor. A torque motor would always supply tension in one direction and all the driving would be done by the Slo-Syn motor.

Gordon Bell feels that this operation has to be serial, and would like to have one labeling track. There may be a single information head which gets mechanically positioned between tracks, but there has to be a separate head for the labeling track which is electronically switched to and from the serial track. The serial channel looks at the labeling track until the right data block is found and then it is switched to the data head. In this way we can get by with one serial channel.

We should identify all of the questions involved in this transport and systematically go through and answer them. One of them is the tape path and guides. It would be nice to use the same ones we're using in present DECTape, but maybe we want to reconsider whether or not we want the oxide against the guides.

Density and speed, of course, are simple questions to be answered, along with width of tracks and number of tracks.

Roland Boisvert

- 2 -

May 1, 1967

With a labeling track, there should then be no need for end of tape sensing because the computer can always look for that. It is not at all serious if we run off the end of the tape anyway. If we desire, we can put a strong leader on the supply reel that can take the torque of the system in the same way that the Grundig dictating machine does.

The control for this serial unit might be so simple that it could fit on the side of the 19 inch panel which now holds logic of the TU55.

Ken Olsen

ecc

digital

INTEROFFICE MEMORANDUM

DATE: May 2, 1967

SUBJECT: AWARDS AREA

TO: Jim Jordan

FROM: Ken Olsen

In answer to your memo of April 27th, Jim, maybe we should wait until we have a new lobby to display our awards. That is, of course, unless you can find some place to put them up that doesn't cost very much.

Ken

ecc

cc - Bob Snell
Dick Best

put in
memo file

digital

May 2, 1967

Mr. Roku Yasui
Toric Development Company, Inc.
58 Guinan Street
Waltham, Massachusetts

Dear Rocky:

Enclosed is some literature from the Standard Register Company who seem to manufacture the sprocket platen for most typewriters. It is my idea that we would buy the platen from them for use in our line printer.

Enclosed also are two IBM pamphlets on their bar-type line printer. We expect to have a cross-license with them soon, so one approach for a line printer would be to copy their components exactly, or maybe even buy the components from them. Their machines will vary from 120 to 144 lines and they have format control; our machine will only be 72 columns and no format control. They have character sets of 13, 39, 52, and 63; we will standardize on 64 or 96. They go up to 750 lines a minute; we will be content at 100 - 200 lines per minute.

From this literature, I don't quite understand how their hammer operates. We could probably buy one as a spare part and try it. I think they have one hammer per column which they physically cock and hold with a common holding magnet. When they energize the print magnet coil, it releases the hammer like the hammer in a revolver. During the line feed, they cock all the hammers, probably by rotating the base. Because the hammers are so narrow and the print coil is so small, they can make them on 0.1 inch centers. I am guessing at much of this from the Figure 3, and some of the ideas I have already had.

A magnet is very effective in holding when it has almost 0 gap. The operation as I have described it would take advantage of this fact because when the hammer is cocked the magnet is brought in contact with its armature.

Mr. Roku Yasui

- 2 -

May 2, 1967

Our original idea was to use less than 72 hammers and have each hammer operate 2, 4, or 6 columns. Operation would be much more straightforward, however, if we had 72 hammers. If the hammers are cheap enough, this would be a nice system.

Sincerely yours,



Kenneth H. Olsen
President

KHO:ecc

Enclosures

digital

INTEROFFICE MEMORANDUM

DATE: May 2, 1967

SUBJECT: TWX MESSAGE FS-854

TO: Ken Larsen

FROM: Ken Olsen

Please rewrite your note to Jack Shields regarding the TWX message to Al Beal in one or two simple sentences. I am not always sure I understand what is meant when things are put in this complicated way.

Ken

ecc

digital

INTEROFFICE MEMORANDUM

DATE: May 2, 1967

SUBJECT: TECHNICON

TO: Stan Olsen
cc: Fred Gould

FROM: Ken Olsen

I asked Fred Gould to visit Technicon sometime to make an OEM sales pitch.

Ken

ecc

digital

INTEROFFICE MEMORANDUM

DATE: May 2, 1967

SUBJECT: PDP-8 SLIDE SWITCHES

TO: Jack Shields

FROM: Ken Olsen

When Mort Ruderman and I visited Technicon last week, they mentioned the problems they are having with PDP-8 slide switches and talked about it as if it was common knowledge that all PDP-8 customers have problems with slide switches. Are we having any more trouble lately?

Ken

ecc



INTEROFFICE MEMORANDUM

DATE: May 4, 1967

SUBJECT:

TO: Rocky Yasui
cc: Dick Best
Bob Savell
Jack Smith

FROM: Ken Olsen

We have several parts of many Teletype printers. I assume that they are all defective, and therefore useless, but we saved them because they may be of value someday. I suggest that you contact Jack Smith and get the parts to make one sprocket-feed machine, and that you use this to get a feel for the layout of a new printer. There is no reason why this should work, but from this you can see the design of a sprocket-feed mechanism and how they hold the paper.

I would also suggest that you get a new roll of Teletype paper (of the sprocket paper variety), and also one with two or three carbon copies, so that you can run experiments on how much pressure is necessary to penetrate a carbon.

Ken

ecc



INTEROFFICE MEMORANDUM

DATE: May 4, 1967

SUBJECT: MORE RANDOM NOTES ON CHEAP LINE PRINTER

TO: Rocky Yasui
cc: Dick Best
Bob Savell

FROM: Ken Olsen

Here are some notes that I have been accumulating on the design of a cheap line printer. I like the idea of a stick printer, as compared to a drum or chain printer, because the stick is relatively easy to make. It doesn't have the tolerance problems of a chain, nor the expense of a drum. Its only disadvantage is that it needs a uniform back and forth motion, which is not as natural as the rotary motion of a chain.

The stick can be made either by engraving the characters of a solid bar and hammering from the back of the paper in the same way that a drum printer works, or by mounting the characters on spring fingers and hammering them against the paper like IBM does.

The design of the hammer is the key design problem. If they can be made on tenth inch centers, the printing can be quite fast and rather straightforward. In order to put them on tenth inch centers, the coils would have to be staggered so that they can be almost $2/10$ of an inch wide. If necessary, the armatures can also be staggered; i.e., half of them being up and half being down, and then even between those sets the coils can be staggered.

If the keeper bar on the hammer is pivoted, it can be made so that there is complete contact with both poles of the armature without careful fitting.

If the hammer is held against the armature with a permanent magnet, there is no danger of the hammer being fired by a power failure like there would be if it was held with a coil. It would then only be necessary to drive current into the coil to release the permanent magnet. Therefore, the time cycle would be small and a large amount of current could be driven through the coil through capacitor discharge without the need for very large power supply currents (as might be necessary in a case where the hammer is held by an electromagnet).

Both the hammer and the type support should probably have spring joints rather than loose pin joints. This way there would be no slop and no wear. We can probably make experimental type bars by soldering the characters from an ordinary typewriter onto shim stock. We can form the shim stock or spring stock into a comb for making a type bar by chemical etching, and we might form the spring for the hammer the same way. When the hammer is released to the magnet, it should overshoot its quiescent position to hit the type. After the type is hit, it should then come to its quiescent stable position, which is away from the type.

It is my guess today that there should be 64 characters as in a Type 33 Teletype. In the future we may want 96 characters, which would then include lower case. If we mount these on centers such that 62 characters take 7.2 inches, we would then want two complete alphabets on a stick, and the stick would then have to move 7.2 inches for each line printed. If we find it is too expensive to make 72 hammers on 0.1 inch centers, we can then make 38 hammers on 0.2 inch centers and print half the characters as the stick goes right and the other half of the characters when the stick goes left.

The typewriter ribbon is always a somewhat messy operation on a line printer. It seems to me that people often started out with a narrow ribbon and ended up with a ribbon which was full width of the page. We may be able to get by with ribbon about one inch thick and run it through cocked at an angle so that we use the full width of the ribbon. Maybe we should plan so that we can eventually go to ribbon which is full width of the paper. When this is done, it completely hides all the type mechanism.

We should consider NCR pressure-sensitive paper and paper which is sensitive to silver. We might use silver type, which is replaced periodically, and use only silver-bearing paper.

Line printers are very dirty. Paper continuously releases dust and we may want to consider a fan which blows out the dust. Above all, we should design the machine so that it will tolerate a lot of dust.

We can drive the stick back and forth with a Slo-Syn motor with a rack and pinion.

Another way of driving the stick is to use a synchronous motor and two clutches - one for each direction. Another way is to drive the stick in one direction with a synchronous motor and clutch, and then let a spring instantly return it to its initial position by releasing the clutch. This is very much like the Type 33 operates.

Another way is to have a metal ribbon continuously rotating between two pulleys. There would be two pair of dogs on this ribbon; one set which would bring the stick to the right and the other to the left. This way we have continuous uniform rotary motion which will keep the stick going back and forth at a uniform rate. Other dogs on the tape would be used to advance the paper and to cock the hammers. The stick would then go back and forth continuously, 24 hours a day, whether there is printing going on or not.

We should also consider magnetostriction for use as a hammer, and also piezoelectric crystals. These probably don't have enough motion or any sensible amount of length and power; however, they may be used to trigger mechanically-cocked hammers.

Ken Olsen

digital

INTEROFFICE MEMORANDUM

DATE: May 5, 1967

SUBJECT: TECHNICON

TO: Mike Ford
Mort Ruderman

FROM: Ken Olsen

On the morning of Friday, May 5, Mr. Harry Gould of Technicon called. He would like to borrow a machine on June 16th for a show they have in Europe from June 21st to 28th. I told him that we would like to do this sort of thing but that I couldn't speak for the product line. I asked Mike to call him back. His number is: area code 914, OW 3-1000.

Ken

ecc

DATE: May 5, 1967

SUBJECT: TERADYNE

TO: Mike Ford
John Jones
Nick Mazzaresse
Stan Olsen
Win HindleFROM: Ken Olsen

Alex d'Arbeloff of Teradyne came out to visit me today to discuss the problems they have had with DEC.

They have been very successful with their products, and next year expect to sell a hundred systems with DEC computers. From this I gather their problems have not been too severe.

Their main problem is trying to develop a consistency between products because of the discount policy we have. The mathematics gets quite involved to explain how they get their problems, but, simply, he would like the PDP-8, PDP-8/S, and PDP-9 interchangeable for discount reasons.

When I explained the difficulties of having discounts cross between lines, he expressed the desire to have us work out a special pricing system for big customers like himself.

Because their business is complicated by late deliveries on certain parts of equipment, and because some parts are shipped to the customer and some directly to Teradyne, he feels there should be a man inside assigned to looking out for their account. I feel this is a good idea, and it might be the same man who handles Foxboro.

I told him we would consider these requests and call him in a week or so to let him know how our thinking was progressing.

Ken

ecc



INTEROFFICE MEMORANDUM

DATE: May 9, 1967

SUBJECT:

TO: Nick Mazzaresse
Mike Ford
cc: Stan Olsen
John Jones

FROM: Ken Olsen

During the Engineering meeting this morning, Dan Wardimon said, or implied, that an arbitrary decision was made by Mike Ford to rule out the Burrough disc from the PDP-8 program. This decision is probably wise, and probably should be done, but I am very sensitive to hints of arbitrary action because, apparently, this is the one factor which disturbs our engineers.

When decisions are made, please be sure that due consultation is made with those who would have valid opinions, and then be sure that these decisions are not passed on as the arbitrary decision of one individual.

There is a tendency on the part of engineers, and others in the Company, to pass off the responsibility for making decisions on marketing and then be critical of marketing people for making arbitrary decisions. We should make an attempt to protect marketing people from being forced to make decisions without the help of others, and then protect them from accusations of being arbitrary.

Ken

ecc

digital

INTEROFFICE MEMORANDUM

DATE: May 9, 1967

SUBJECT: COMPUTER USAGE COMPANY

TO: Larry Portner
Bob Lane
Win Hindle

FROM: Ken Olsen

Mr. Elmer Kubie from the Computer Usage Company has an idea for mechanically locking portions of a time shared memory to safely protect it from users. Are we interested in his idea?

Ken

ecc

DATE: May 10, 1967

SUBJECT: FLOOD DAMAGE

TO: Pete Kaufmann
Al Hanson

FROM: Ken Olsen

Fred Gould gave me a copy of a report entitled, "Flood Plain Information, Assabet River (Westborough to West Concord, Massachusetts)" dated June 1966. I have photocopied Plate No. 3 from this which has the key information for it. This is a study requested by the Commonwealth of Massachusetts to consider ways of eliminating flood damage like that which occurred in 1955.

We should look into this carefully because there is a possibility that with a flash flood we may lose our manufacturing facilities in Building 11. On this Plate they draw a line which shows what is a 2% annual probability of flood. This is somewhat lower than the actual 1955 level because they have taken steps to decrease flood damage. I have not studied this enough to say whether the modified probability is high enough to flood Building 11.

With planning, it might be possible to have temporary dams that could be quickly put into the doorways of Building 11. It would also be necessary to plug the drains going into the floor so that water would not come up that way.

The mean monthly run off in CFS for the month of August is 69 with a minimum of 10, but the maximum is 561. This means that most of the 561 probably comes in one day when it comes. In April the maximum was 741 with a mean of 381. From this I would guess that it spread pretty much through the whole month and is not a serious danger.

Ken

ecc

floors or basements. These rules could provide a minimum requirement concerning the safety of the structure for the preservation of life and health. This can be accomplished by requiring that a permit will not be issued for construction in a flood-prone area unless the hazard is eliminated by providing adequate drainage facilities, by a protective wall, by suitable fill, by raising floor levels of the buildings, by floodproofing, or by combinations of these methods.

e. Subdivision regulations. With zoning regulating use of the flood plain, subdivision regulations may be amended to minimize the flood hazards to uses permitted in the flood plain.

f. Other controls. Financing institutions can control the development in the flood plain by denying funds to subdivision or individual builders. Outright purchase of lands by the local community is another means of restricting use of the flood plain.

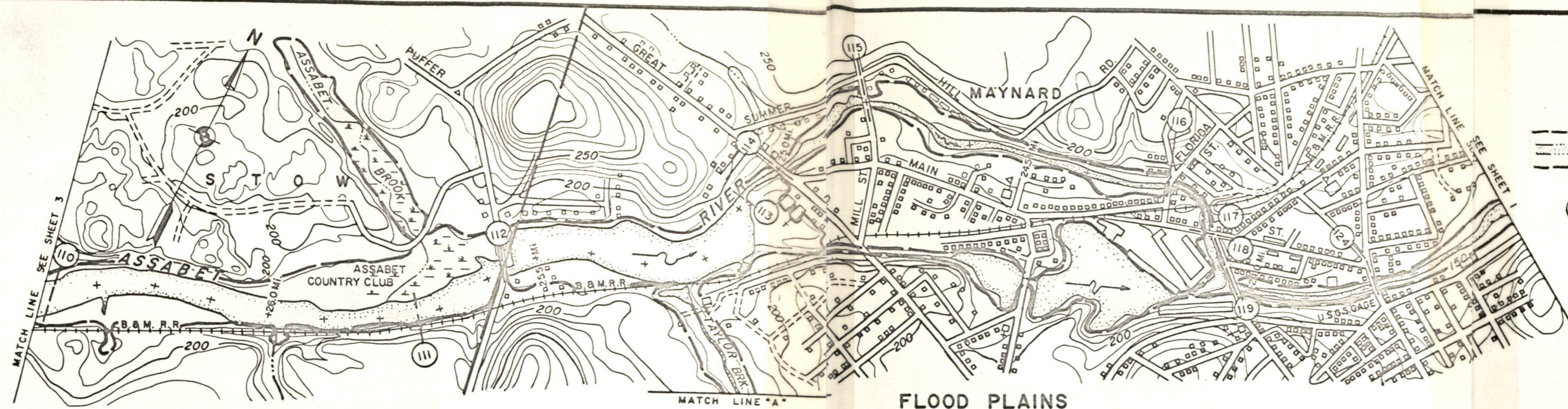
46. OTHER METHODS OF REDUCING FLOOD LOSSES

In addition to preventing flood losses through restrictive flood plain regulations, several other methods of reducing flood losses are possible.

a. Floodproofing of structures. There is much that an individual can do to protect his property from damage due to floods. The most common are: (1) controlling seepage through walls; (2) installing valves or gates on sewer or drainage lines; (3) permanently closing unnecessary openings in walls; (4) protecting interior contents, machinery, appliances and utilities; and (5) conducting evacuation drills similar to fire drills. In many cases, basement flooding can be eliminated by regrading the land around an existing building or inclosing it with a low protective wall and the proper drainage. Most of these methods can be incorporated in the design of new buildings and enforced by building codes.

b. Flood warning and evacuation. The relative size of the Assabet basin makes a flood-warning service such as the Weather Bureau provides for the larger drainage basins impractical. The most that can be expected from the Weather Bureau would be a regional forecast of "possible flash flooding in small streams in Massachusetts." With this type of warning, the Police Department or a local Civil Defense office would be on an alert status. Staff gages installed by local interests at two or three locations along the river would provide a visual index of the rate of rise. It would then be possible to prescribe critical elevations at which time certain areas should be evacuated before the flood was at its worst.

c. Channel maintenance. Direct methods of improving the channel conditions will also reduce flood damages. Local authorities should maintain a continuous surveillance of the streams to prevent unauthorized dumping, remove fallen trees that may become temporary debris dams and keep bridge and culvert openings clear of debris or vegetative growth.



FLOOD PLAINS

SCALE IN MILES
 0 0.1 0.2 Mi.

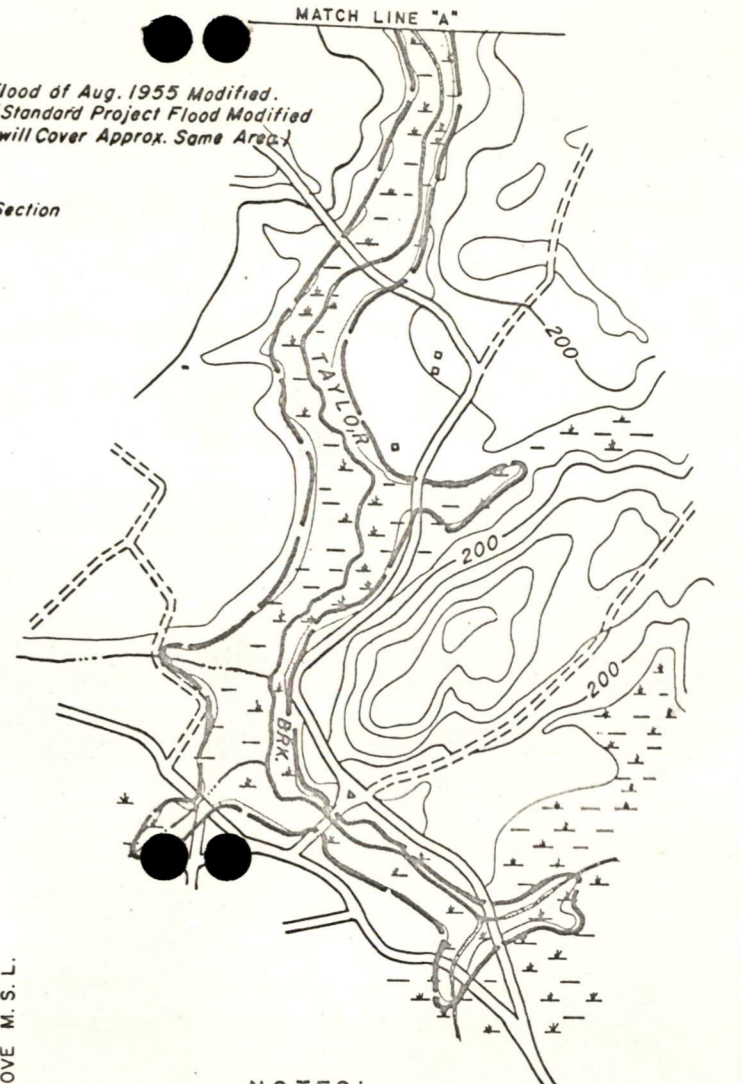
LEGEND

Normal Flow

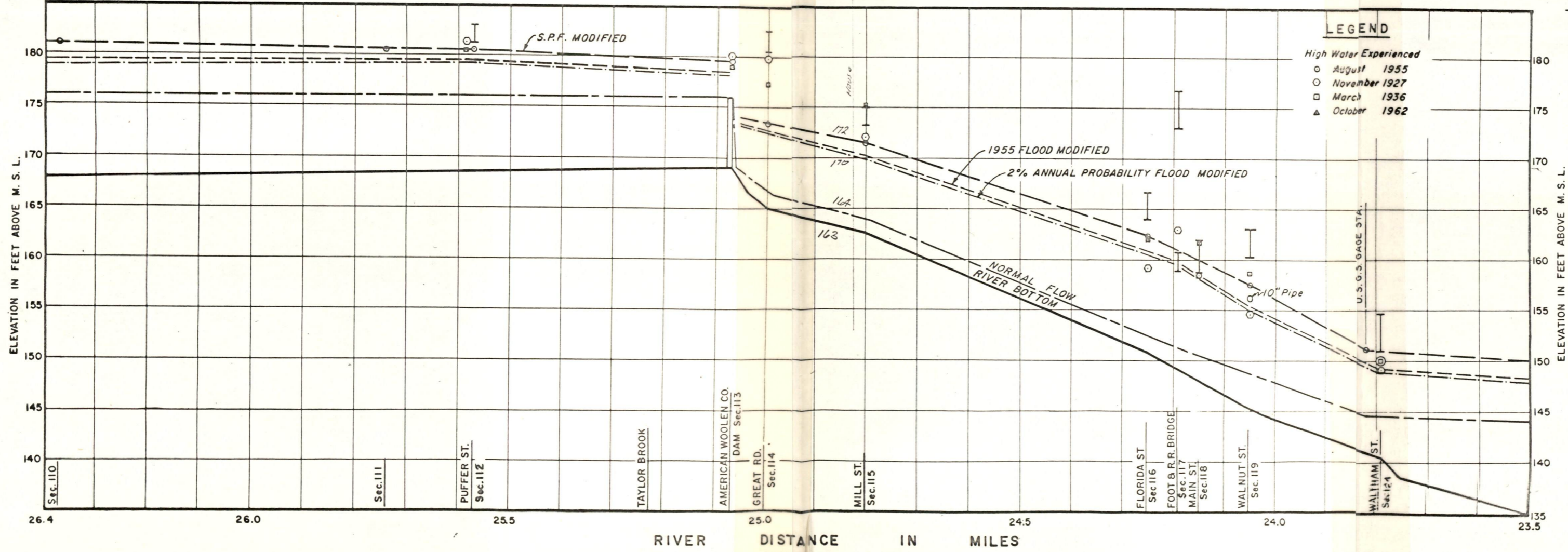
Flood of Aug. 1955 Modified.
(Standard Project Flood Modified will Cover Approx. Same Area)

10 River Cross - Section

I Bridge



NOTES:
 Elevations Refer to Mean Sea Level Datum.
 Contour Interval Equals Ten Feet.
 Topography is Based on U. S. G. S. Maps.



FLOOD PLAIN INFORMATION

ASSABET RIVER

WESTBOROUGH TO W. CONCORD, MASS.

FLOOD PLAINS & PROFILES

SHEET 2 OF 10

JUNE 1966

MILE 23.5 TO 26.4

DEPARTMENT OF THE ARMY

NEW ENGLAND DIVISION, CORPS OF ENGINEERS

WALTHAM, MASS.

digital

INTEROFFICE MEMORANDUM

DATE: May 11, 1967

SUBJECT: CAMPING VEHICLES

TO: Henry Crouse
cc: Mort Ruderman

FROM: Ken Olsen

Mort is considering using a trailer to take around and show off our equipment to the biomedical field. I suggested that he consider one of the new camping vehicles, which are a lot easier to use than a trailer. Will you see if you can collect information on these. I know that Dodge is big in it, and Chevrolet has advertised that they will modify their step vans into camping vehicles. We, of course, are not interested in the vehicle after it is converted, but the basic vehicle that could be converted would probably suit Mort's needs.

Ken

ecc

digital

COMPANY CONFIDENTIAL
INTEROFFICE MEMORANDUM

DATE: May 11, 1967

SUBJECT: NEW ASSEMBLY FACILITY

TO: Pete Kaufmann

FROM: Ken Olsen

With very little information, and the results of mainly talking to myself, my latest suggestion for a new assembly facility (when and if you want to build one) is in the middle of downtown Boston. I believe there is a lot of good loft space available. It could be near the subway and the Mass. Turnpike. I have been told that a large number of women are available in the area, and, if the working conditions are desirable, I think we could have a choice in the women we hire.

We may want to start a subsidiary company with a completely different name and a completely different set of officers, and make no implication as to the permanence of jobs. We may take one of our young fellows and one or two of our good girls and send them to Boston to help set this up.

Maine, North Dakota and Taiwan are much more exotic, but this part of Boston is closer than they are, and some of these people are already skilled in our type of business.

Ken

ecc

digital

INTEROFFICE MEMORANDUM

DATE: May 11, 1967

SUBJECT: SALES AND MARKETING DATA

TO: Ron Smart
Mort Ruderman
Dave Packer

FROM: Ken Olsen

cc: Executive Committee
Bob Collings

I have lost track of our plans for presenting sales and marketing data. Will you meet with me next Friday morning, May 19th, at 10:00 to let me know what the plans are. I would like to have Mort there to let us know if the LINC-8 can be of help in plotting the data, and I would like to hear Dave Packer's comments as to ways in which he could be of help.

Anyone else that is interested is welcome to attend the meeting.

Ken

ecc

digital

INTEROFFICE MEMORANDUM

DATE: May 12, 1967

SUBJECT: PRODUCTION STEPS OF PC01

TO: Jack Smith
cc: Pete Kaufmann

FROM: Ken Olsen

Please outline for me the production steps in making a PC01. If you would chart it out in such a way that I can tell how many times assemblies are sent out of stockrooms, I can get the picture I want.

I have heard that people are unhappy that our production system is too complicated, and I would like to have a picture of what it is.

Do this very roughly because it isn't worth spending much time on.

Ken

ecc

digital

INTEROFFICE MEMORANDUM

DATE: May 12, 1967

SUBJECT: LEAVE OF ABSENCE POLICY

TO: Bob Lassen

FROM: Ken Olsen

I haven't heard the reasons for our Leave of Absence policy, but let me pass on a few of my concerns. The fact that we have a Leave of Absence policy cannot be meant to imply that under these conditions the leave of absence automatically means that a person's job is available when they come back. If a girl is pregnant, we cannot imply that her job will get by with temporary help and that her same job will be available when she comes back.

If leave of absence is something that we want to encourage in order to have people return, two months before birth and two months after birth may be too short a period of time.

Ken

ecc

digital

INTEROFFICE MEMORANDUM

DATE: May 12, 1967

SUBJECT: DIABETICS

TO: Bob Lassen

FROM: Ken Olsen

I have been reading magazines put out by the Diabetes Association. These often include letters written by people who have trouble finding jobs because they are diabetics. I never gave it a thought, and you probably didn't either, because the extra discipline a diabetic has sometimes makes him a much more useful human being than the average.

However, I do feel that we should carefully interrogate each diabetic, or make sure the doctor does, to be sure they have it under control. A diabetic that does not control his diabetes is potentially a problem, and we can help the individual by forcing some discipline.

Ken

ecc

digital

INTEROFFICE MEMORANDUM

DATE: May 15, 1967

SUBJECT: ASSOCIATED INDUSTRIES OF MASSACHUSETTS

TO: Harry Mann

FROM: Ken Olsen

I don't know if AIM is a worthwhile cause or not. Several organizations claim they are lobbying for the good of industry, and I'm not sure which ones are worth contributing to. Maybe you should check with some of your friends in the financial community to find out what their attitudes are.

The Massachusetts Tax Payers Federation is headed by the President of Foxboro, Rexford Bristol. They, too, take credit for all legislation which is in favor of industry.

We are members of the National Metal Trades Association, which I think also does some lobbying. I think we would like to stay a member of the Metal Trades because they can be of significant help if there are ever labor problems.

Ken

ecc

digital

INTEROFFICE MEMORANDUM

DATE: May 15, 1967

SUBJECT: NEW LINE PRINTER

TO: Bob Savell
cc: Rocky Yasui
Dick Best

FROM: Ken Olsen

I would like to suggest that the design of hammers be kept the key part of the development of the line printer, and that we proceed with that before we lay tight specifications on the rest of the machine. If we can make 72 hammers inexpensively and fast, we will make a fast line printer and all the other components will be made to match. If we cut it to only 38 hammers and they are slower, the rest of the machine will also correspond.

Ken

ecc

digital

INTEROFFICE MEMORANDUM

DATE: May 15, 1967

SUBJECT: PAPER TAPE READER

TO: Ed de Castro

FROM: Ken Olsen

cc: Jack Smith
Jack Shields

I have heard a number of comments which seem to indicate that there are problems with the paper tape reader. Will you list for me the problems you know about in its design, and let me know if you think we should re-design it or if we should have a less expensive model that runs at a slower speed.

No one has given me a clear indication to the problems, but the subject seems to come up often. I would, therefore, like to have a list of just what they are because this product is getting to be more and more important to us.

Ken

ecc

Jack Smith and Jack Shields - I would like to hear your comments on the PC01 also.
KHO

Presentation made on 6/12/67

digital INTEROFFICE MEMORANDUM

DATE: May 16, 1967

SUBJECT: STANDARDIZATION PARTS OF COMPUTERS

TO: Ed de Castro
cc: Executive Committee

FROM: Ken Olsen

I gather there is a difference of opinion between the computer designers and some of the people with more general management type responsibilities as to the extent to which standardization parts of computers is practical.

I would like to see a more sympathetic understanding of problems developed between these two groups. You are considered part of the computer design group and want to develop more general management capabilities, so you may be the ideal person to develop a reconciliation of these points, or at least define them so that appreciation of the problems will be easier.

Will you look into this situation and then come to the Executive Committee in two or three weeks to let us know what conclusions you have reached. If you would like a committee to work with you on this, let me know who you would like and I'll ask them to be on it. Use members of the Executive Committee freely - particularly Pete Kaufmann and Harry Mann because their points of view and experience are very important.

Ken

ecc



INTEROFFICE MEMORANDUM

DATE: May 17, 1967

SUBJECT:

TO: Tim McInerney
Larry Portner
Stan Olsen
Nick Mazzaresse
Win Hindle
Loren Prentice
Mort Ruderman

FROM: Ken Olsen

I was at a demonstration of the Dartmouth time-sharing system last week and found that it was deadly. The sound effects and Teletype were about the only contribution the computer made to the discussion. Closed-circuit television would have helped, but I believe we could make a much simpler device to be used in trade shows, and maybe even for our demonstrations of the PDP-6 in Building 12.

If we shine a bright photographic light on the Teletype and have a large projection lens shine on a screen, we might be able to make a system which would be visible to a large audience. I experimented with a mirror lens system from our Wollensak transparency projector and a quartz iodine lamp. It worked fairly well, and I think that if the screen were shaded from the light, it would be quite readable.

This would cost us several thousand dollars to develop if we put it into Mechanical Engineering, but if someone were interested they might sketch out a system that could be built by the carpenters and cost very little. We could buy the lens from one of the projector companies, or Edmund Scientific has an f3.5, f1 6" for \$49 that would cover the Teletype page. The page could be illuminated with one or two quartz lamps. These are very compact and would not get in the way.

Ken

ecc

digital

INTEROFFICE MEMORANDUM

DATE: May 17, 1967

SUBJECT: RCA

TO: Mike Ford
Nick Mazzaresse

FROM: Elsa Carlson

Dave Reeves called me on May 16th to schedule a meeting between Ken and Messrs. Paoli and O'Shea of their Parts and Accessories Department to discuss who is going to support purchases of PDP-8's within RCA. They feel that RCA should have the support, and want adequate parts in their warehouses.

They will be here on Thursday, May 25, at 10:00 a.m., and Ken would like you to attend the meeting.

Elsa

digital

INTEROFFICE MEMORANDUM

DATE: May 17, 1967

SUBJECT: RADIO ELECTRONICS

TO: Stan Olsen
Dave Denniston

FROM: Ken Olsen

I received a call this morning from Mr. Robert Norman King, President of Radio Electronics, 292 Madison Avenue, New York City. They are a small company that have been using our modules in a data collection system. They type on a Selectric typewriter onto magnetic tape and then to a computer or another tape. They have been very happy with our modules, and are now ready to talk quantity. They want to visit our plant to be sure of our capability and to arrange special pricing.

I told him that Stan would be away next week and so he said he would come on Friday, June 2nd at about 10:30 a.m. I told him that I would like to meet him and show them around the plant, but that I could make no commitments because it would have to be a product line manager.

Ken

ecc

digital

INTEROFFICE MEMORANDUM

DATE: May 18, 1967

SUBJECT:

TO: Harry Mann

FROM: Ken Olsen

At the Board meeting on Tuesday, General Doriot asked that we plan ahead our need for money, and I think he meant that we should let him know what our plans are. I explained our cash position and our plans to borrow money for sometime, but he had in mind when we would go to the public again. He suggested that we should plan this at least 18 months in advance.

Bill McLean asked for a statement of coverage on our insurance that we paid for as protection for ourselves as Board members and Officers. There are two questions which I have in mind and that I couldn't explain to others. One is, why didn't we have this coverage expanded to take care of all other boards that we're on, and the second is, if homeowner's and catastrophe insurance can be made to cover all others, why do we need this insurance for Digital. It seems to me that homeowner's and catastrophe insurance covers as well as this extra insurance and costs less.

Ken

ecc

digital

INTEROFFICE MEMORANDUM

DATE: May 18, 1967

SUBJECT: FUNCTIONS OF OUR COMPANY NURSE

TO: Win Hindle
Bob Lassen

FROM: Ken Olsen

At one of the Personnel Committee meetings, it might be a good idea to have the Company nurse give a report on her activities. It would be good to have the statistics of what our first aid room is called on to do.

It would also be interesting to know how many of what kind of pills, and what kind of pills, are given to how many people and for what reasons.

It might be good for the group to evaluate whether or not we are going too far in treatment or not far enough, and whether or not the Company should give out vitamin pills or other pills that are taken regularly.

Ken

ecc

digital

INTEROFFICE MEMORANDUM

DATE: May 19, 1967

SUBJECT: ORDER PROCESSING

TO: Dave Packer

FROM: Ken Olsen

People have been pleased with the results of your committee on order processing. I think it is now time that you give a report so that we will all know exactly what is going on. Will you arrange with Elsa to be on the agenda of the Executive Committee to give a short report.

Ken

ecc

DATE: May 19, 1967

SUBJECT: NOTES ON MARKETING AND SALES REPORT MEETING OF MAY 19

TO: Ron Smart
Bill Farnham
Dave Packer
Harry Mann
Ted Johnson
Don Summers
George Newton
Bob Collings

FROM: Ken Olsen

The reports now coming from the Accounting Department are: 1) Bookings by Cost Center and by Product Line-DEC Order Number (these come out 10 days after the closing of the month). 2) Backlog by Product Line-DEC Order Number and by Due Date (these come out 15 - 20 days after the monthly closing). After the backlog list is purged, the due date listing will indicate all late orders. 3) Shipment Summary (this comes out twice a month within 14 days of the end of the period). 4) Cost Center Reports (these come out 14 days after the end of the month).

Harry Mann offered to produce a report which gives the bookings, bookings forecast, and figure of merit for each office and district. These tabulated reports will eliminate the need for plotting this information each month. The definition of "figure of merit" will be changed to be bookings of the previous month divided by expenses, averaged for three months, and delayed by two months.

Harry also promised to give a listing each quarter of the return on assets for each of the foreign subsidiaries.

The Sales Department will plot bookings forecasts and this new figure of merit for each quarter, and have slides made of them. They will also include with their potential orders those items that are under letter of intent but not in backlog.

At a second meeting of this Committee, to be held next Friday, May 26, at 10:00, the Sales Department will propose a plan for monthly presenting (in chart form for each office) the dollars and orders being worked on. This will include a factor expressing the likelihood of receiving the order, and a list of those likely orders which were lost during the previous month. The Sales Department will also propose a method for presenting data from each sales office on the big customers in their area. This would list orders lost from the big customers, and problems (or potential problems) with the big customers. We will also entertain a proposal for better definition of backlog.

May 19, 1967

At some future date, we will consider keeping track of Sales Call Reports. We will also, in the future, develop a system for itemizing what percentage of the market we have for each product in each area.

We will also try to systematize predictions of federal budgets in specific fields, foreign policies and statistics, and the effect of the economic situation here and in each country. It is not clear where in the Company these reports should be done; I may start them in my office for now.

Ken

ecc

digital INTEROFFICE MEMORANDUM

DATE: May 19, 1967

SUBJECT: ALLIED RADIO ORDER

TO: Henry Crouse

FROM: Ken Olsen

The next time you order something from Allied Radio, there are some sample switches I would like to have you order for me to keep in my junk box for future design. They are found in the lower righthand corner of page 193, Catalog 670. I would like one each of the five listed there.

Ken

ecc



INTEROFFICE MEMORANDUM

DATE: May 19, 1967

SUBJECT: 709 POWER SUPPLY

TO: George Gerelds
cc: Stan Olsen

FROM: Ken Olsen

I have been looking over the 709 Power Supply and feel it looks clean and attractive. Here is a small idea that you may want to try out on the 709 because it might be useful for many supplies afterward.

The power resistors across two of the supply voltages seem awkward for the little good they do. In the Allied catalog, they tell about some new Ohmite vitreous-enameled molded resistors (Series 99) which are available with a clip. This clip doubles the power dissipation of the units and I think could be mounted on the bracket which holds the capacitor. In this way we could eyelet the clips on the brackets, clip in the resistors, and solder their pigtailed right to the terminals of the capacitor.

These resistors come in 1 1/2, 3 1/4, 5, and 11 watt sizes. The price is about the same for all sizes, so we could standardize on 11 watt size which would be good for 22 resistors mounted on the clip. The 100 ohm resistor, R 3, dissipates only 4 watts, and the 15 ohm resistors, R 1 or R 2, dissipate 15 watts each.

Ken

ecc

digital

INTEROFFICE MEMORANDUM

DATE: May 22, 1967

SUBJECT:

TO: Rocky Yasui

FROM: Ken Olsen

When we design a card reader, it would be an advantage to use high production lamp bulbs (if we can make them fit). Here are two samples that I picked up in a hardware store.

Ken

ecc



INTEROFFICE MEMORANDUM

DATE: May 22, 1967

SUBJECT: MAKING MORE EFFECTIVE USE OF SECRETARIES

TO: Persons Mentioned Below

FROM: Elsa Carlson

We have invited Miss Marguerite Connolly of IBM to visit DEC and lecture on "Making More Effective Use of Secretaries."

The two-hour lectures are scheduled for June 6 and 8 at 7:30 in Ken Olsen's office. Please let me know by Friday, May 26 if you have an interest in attending, and if the date for which you are scheduled is convenient.

June 6

Ken Olsen
Pete Kaufmann
Stan Olsen
Ted Johnson
Bob Lassen
Ken Gold
Bob Collings
Ed Harwood
Dave Knoll
Loren Prentice
Henry Crouse
Jack Smith
Dick King
Joe St. Amour
Ron Smart
Bill Farnham
Ron Eisenhower
Roger Handy
Jack Shields
Tim McInerney
Ron Wilson
John Holzer
Frank Kalwell
Saul Dinman
Jim Cudmore
Jim Davis
John Jones
Howie Painter
Ken Fitzgerald

June 8

Harry Mann
Win Hindle
Dick Best
Bob Dill
Dave Packer
Jim Myers
Nick Mazzaresse
Bob Lane
Mort Ruderman
Al Alexanian
Mike Ford
Bill Landis
Ed de Castro
Clark Crocker
Stew Ogden
Bill Long
Dick Parks
Allen Kluchman
Steve Bowers
Brad Towle
Bob Savell
Paul Chambers
Steve Mikulski
Larry Portner
Pat Greene
Dave Edwards
Roger Melanson
Cy Kendrick
Al Devault

digital

INTEROFFICE MEMORANDUM

DATE: May 22, 1967

SUBJECT: BOARD OF DIRECTORS MEETING IN CANADA

TO: Harry Mann

FROM: Ken Olsen

Should we have a meeting of the Board of Directors of the Canadian subsidiary on the weekend of the Open House (June 23)? I don't remember who the Directors are, but it might do good to show respect for the Company and have a real meeting in Canada.

Ken

ecc

DATE: May 24, 1967

SUBJECT: DEC SERVICES

TO: Harry Mann

FROM: Ken Olsen

There are four areas which we should study to see if we are charging reasonable rates for the services we perform.

1. The tape preparation group gives away many tapes free which we could charge for. We do charge for some of them, but no careful consideration has been made to be sure we charge enough. Someone from your Department should study this with Harvey Shepherd. I believe that if we charge a reasonable amount for these tapes we will get more correspondence from our customers than when they are free, and this may be a money-making operation. When we stop running it like a free operation, we may get it under control enough that we reproduce other people's tapes for a standard fee.

Harvey Shepherd would also like help in studying our manual cost and pricing. Everyone else charges for manuals, and some appear to be making money at it. For example, we feel free to buy manuals from IBM because they charge for them. We should be sure, however, to charge plenty for our manuals.

2. We offer to pay the expenses of DECUS as a service to our customers. I don't think we would lose any friends, and I think there, too, people would feel more free in asking for our tapes if we charged a standard fee for them.
3. I would like to see a study made of our services for spare parts to see if we feel we are charging enough for them.
4. I would like another study made of supplies, such as typewriter paper and paper tape, to see if we are charging what the market will bear in these items.

Ken

ecc

digital

INTEROFFICE MEMORANDUM

DATE: May 26, 1967

SUBJECT: CANADIAN SUBSIDIARY BOARD OF DIRECTORS MEETING

TO: Denny Doyle

FROM: Ken Olsen

Do you think it would be a good idea to have a Board of Directors meeting of the Canadian operation at the time of your Open House? If you think it is a good idea, you can invite Stan and Harry up and we could have a meeting at that time.

If you want to do this, let me know what items you think should be covered and we will work out the agenda ahead of time.

Did you notice that CAE Industries, Ltd., Montreal, has ordered SDS Sigma 2's for flight simulator applications?

Ken

ecc

digital

INTEROFFICE MEMORANDUM

DATE: May 26, 1967

SUBJECT: TABLETOP VERSION OF THE PDP-8/I

TO: Nick Mazzaresse
Mike Ford
Dick Sogge

FROM: Ken Olsen

I would like to suggest that you consider postponing first delivery of the tabletop version of the PDP-8/I until six or nine months after delivery starts for the rack mounted units. I believe the tabletop 8/I will be an awkward computer until we design a new power supply for it. If we postpone delivery of these units, it would give us time to develop a new power supply, and would also allow us to get into production without waiting for all the elaborate and expensive parts that go into a tabletop model. It would also allow us time to evaluate the possibility of a cabinet version which might be more desirable than a tabletop version.

Ken

ecc

digital

INTEROFFICE MEMORANDUM

DATE: May 26, 1967

SUBJECT: SDS

TO: Jean-Claude Peterschmidt

FROM: *Ken* Olsen

I heard the rumor that SDS has a contract with the French Government to develop a Sigma 8 in France to be produced by a group of French companies. The rumor also says that SDS would have rights to sell this computer in the United States. This rumor sounds rather unlikely, but I would appreciate hearing any comments you might have.

Ken

ecc

cc: Mr. Arnaud de Vitry
bcc: Win Hindle
Ted Johnson

digital

INTEROFFICE MEMORANDUM

DATE: May 31, 1967

SUBJECT: HOW I RUN MY OFFICE

TO: Bob Collings
cc: Executive CommitteeFROM: Ken Olsen

Here is a note on how I think I run my office. We give product lines the opportunity to make budgets and lay out plans. When they are successful relative to the plan we accepted, we are appreciative and admit their strategy was good. We used to have a vice-president who was always second-guessing, and it discouraged many of our people who at that time seemed to have very limited competence but now seem to be unusually competent. We therefore are very reluctant to go back over the history of a product and show where people could have done better if they had done things differently.

When I have myself under control, I influence future decisions by asking people to make studies and prepare reports on specific areas. This way they eventually come to the conclusions I wish, or else I back down with never having to order them to do what I wish.

I mention this now because I am sure you can make very significant contributions to the product lines in developing techniques for analyzing product strategy, but I do want you to realize that they are very jealous of their right to be appreciated when they are successful relative to what they said they were going to do. They are also rightfully a little self-confident in their future plans. Anyone who doesn't have somewhat more self-confidence than is justifiable, wouldn't manage a product.

Our business is getting more stable, our investments are getting bigger, our time cycles are getting longer, and traditional academic and mathematical approaches to our products are getting more and more important, and I do want to encourage these.

Ken

ecc

digital

INTEROFFICE MEMORANDUM

DATE: June 1, 1967

SUBJECT:

TO: Dick Richardson

FROM: Ken Olsen

It seems to me that if we speed up or replace the electronic hoist on the vapor degreaser ,
we could increase production.

Ken

ecc

digital

INTEROFFICE MEMORANDUM

DATE: June 6, 1967

SUBJECT: SCANDATA

TO: Nick Mazzaresse

FROM: Ken Olsen

cc: Mike Ford
Howie Painter

I got a call today from Mr. Frank of Scandata. He said that they have six PDP-8 Typesetting systems on blanket order, and have had one released for six months but have been unable to get the punch for it. He was somewhat rude, or maybe just upset, in not giving me any more data and just asking me to look into it for him.

Please let me know the situation in this because I promised to call him back with the story on Wednesday or Thursday.

Ken

ecc

Norristown, Pa.

277-0500

digital

INTEROFFICE MEMORANDUM

DATE: June 7, 1967

SUBJECT: DEC HAM RADIO CLUB

TO: Win Hindle
cc: Harry Brockington
Vito Augello

FROM: Ken Olsen

Attached is a memo requesting that we consider the formation of a ham radio club at DEC. I feel that this is an item the Personnel Committee should consider, and I would like you to put it on the agenda at the convenience of the Committee. I'm sure Harry and Vito would be happy to prepare a presentation for the Committee.

Ken

ecc



INTEROFFICE
MEMORANDUM

DATE June 6 1967

SUBJECT Digital Equipment Corporation's Ham Club

TO Ken Olsen

FROM Harry Brockington
Vito Augello

At your convenience, we would like to meet with you to discuss the following:

1. The formation of a DEC Ham Club.
2. A possible location for a station somewhere in our buildings.
3. DEC sponsored QSL Cards, examples of which we have to show you.

Harry Brockington
Harry Brockington

Vito Augello
Vito Augello

cl

digital

INTEROFFICE MEMORANDUM

DATE: June 7, 1967

SUBJECT:

TO: Stan Olsen

FROM: Ken Olsen

cc: John Holzer

Please propose a plan for maintaining parts for some fixed number of years after our modules are sold. RCA promises to have parts for 15 years.

Part of this plan should be a system for keeping etched wire negatives on file and some small number of etched boards. With a system like this there would be an automatic way of saving parts which might otherwise become surplus.

Ken

ecc

digital

INTEROFFICE MEMORANDUM

DATE: June 8, 1967

SUBJECT: NEP/CON

TO: Tom Stockebrand

FROM: Ken Olsen

Next Tuesday and Thursday mornings at the NEP/CON Show there are sessions on hybrid circuits which include some interesting papers.

Also on Thursday morning is a paper on "encapsulation of thick film substrates" which you might be interested in hearing.

Ken

ecc

digital

INTEROFFICE MEMORANDUM

DATE: June 8, 1967

SUBJECT: NEP/CON

TO: Pete Kaufmann
cc: Joe St. Amour

FROM: Ken Olsen

There are going to be several interesting manufacturing sessions at the NEP/CON Show next week. One of the interesting papers to be presented Wednesday morning is on hot air soldering facilities. We might use this in soldering back panel connections.

Ken

ecc

digital

INTEROFFICE MEMORANDUM

DATE: June 8, 1967

SUBJECT: NEP/CON

TO: Dick Best

FROM: Ken Olsen

On Tuesday, Wednesday and Thursday mornings during NEP/CON, there are sessions on connections and packaging.

Ken

ecc

Exec. Comm. agenda 7/31/67

digital INTEROFFICE MEMORANDUM

DATE: June 8, 1967

SUBJECT: 16-BIT COMPUTER

TO: Stan Olsen
cc: John Jones

FROM: Ken Olsen

For the past six months I have been heartily supporting the 16-bit computer, but now, suddenly, I can't remember why I was for it. Will you make a presentation to the Executive Committee telling us exactly why we want to build a 16-bit computer.

I would like to see a comparison of the proposed 16-bit computer, a copy (or a hybrid) of one or several of the present available 16-bit computers, and a redone PDP-9. I would like to know when they would be available for delivery, what the price would be, and what the profit difference would be.

Then will you make a list of the factors which are important in the marketing of a new computer, how important is a good paper tape reader and punch (how much did the reader and punch help the PDP-9?), would a cheap line printer help, would inspired selling of a display scope help, how important is a new, inexpensive DECTape, and what do we really need in the way of a disc to make ours the most useful computer in the market?

Maybe I have been overtaken by air resulting from the thought that maybe we now have the idea that order code is the only thing that sells computers when I thought all along that it was just one of the many things. I have come to the conclusion that convenience, which includes software, in/out equipment, discs and tapes, is the most important aspect of a computer. If it really is order code, you'd better set about to straighten me out or we're going to be in conflict and I'll come down with ulcers.

I didn't send this note to Ed de Castro because I didn't want to dampen the enthusiasm for the central processor; however, it is your responsibility to be sure that we have the overall view of this machine. On the PDP-8 and the PDP-9, we not only overlooked the importance of engineering and producing the options, but we have not explored their importance to the customer. Maybe it is too much to ask those worrying about the order code to be enthusiastic about how important the new DECTape or disc would be in marketing the machine, but you'd better realize how important it is. You get the message across to the customer, and you make sure they get engineered and into the marketing story.

Ken

ecc

digital

INTEROFFICE MEMORANDUM

DATE: June 8, 1967

SUBJECT:

TO: Pete Kaufmann

FROM: Ken Olsen

It seems to me that I have heard from a number of people that Sanders Associates has a good man running their subcontracting in Bedford. Maybe you should hire him.

Ken

ecc

digital

INTEROFFICE MEMORANDUM

DATE: June 15, 1967

SUBJECT: PUTTING TRIM ON CABINETS

TO: Jim Jordan
Loren Prentice

FROM: Ken Olsen

At the NEP/CON Show in New York, I noticed that a couple of the cabinet companies have a very nice way of putting trim on their cabinets. They have a T-shaped slot in their extrusions in which they slide the head of screws so that they can fasten it to a cabinet with a simple nut. This eliminates welding or fastening a stud to the trim, and it eliminates careful location of the studs.

Ken

ecc

digital

INTEROFFICE MEMORANDUM

DATE: June 15, 1967

SUBJECT: HUMAN ENGINEERED PDP-8/I

TO: Jim Jordan

FROM: Ken Olsen

I would like to suggest that you, on your own, propose a "human engineered PDP-8/I." We tend to have such a narrow view of computers, both here and the rest of the industry, that we don't see the overall picture from the users point of view. The people who make the decisions get so involved with the order code and the efficient use of memory that they never get to see the computer from a human engineering point of view.

The PDP-8 is a frightfully tedious machine to use with a slow Teletype reader. It is enough to make one give up computers and go into another occupation. We have at our fingertips all the components to make a truly human engineered computer, and yet it has received no interest. I tried to get it started a year or so ago with the PDP-8 in a PDP-9 cabinet, but the PDP-8's were selling in their grossly inefficient form and people just went along enough to humor my suggestions. Maybe if you approached this now you might make a real contribution and sell soundly conceived ideas.

One possibility would be to put the PDP-8/I in a PDP-9 cabinet with paper tape reader and two DECTapes above the console and a display scope in the narrow vertical section on the side.

You might talk to the Tektronix salesman to see what could be put in this area. This year we bought 200 Tektronix XY scopes and next year we should buy a lot more, and it might be worthwhile to make something special. It probably should have a 7 inch tube instead of a 5 inch tube, and it would be nice to have their new 7 inch storage tube ^{when} available. I don't think we need the complete oscilloscope as they sell to us now and we might just get a few of the components and assemble them ourselves in a vertical frame. For the output of our A - D converter, we can get a signal much larger than what they normally receive and so we might eliminate their preamplifiers.

I would like to get a bigger, better scope with fewer knobs at less cost and that looks better in our cabinet.

We should also develop an inexpensive light pen to go with this system.

"The human engineered PDP-8," or "the first human engineered scientific computer," would really give us a vehicle to do some jazzy selling.

If the price of the new DECTape is low, and the price of the scope and light pen are low, we should walk away with the whole computer market.

ecc

Ken

digital

INTEROFFICE MEMORANDUM

DATE: June 15, 1967

SUBJECT:

TO: Al Hanson

FROM: Ken Olsen

We have a three ton (I think) water-cooled air-conditioner in the back room of my office. If it is fixable you may want to use it somewhere; if it is not, you might as well remove it and throw it away.

Ken

ecc

digital

INTEROFFICE MEMORANDUM

DATE: June 19, 1967

SUBJECT: LINE PRINTER

TO: Bob Savell
Dick Best
Rocky Yasui

FROM: Ken Olsen

I think we learned a lot about the problems of the line printer at our meeting last Thursday, and I feel it was a worthwhile session.

I am afraid that the hammers are going to be expensive enough to make it worthwhile to make two passes at each line. I suggest that you consider making hammers on 0.2 inch centers and that the whole hammer and magnet assembly be moved a third of an inch after each pass. This can be done without any extra actuating mechanism by having the type comb push the mechanism to its new position at the end of each trip.

With this wider spacing, I think we could get by with only one spring per hammer rather than the two parallel springs we liked when hammers were on 0.1 inch centers. A steel armature can be fastened to the top of this spring which is high enough to cover two magnets. This way, two rows of magnets could cover the whole row of hammers. The cores can overlap, and the coils can miss each other and be 0.4 inches wide. The coil should be on the leg of the horseshoe, and not on the body of the horseshoe, for ease of assembly. The legs without coils can overlap.

Ken

ecc

digital

INTEROFFICE MEMORANDUM

DATE: June 19, 1967

SUBJECT: PC01

TO: Ed de Castro

FROM: Ken Olsen

I asked Jack Shields to give me comments that Field Service people have made after their experience in the field with the PC01. Attached is his reply. Please let me know what you think of their suggestions.

Ken

ecc

DATE: May 22, 1967

SUBJECT: THE PC01 OPTION

TO: Ken Olsen

FROM: Jack Shields

Listed below are my comments on the PC01 option including the Paper Tape Reader and Paper Tape Punch. I feel we have a fundamentally better product than any of the vendor supplied Readers we have supplied in the past. With a little bit of work we could make an outstanding Reader Package rather than one that is just a little bit better than the Digitronics.

1. The idea of a master slice adjustment for all holes does not appear to be fundamentally sound, even though different diameter holes for the photo diodes have been drilled according to the diodes relative position to the light source. Feed hole is by far the most critical of these and amplifier adjustment is limited by the feed hole. (Feed hole is merely used to detect end of tape.)

We have many suggestions for a better way of handling this. They are:

- 1.1 Remove feed hole adjustment from the pot control.
- 1.2 Add two pots and have three separate adjustments:
#1. for feed hole, #2. for the holes furthest away from the light source and #3. for the closest.
- 1.3 Change the value of the base bias resistors in the amplifier to compensate for the differences of light intensity. (This change was incorporated successfully in the Typesetting Readers which use essentially the same technique as the PC02 but run at a slower speed.)

Mechanical

2. Adjustment

- 2.1 The reader strobe adjustment requires adjustment of the data to the strobe by varying the relation of the feed sprocket to the motor shaft. Once the set screw had made a cut in the shaft, it is difficult to change by a small amount as the set screw will seek out the original cut.

- 2.2 This is compounded by the fact that a damping spring is mounted between the sprocket wheel and the plate. The spring tends to over-compensate and does not allow for easy adjustment of the lateral sprocket relationship.
- 2.3 At present the reader motor is turned to adjust the strobe because of the previously mentioned difficulty. However, this adjustment has a limited range and the earlier adjustment must be made first.
- 2.4 The plexiglass over the photo diode warps and the glass loosens on the block. This glass is also very fragile and tends to crack very easily in shipment and handling.
- 2.5 The lamp for the PC02 is a bayonet type which is much the same as the Digitronics lamp but the PC02 does not hold the bulb firmly thus it tends to rotate which causes the light pattern to shift diagonally to the diode head.
- 2.5 If for any reason the paper tape does not fit snugly over the sprocket, the sprocket wheel will, when told to move, shred the paper. In fact, it is fairly easy for this to occur since there is no accurate rear guide for the paper and an operator may easily misalign the paper when loading the reader.

3. Punch

- 3.1 No 50/60 cycle motors are available for the punch. 50 cycle machines are using 60 cycle motors with a 10K pot in series with the SCR to drop the voltage to 92 volts.
- 3.2 The rear driving pulley on the motor is not aligned parallel with the front pulley.
- 3.3 The rear driving pulley is not the right diameter, and therefore, the teeth on the cog belt ride up on top of the driving teeth. Because of this, the tension on the driving belt is too great and cannot be corrected because the punch unit is already at the bottom of the driving slots.

- 3.4 It takes 45 minutes to get the punch into or out of the unit, then before you are able to work on the punch you must strip it from its mounting frame. The connecting wires are attached by tab connectors which are difficult to remove.
- 3.5 The tabs are not color coded or marked, therefore, they could be incorrectly installed and cause the 823 SCR driver to burn out.
- 3.6 The SCR driver has exposed power diodes which are difficult to avoid when emptying the chad box. Someone could easily be injured because of this.

JJS:ned

digital

COMPANY CONFIDENTIAL
INTEROFFICE MEMORANDUM

DATE: June 19, 1967

SUBJECT: DIGITAL LOGIC CORPORATION

TO: Harry Mann

FROM: Ken Olsen

Attached is a D & B on Digital Logic Corporation, Dick Musson's company. He has hurt the morale of our people by telling them that he has sold half of his company for half a million dollars -- they all want to know why they can't be millionaires too. He was supposed to have sold it to Wyle Laboratories (their D & B is included also).

Their balance sheet is a little old, but it doesn't seem to me that they are doing particularly well; in fact, for the number of people they have it seems to me that they must be losing their shirt on that volume. Could you look this over and drop a note to Ted and myself about this. As you write, keep in mind that we may send a copy of it to our Los Angeles office.

Ken

ecc

digital

INTEROFFICE MEMORANDUM

DATE: **June 20, 1967**

SUBJECT: **BAR CHART OF MAJOR PRODUCT LINES**

TO: **Stan Olsen
Nick Mazzaresse
Win Hindle**

FROM: **Ken Olsen**

I would like to call another Woods meeting for early in July before people start taking their vacations (this could be a half day meeting). I would like to ask each of you to plot out a bar chart for the next five years for your major product lines - the PDP-8, PDP-9, PDP-10, and modules. I know it will be very rough guessing, but it could be a vehicle around which we can think and discuss things.

This would make it very easy for us to discuss alternatives, such as PDP-9/I instead of a 16-bit machine, or in addition to a 16-bit machine. It would also force each computer group to write down when they want each type of peripheral equipment.

Ken

ecc

digital

INTEROFFICE MEMORANDUM

DATE: June 20, 1967

SUBJECT: MAGNETIC TAPE TRANSPORT DEVELOPMENT

TO: Win Hindle
cc: Bob Savell

FROM: Ken Olsen

When you accepted responsibility for the magnetic tape transport development work, I don't remember what the understanding was as far as what your specific responsibility was. Please let me know whether you accepted engineers who had a fixed responsibility with the Company to finish up the tape transport and after that you had the engineers to use at your option, or whether you had the responsibility (until it was given to someone else) to supervise this group to keep making developments in the tape transport area.

If the understanding was that this group was going to continue developing tape transports until we decided as a Company to stop this development, will you make a rough schedule of development for five years. This will be exceedingly rough for the last three years, but I would like to see what plans people have in mind for the tape transport after this one, and maybe some indication of what options we have so that when decisions are made all of us are on board and ready to contribute to the decisions. It would be nice if you could shade in the development portion of the schedule, and put in what you think the cost will be for each quarter of that development. Then, in the open part of the bar, put down what profit we should expect each quarter.

Ken

ecc

digital

INTEROFFICE MEMORANDUM

DATE: June 20, 1967

SUBJECT: DISC DEVELOPMENT

TO: Nick Mazzaresse
cc: Mike Ford

FROM: Ken Olsen

When you accepted responsibility for the disc development work, I don't remember what the understanding was as far as what your specific responsibility was. Please let me know whether you accepted engineers who had a fixed responsibility with the Company to finish up the disc and then after that you had the engineers to use at your option, or whether you had the responsibility (until it was given to someone else) to supervise this group to keep making developments in the disc area.

If the understanding was that this group was going to continue developing discs until we decided as a Company to stop disc development, will you make a rough schedule for development for five years. This will be exceedingly rough for the last three years, but I would like to see what plans people have in mind for the disc after this one, and maybe some indication of what options we have so that when decisions are made all of us are on board and ready to contribute to the decisions. It would be nice if you could shade in the development portion of the schedule, and put in what you think the cost will be for each quarter of that development. Then, in the open part of the bar, put down what profit we should expect each quarter.

Ken

ecc

digital

INTEROFFICE MEMORANDUM

DATE: June 20, 1967

SUBJECT: ROUTINE PHOTOGRAPHY

TO: George Lord
Bill Long
cc: Harry Mann

FROM: Ken Olsen

I would like to see if there is some of the routine photography that we can send outside the plant to be done. Will you look into the possibility of having a single lens reflex 35 mm camera with built-in exposure meter left in Bill Long's area so that one of his people can take all the reference pictures on each system. Then, if there is a place that we could mail the film, they could return 8" x 10" prints to us for our records. I suspect that if we find the right processing group this might be an inexpensive way for us to get our reference photographs. I would like to hear any other ideas you might have where we can cut out some of the routine work which now ties us up.

Ken

ecc

digital

INTEROFFICE MEMORANDUM

DATE: June 22, 1967

SUBJECT: FIVE-YEAR PLANS

TO: Bob Collings

FROM: Ken Olsen

I have asked a few of our people, and I should ask them all, to lay out their product plans for the next five years. I know they are vague a year from now, and exceedingly vague five years from now, but I would like to have them put it down so this can be the basis of our long-term planning. You might think of a format which they could use to lay this out, and that might make it easier to get the information from them.

Ken

ecc

digital

INTEROFFICE MEMORANDUM

DATE: June 22, 1967

SUBJECT: INTERNAL CIA

TO: Bob Collings

FROM: Ken Olsen

I would like to have you outline the jobs which I have asked you to do when you start full-time, and then we can set priorities and define them.

One job which we talked about, and which the Executive Committee is quite interested in, is the internal CIA. The companies they would like to have you watch with great care are SDS and 3 C's, and with less care, but to look out for new developments, would be IBM and their 360-30 and -40 which compete with our PDP-10, their typesetting system, the 1130, the 1800, and their in/out developments; and, of course, any new developments in the small computer area. We are also interested in the CDC 1700 and 3000 series machines, and also what they have available in peripherals.

The other small companies which don't look too dangerous (but we ought to keep our eye on them to make sure they don't sneak up on us) are Interdata, ASI, SEL, Interstate, and EAI.

Ken

ecc

digital

INTEROFFICE MEMORANDUM

DATE: June 22, 1967

SUBJECT: BOOK OF SPECIFICATIONS FOR PROJECT SCHEDULES

TO: Bob Collings

FROM: Ken Olsen

We decided that, in addition to developing a better system for reporting on schedules, we should also have a book of specifications that go along with each project. This book of specifications should have some formality involved in making changes. It is sort of foolish to have a time schedule with open specifications.

We also want to do the same with our marketing plans. We would like to collect all the marketing plans and formally present them, and then keep track of them in the same way we keep track of scheduling.

Will you make sure that I collect these marketing plans. They are PDP-8, PDP-8/S, PDP-9, PDP-10, Modules, A-D, Digital Test, Display, Biomedical, Physics, Typesetting, Educational, Oceanography, Industrial, PDP-X, Data Acquisition, and Communications.

Ken

ecc

digital

INTEROFFICE MEMORANDUM

DATE: June 22, 1967

SUBJECT: DEC SERVICE OPERATIONS

TO: Bob Collings

FROM: Ken Olsen

We plan to review our service operations within the Company, and by doing one every two weeks, in a year we will have them all covered. In my Department there will be Ken Gold's operation.

In Harry Mann's operation there is Plant Engineering, Office Services, Printing, Art, Photography, Data Processing, and Cost Accounting.

Under Nick there is Computer Administration, and Promotion.

Under Win is Personnel, DECUS, Program Library, Customer Training, and In-House Training.

Under Ted is Field Service, Direct Mail, and Trade Shows.

Under Pete is Purchasing, Drafting, and Metal Shops.

Under Stan is Traffic, Mail Room, Library, Model Shop, and Printed Circuit Layout.

Ken

ecc

digital

INTEROFFICE MEMORANDUM

DATE: June 22, 1967

SUBJECT:

TO: Bob Savell
cc: Rocky Yasui
Dick BestFROM: *✓* Ken Olsen

I like the idea of using solenoids as hammer drivers. It makes the assembly exceedingly easy and straightforward. The armatures are floating and so there are no bearings at all. If we put them on 0.2 inch centers, they fit rather easily if we stagger the coils. I built a model showing how the coils can be staggered. On this model I have two magnetic returns, one on top and one on the bottom, but we might get by with just one on the bottom with spacers on the top, and this would make it a little easier to assemble. I have some brass tubing and tubing cutters that you can take to fool around with if you would like.

I would wind the coil directly on the tubing with enameled wire (and no insulation) to get as much wire on the tubing but still fit between the other pieces of tubing. I think we can get three or four layers of No. 30 wire on.

The armature would be made of a piece of soft steel $1/8$ of an inch in diameter with brass or nonmagnetic stainless steel on each end of it to give it the right length. These three pieces would be butt-welded together and then ground to make them perfectly straight and uniform in diameter. A "C" spring clip on the end would hold the return spring in place.

This whole magnetic assembly would be pushed between its two positions by the type bar as it comes to its extreme, and in this way automatically position it.

Ken

ecc

digital

INTEROFFICE MEMORANDUM

DATE: June 22, 1967

SUBJECT:

TO: Bob Lassen

FROM: ~~Ken~~ Olsen

I would like to make a rule that we never have both boys and girls in dark rooms at the same time. This means we should not hire any girls for darkroom work.

Will you let me know any time our badge production gets behind. We should have badges available for employees the day they start work, and every time we get behind I want to know about it.

Ken

ecc

digital

INTEROFFICE MEMORANDUM

DATE: June 26, 1967

SUBJECT: NORTHEAST ELECTRONICS CORPORATION

TO: Bob Collings

FROM: Ken Olsen

I am Director of a small company up in Concord, New Hampshire that makes test equipment for the telephone industry. They are very successful and run a very good operation; however, they do not have a clear feeling for how to approach planning the future, or even how to formulate what their goals are. It was suggested that they might find it profitable to have one of the business schools make a study of them. I suggested that you might drop their name at the Business School as one of the potential corporations to be studied.

Ken

ecc

digital

INTEROFFICE MEMORANDUM

DATE: June 26, 1967

SUBJECT: OTTAWA AIRPORT BOOKSTORE

TO: Pete Kaufmann

FROM: Ken Olsen

At the airport in Ottawa, there is a very good bookstore. They have one section on business books which has several books on how business is done in Canada. I thought of buying one or more of these books, but thought I'd wait until Harry came so I could talk him into buying them because I didn't really plan to read them myself anyway. Harry's plane was late and so I missed him, and neither of us bought the books. You might like to look them over yourself when you're up there this week and see if they look worthwhile.

Ken

ecc

RECEIVED

1967 JUN 27 PM 12:14

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27/67

WUI TLX NYK+
DIGITAL MAYN
85184327"
DIGITAL READING
DIGITAL READING
DIGITAL MAYN

DIGITAL EQUIPMENT CORP.
TECHNICAL PUBLICATIONS

MSG 2093 6/27/67

TO JOHN LENG
FROM KEN OLSEN

U R G E N T . U R E N T

B.H. IS COMING TO U.S. NEXT WEEK. HE WANTS ME TO TELL HIM WHY THE
ACTION WAS TAKEN. HE CLAIMS NO ONE TOLD HIM.

PLS DROP NOTE TELLING ME WHAT I SHOULD SAY. PLS ENCOURAGE HIM NOT
TO COME.

I ASSUME HE IS COMING ON PERSONAL BUSINESS TO FIND A NEW JOB AND NOT
AT DEC'S EXPENSE. I WILL SEND HIM A LIST OF HEADHUNTERS THAT HE
SHOULD MAKE APPOINTMENTS WITH BEFORE HE COMES, IF HE COMES.

HAS HE ACCEPTED AND SIGNED OUR GENEROUS TERMINATION TERMS?

ARE HIS CREDIT CARDS RETURNED?

END OR GA

*
DIGITAL RADING
DIGITAL MAYN
*
DIGITAL READING

MSG 2108 6/27/67

TO JOHN LENG
FROM KEN OLSEN

I WILL SEND THE FOLLOWING TELEX TO B. H. TOMORROW IF I GET YOUR APPROVAL.

I NORMALLY WOULD BE HAPPY TO VISIT WITH YOU AND TO HELP YOU IN ANY WAY I CAN BUT, UNDER THE CIRCUMSTANCES, I FEEL I MUST REFUSE TO SEE YOU UNTIL AFTER YOU HAVE ACCEPTED AND SIGNED OUR GENEROUS TERMINATION CONDITIONS.

ALSO

RECEIVED

1967 JUN 27 PM 7:52

DIGITAL EQUIPMENT CORP.

TECHNICAL PUBLICATIONS

digital

INTEROFFICE MEMORANDUM

DATE: June 27, 1967

SUBJECT:

TO: Jim Jordan

FROM: Ken Olsen

While I was in Canada last week, I visited a company that makes kitchen cabinets. They can no longer get veneers, and so they are developing a system for putting plastic on their wooden panels. They shape the panels out of chip board and put them in a vacuum forming machine, coat them with glue, and form the plastic with vacuum over the board. This gives a surprisingly good finish, and allows them to make very elaborate looking doors from simple chip board.

I'm not sure how this can be used in our business. This material can be put over steel or aluminum, but vent holes have to be put in them (the chip board is porous enough that very few holes are needed).

This has a German patent, but the material is now manufactured by American Renolit in Pennsylvania. The German patent might be a technique for making plastic look like wood.

It is fascinating to think about making our console tops this way. We could make them out of chip board and cover them with plastic.

The four mill plastic looks a little flimsy, but the six mill plastic looks quite good.

Ken

ecc

DATE: March 31, 1967

SUBJECT: FURTHER NOTES ON PAGING SYSTEM

TO: Sales Newsletter
Engineering NewsletterFROM: Ken Olsen

When an organization reaches a certain size, it is forced to eliminate all paging. We are quickly approaching saturation in our paging system, and to avoid the day where we eliminate all paging, I would like to impose new rules to limit the number of pages.

1. First, and most helpful, would be to always look up a number in the directory and dial it rather than using the paging system. The few seconds it takes to look up a number is very little effort on one person's part to avoid disturbing 1400 people with an unnecessary page.
2. We should always leave word with someone near our telephone where we will be when we are away from the telephone.
3. Please be conscientious in returning calls from notes that have been left for you so that people will realize that a note is sufficient and will feel no obligation to page you.
4. Finally, some people complain that they are paged for calls which cannot be taken care of except at their desk anyway. If a person is not at his desk, let's consider whether he can take care of the call away from his desk before we page him.
5. We should be very conscientious to answer the first page very quickly so that there will be no temptation to page a second time.

Ken

ecc

DATE: March 31, 1967

SUBJECT: Wire-Wrapping Practices for #24 Wire

TO: Jack Shields
Steve Mikulski
Bob Savell
Ed Harwood
Ed deCastroJack Smith
Saul Dinman
Irving Doucette
Engineering NewsletterFROM: Dick Best and Ken Olsen

1. Machine-wrapped wire shall be yellow Teflon. We are experimenting with other insulations, and may one day change.
2. Hand-wrapped wire shall be any color except yellow. The preferred insulation is Kynar. Teflon will be used until the Kynar we have ordered arrives.

The principle is that color differences are used to tell which wires were put on when, and how. The first wiring done is by hand, connecting to the ground lugs on the mounting bars. The preferred wire for this is white Kynar. The next wires that are put on are machine-wrapped yellow Teflon. The next wires are hand-wired connections of the machine-wrapped panel, some done in the machine area, and some at check-out. The preferred wire here is blue Kynar. The next class of wiring is ECO's; green Kynar is the preferred wire.

Today we do not have enough Kynar on hand. We will use Teflon meanwhile, and will try to use the colors mentioned above. If a particular color is not available, use any color except white, yellow, or green. Black is to be avoided, since it is the same color as the connector block and is difficult to see.

jeb

digital

INTEROFFICE MEMORANDUM

DATE: March 30, 1967

SUBJECT: PROGRESS REPORT OF DIGITAL TEST GROUP

TO: Pat Greene
Win Hindle

FROM: Ken Olsen

If I remember correctly, it has been about three months since our last proposal from the Test Group, and about three months before the first checkpoint. I think it would be a good idea to review the progress for the Executive Committee at this time. If it is convenient with you, I have scheduled this for the 10th of April at 9:00.

Ken

ecc

digital

INTEROFFICE MEMORANDUM

DATE: March 28, 1967

SUBJECT: TAPE PREPARATION

TO: Larry Portner
Ed de Castro

FROM: Ken Olsen

I would like to review our tape preparation for making parts for the Library operation at an Engineering Committee meeting. I would like to see what ideas we can develop to speed up the operation and to try to eliminate many manual operations as much as possible. I would like to see you present a chart showing what manpower we use in each operation and how much time it takes.

Ken

ecc

digital

INTEROFFICE MEMORANDUM

DATE: March 28, 1967

SUBJECT: DEFINITIONS

TO: Jim Myers
cc: Bob Lassen

FROM: Ken Olsen

Now that we are trying to formalize our organization in order to make it easier to operate a large company, one of the things we plan to do is standardize definitions. Will you prepare for me the definition of 1) executive secretary, 2) secretary, 3) stenographer, and 4) clerk, and then will you get an estimate for me as to how many girls we have in each category.

Ken

ecc

digital

INTEROFFICE MEMORANDUM

DATE: March 28, 1967

SUBJECT: ITEMS FOR THE PERSONNEL COMMITTEE

TO: Win Hindle

FROM: /Ken Olsen

Here are some of the items I would like to have the Personnel Committee cover. You may want to have subcommittees for each item. The subcommittee could be made up of people outside the regular Personnel Committee.

1. Parking
2. Cafeteria
3. Stealing within the plant
4. Fire drills and fire escapes

Ken

ecc

digital

INTEROFFICE MEMORANDUM

DATE: March 28, 1967

SUBJECT: DESCRIPTION OF MODULES

TO: Dick Best

FROM: Ken Olsen

At the Engineering Committee meeting this morning, it was mentioned that the Module Production Release has a space for module descriptions and, therefore, all modules should be described before they go into production. I said that I would ask you to be sure that there is at least a tentative description of a module before you assign a number. Then, before it is ready for production, the complete description will be made.

At next week's Engineering meeting, your committee will report on methods to control the preparation of cable modules.

Ken

ecc

digital

INTEROFFICE MEMORANDUM

DATE: March 27, 1967

SUBJECT: RESPONSIBILITIES

TO: Executive Committee

FROM: Ken Olsen

The following is information taken from the blackboard at this morning's Executive Committee meeting:

Ken Olsen

Public Relations
(On-Line)
Chief Engineer

Ted Johnson

Field Service
Quality Assurance
Direct Mail
Foreign Sales
National Sales

Pete Kaufmann

International Manufacturing
Quality Control
Purchasing
Process Engineering
Drafting
Mechanical Engineering
Incoming Inspection
Model Shop
Sheet Metal Shop
Machine Shop
Computer Assembly
Power Supplies
Computer Test

Harry Mann

Accounting
Treasurer
Office Services
(Telephones, Communications)
Systems and Procedures
Plant Engineering
(Parking, Security, Janitors, Carpenters)
Technical Writing
Printing
Photo
Art

Nick Mazzaresse

PDP-8, PDP-8/1, PDP-8/S
Mini-disc
A - D
LINC-8
Digital Test
Special Systems
DECTape
Paper Tape
Order Processing
Test Equipment
Computer Production Engineering

Win Hindle

PDP-6, PDP-10
Display
Programming
Personnel
(Training, Outside Training, Cafeteria)
DECUS
IBM Tape
High Speed Printer

Stan Olsen

PDP-9/16
Modules
Plastic Module
Module Order Processing
Traffic
Mail
Library
Module Shop
Printed Circuit Layout

April 10 - Cost Center Statements

April 14 - Final Product Line Statements

April 18 - 20 - SJCC

April 24 - Executive Committee Review

May 2 - Mailing to Board of Directors

May 9 - Board of Directors Meeting

digital MEMO

DATE March 27, 1967

TO Executive Committee FROM Ken Olsen

Please organize your list of tasks into an organization chart so that I can make a Company-wide organization chart.

Ken

ecc

digital

INTEROFFICE MEMORANDUM

DATE: March 28, 1967

SUBJECT: Marketing Committee Agenda Items

TO: Win Hindle
Stan Olsen
Nick Mazzaresse

FROM: Ken Olsen

I have put on the agenda for the next Marketing Committee, the review of budgets and plans for advertising, promotional literature, trade shows, and direct mail. I put your names as the ones to present the items, but I would suggest that you simply turn the work over to your product managers.

Ken

ecc

RECEIVED

1967 MAR 25 AM 2:44

DIGITAL EQUIPMENT CORP.
TECHNICAL PUBLICATIONS

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TO ROBIN FRITH

FROM KEN OLSEN

THANK YOU FOR THE INVITATION TO VISIT AUSTRALIA. UNFORTUNATELY,

I PLAN TO BE IN EUROPE FOR SOME TIME IN APRIL AND THE FIRST
PART OF MAY. I DO STILL INTEND TO VISIT YOU SOMETIME THOUGH.

END OR GA

+

DIGITAL AA20740

DIGITAL MAYN

DATE: March 23, 1967

SUBJECT: NOTES ON COMPUTER MODEL FOR PLANNING

TO: Executive Committee
Dave PackerFROM: Ken Olsen

There are four separate computer systems that I can see we may want within the Company. The first is Accounting. The second is Marketing (this might be a subset of the Accounting system in which we sort our Marketing data). The third is a Manufacturing system which we will use to optimize schedules, shorten reaction time and produce valid delivery times with less inventory. The fourth is a computer system to help in planning.

There are a number of things that I would hope would come out of this computer model for planning.

1. It should be a vehicle for dialogue, both up and down and sideways, within the Company.
2. It also should have the features of computer management games and that it will train managers and give them fast answers to the results of their decisions.
3. It should allow us to plan and optimize the resources.
4. It should expose those unexploited markets and products so that someone in the Company can lay claim to them.
5. It should force an internal consistency within a plan.
6. It should quickly give a sum of all plans to be sure the resources are available.
7. It should establish a mechanism to review alternatives.
8. It would then make available (or force the availability of) consistent assumptions for all products, such as salary increases and discount rates.
9. It should then point out the critical path for growth.
10. Finally, it should be, above all, an instrument to develop intuition.

Ken

ecc

digital

INTEROFFICE MEMORANDUM

DATE: March 23, 1967

SUBJECT: HORIZONS UNLIMITED

TO: John Jones

FROM: Ken Olsen

Please ask Bob Waters of Horizons Unlimited to make a presentation to the Marketing Committee sometime soon.

Attached is a memo I wrote to Jim Myers about airline reservations. You might coordinate this visit with Jim, and ask him to attend the meeting also.

Ken

ecc

Harry said no

digital

INTEROFFICE MEMORANDUM

DATE: March 22, 1967

SUBJECT: SALES OFFICE RESULTS

TO: Ted Johnson
Ron Smart

FROM: Ken Olsen

I am becoming concerned that we might be too ambitious in our making of plots and graphs. I fear that we may have such an extensive system that we don't get around to getting it done each month.

Will you lay out a schedule so that I'll know which Monday of the month you will have a complete set of slides for each office. This way we will schedule it ahead of time and you will have a date to work for. Then let me know what items you think we should cut out, if we should simplify the graphs and have one plot instead of three, and I will be willing to do this to get them in on time.

Ken

ecc

digital

INTEROFFICE MEMORANDUM

DATE: March 22, 1967

SUBJECT: PAGING

TO: Engineering Newsletter
Sales Newsletter

FROM: Ken Olsen

Our paging system is getting to be rather irritating. I have requested that we do what we can to teach the girls to page in a more pleasant tone of voice and a pleasant attitude, and, in addition, I have requested that pages only be made once. It is, therefore, important that we all answer the page immediately because normally we will not be paged a second time.

Ken

ecc

digital

INTEROFFICE MEMORANDUM

DATE: March 22, 1967

SUBJECT: PAGING

TO: Jim Myers

FROM: Ken Olsen

The paging is getting worse all the time. For a long time I never noticed it and only heard complaints from visitors, but I can't take it any longer. First, I want you to teach the girls to speak pleasantly. Secondly, let us never page for one person more than two times, and normally only one time. We will page a second time only when the person doesn't answer the first page.

Ken

ecc

digital

INTEROFFICE MEMORANDUM

DATE: March 22, 1967

SUBJECT: AIRLINE RESERVATIONS

TO: Jim Myers
cc: Harry Mann
Bob DillFROM: Ken Olsen

Please send a questionnaire to the secretaries of those men who travel often asking their opinions about our new travel agency. I would like to know about his accuracy, his helpfulness, his availability, and whether or not he is giving us the extra service that we had hoped to get by having our own captive agency.

From what I hear about this agency, they are so incompetent and lazy that I think we should allow people to make their reservations with whatever agency they want to. I check all my own flight reservations now because I don't trust them, and, if we don't get it straightened out, I think I am going to have Elsa check with the airlines to see if I am actually booked on the flights that he says I am.

When we started with this agency, I assumed we would get all the normal services and accuracy, and, in addition, I was looking for helpful things, like keeping track of good hotels in the different cities.

Ken

ecc

digital

INTEROFFICE MEMORANDUM

DATE: March 20, 1967

SUBJECT:

TO: Dick Best

FROM: / Ken Olsen

On the first floor at the IEEE Show, there are two manufacturers of DIP Handlers. One is from Waltham and the other from Cambridge.

I think we should consider silicon controlled rectifier power supplies for the new 8/1. Please check what these manufacturers now have to offer.

Ken

ecc



INTEROFFICE MEMORANDUM

DATE March 17, 1967

SUBJECT

TO Jim Jordan

FROM Ken Olsen and Mike Ford

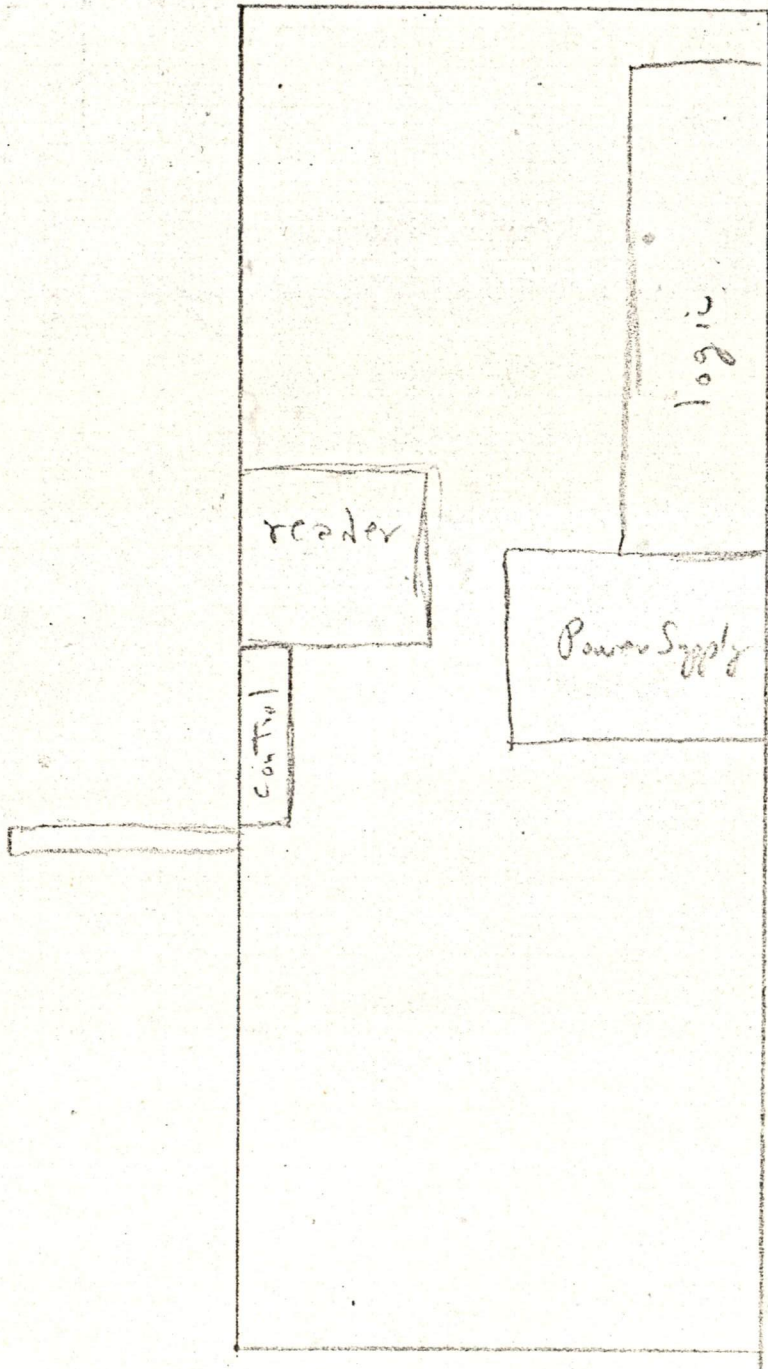
Here is an idea of the 8/I. Let's make four separate pieces: The first is a central processor which we believe will fit in a unit 24" high and 15 3/4" wide. The second is a power supply which should be less than 10" high and almost 19" wide and maybe 15" deep. The third is a paper tape reader and punch which is about 8" high, 8" deep and 19" wide. And the fourth is indicator panel which is about 10" high, 19" wide and 2" deep.

For table top use, the logic is put on top of the back end of the power supply and the indicator panel fastened to the front of the power supply. The optional paper tape reader and punch is placed on the shelf formed by the protruding part of the power supply.

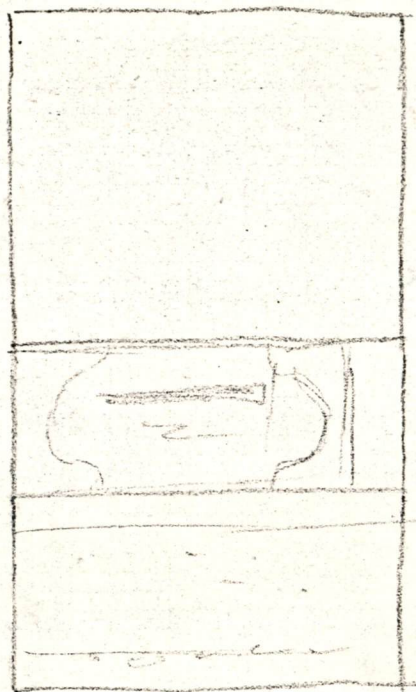
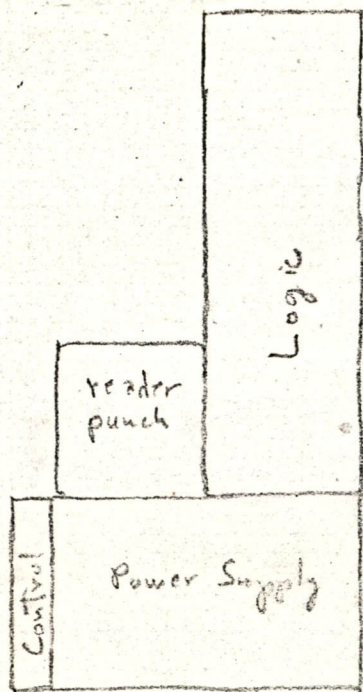
For rack mounting, the logic and power supply are by the back door of a 19" rack (or with adaptors, it can be put into a 19" rack). This leaves the whole front of the 19" rack for indicator panel, paper tape reader and punch, several DECTapes and a 32A disc.

This makes an ideal setup for militarizing the PDP-8.

ewm



KO/fer
17 March 67



Keef
17 March 67

digital

INTEROFFICE MEMORANDUM

DATE: March 17, 1967

SUBJECT: OBSERVATIONS OF THE MARCH 15TH WOODS MEETING

TO: File

FROM: Ken Olsen

Here are some observations that I remember from the Woods Meeting, but they are only from memory as I took no notes.

The main problem discussed at the meeting was the arbitrary breakdown of products between Managers. We are now at the point where we have to make arbitrary decisions on the future of the PDP-8, PDP-8/S, PDP-8/I, and a 16-bit computer. We would like to divide the units to take optimum advantage of the markets for our products. There is, however, no implication that we will periodically divide up products to equalize responsibilities.

It seemed quite commonly agreed that we have three main products - the PDP-8, PDP-9, and PDP-10 (and their successors) - which have approximately equal future potential, even though the PDP-8 is much larger at the present time. It seemed obvious to the group to break down the three products between the three Group Managers, and then divide up the other parts between the three Managers.

It is obvious that any breakdown will have some disadvantages and not be optimum from everyone's point of view, but the following breakdown seemed to be the best overall compromise.

Win would have the PDP-10, IBM transports, large disc, Personnel, and Programming.

Nick would have the PDP-8, PDP-8/S, PDP-8/I, the small disc, displays, and A - D.

Stan would have the PDP-9 and 16, the modules, and the plastic module.

These smaller items will be considered for redistribution at various times, depending on what seems optimum at the time. The A - D business may become part of the module product line, for example, the small disc crew may take on a big disc, etc.

It is not clear where a line printer and card reader will be developed, and a remote terminal console could come up in any product line, depending on who wants to develop it.

It is important that we commit ourselves to a plan, but we can delay the exact time until it is optimum; however, we should assign the disc, the IBM transport, and the plastic module people to the appropriate Group Managers as soon as possible.

ecc

Ken

dec**INTEROFFICE
MEMORANDUM**

DATE March 14, 1967

SUBJECT STANDARDIZED OFFICES

TO Henry Crouse
Jim JordanFROM Ken Olsen

Just as soon as we can get the painting and wiring done, we are going to build a large number of offices in the second half of the 3rd floor of Building 5. For many years, we have been talking about designing a standard office so that everyone will have one of consistent shape and size to eliminate the jealousy and petty arguing that children and professional people often get involved in.

Will you call on each of the furniture companies and see what suggestion they have on office layouts, and what furniture we could use.

It would be a tremendous advantage if we could get by with an office 7 feet wide. This makes a very narrow office, but it would work out very nicely because the windows are in 7 foot centers. If we made the offices 7 feet wide and 15 feet long, it would make plenty of square feet if we could make a clever layout.

One layout that looks fairly good when I sketch it out is to have the desk facing the window with a file cabinet along side it, and then on the long wall there could be a generous blackboard, and on the other wall a 2' x 6' or 2' x 8' folding leg table. If we built a bookcase on the wall like we did for the programmers, it would make the office much more attractive and not clutter the floor. There are probably a number of other variations that we could use. We might make standardized layouts and give them to people as an option to use. It is obvious that no matter how much space you have, people will fill it all up, so we should make certain limitations.

What we use for walls is a critical question. I think too much of the varnished luan doors is very depressing.

Most people who come in to see the offices we built for the programmers think they are very attractive and pleasant. Somehow we didn't sell this idea to the programmers and some of them think they are being misused. One of the most pleasant parts of this type office is the color and lightness of it all. If we ever used 6 1/2' luan doors for that, they would be like cells at Bridgewater.

The programmers' offices are somewhat too clever because it took a long time for the carpenters to put them together. Maybe we could help the carpenters figure ways to speed it up, but probably we should use a better way than that for construction. One

Henry Crouse
Jim Jordan

- 2 -

March 14, 1967

thing we should look into is panel material that can be painted bright colors. When we were looking into the offices for the programmers, we looked for masonite doors that could be painted and would come in widths like 5 feet, but were not very successful. It might be worth looking into this again.

It has been suggested that we stop in and visit the Teradyne company. They are financed by American Research also, and a very good customer of ours, besides being on very friendly terms with us. They have an old mill building in Boston, and we hear that they have made very interesting use of colors.

Ken Olsen

ecc



INTEROFFICE
MEMORANDUM

DATE March 13, 1967

SUBJECT Experimental Plating

TO Pete Kaufmann

FROM Ken Olsen

Can we get the basement of Building 5 immediately so that we could put George Brown's experimental plating area in its final location rather than building it twice?

Ken

ecc



INTEROFFICE MEMORANDUM

DATE March 10, 1967

SUBJECT RCA

TO Nick Mazzaresse
Stan Olsen
Mike Ford
cc: Ken Larsen
Ted Johnson

FROM Ken Olsen

I received two calls today, Friday, March 10, from Dave Reeves at RCA. They are more enthusiastic than ever in going ahead with their educational system using PDP-8's. Their original plan was to use the PDP-8 for only two years until they develop their own, but now they are considering planning to use it for several more years. They are thinking of using between 30 and 100 machines in the first year.

I told them that we would like to tell them about our new machine so that they will know if it will satisfactorily fit into their system when they are ready to change over to it.

They are so enthusiastic about us and our machines that he called back the second time to ask me to take part in the ceremonies of opening their new facilities on Monday, March 13. The president of RCA will be there and they wanted to show their confidence in us. I, of course, am not able to go because of our Board of Directors meeting on that day.

He said that our San Francisco office was very professional and competent in carrying out their contacts with RCA, and he said we should be proud of our personnel in that office.

Ken

ecc

3/13/67

Dave Reeves called again today and confirmed that he will be here to visit our facilities on Tuesday, March 21st. With him will be Mr. Allan B. Corderman, Director, and Mr. Robert Avery, Chief Engineer. I will let you know the exact time later.



INTEROFFICE MEMORANDUM

DATE March 10, 1967

SUBJECT SURPLUS MATERIAL COMMITTEE

TO Bob Lane
John Trebendis
Dave Cotton
Dick Best
Frank Kalwell

FROM Ken Olsen

The Executive Committee has been concerned for sometime about the disposition of surplus material which we have been accumulating. Because no one feels completely responsible for this, we often don't take full advantage of opportunities to use this material. We have decided to form a committee, of which we would like to have each of you be a part (with Bob Lane as chairman), to be responsible for the use of this equipment.

The successful functioning of this committee is vital to the profits of the product lines and, hence, the Company as a whole. Monthly reports, expressed in dollars saved, will be made to the Executive Committee.

The problem which is assigned to this committee is to find ways of using materials of all types which can no longer be used for the purpose for which they were originally intended.

Surplus material is the result of many things which happen after material is received:

1. The product for which material was used is discontinued or replaced by a new model (570 Tape Transports, PDP-7, for example).
2. Components are eliminated, replaced, or redesigned within a product, including both purchased and manufactured items.
3. Marketing overestimates its needs for a product.
4. Manufacturing overestimates its needs for components to meet a product line building schedule.

In short, surplus material results from judgment errors or clerical errors. We will always have surplus material (hopefully in small amounts) because as long as we have people, we are bound to have errors. Sometimes surplus material results not from a direct error, but rather from a logical decision to change or discontinue something because of new economic conditions. The job of this committee is to focus its efforts on finding economic ways of using the items brought to its attention by the product lines and manufacturing.

March 10, 1967

Some approaches to be considered by the committee that immediately come to mind are:

1. Convince the product line to continue selling a product until the material is used up.
2. Persuade another product line to use a product or a component that another product line no longer wants.
3. Use engineering know-how to use a surplus component as a substitute for another component.
4. Use engineering and product know-how to rework a surplus component or assembly into something else which is usable.
5. Disassemble an assembly to recover usable components.

The members of the committee can get a great deal of satisfaction in the knowledge that they have saved the product line money and used materials that were produced from strategic materials and human effort which would otherwise go to waste.

As a note of caution, it is sometimes possible to spend more money trying to save something than it is worth. Once an item has been examined and no reasonable usage for it can be found, it is then turned over to Henry Crouse for outside disposal and charged to the product line which authorized it originally.

Finally, but most important, this is an action committee and not a fact-finding or recommending type effort.

Ken Olsen

ecc

dec

INTEROFFICE
MEMORANDUM

DATE March 10, 1967

SUBJECT WESTINGHOUSE

TO Ted Johnson

FROM Ken Olsen

How are we doing at Westinghouse now? We heard that they bought 200 SDS Sigma 2's. What are the possibilities of our selling PDP-8's there?

Ken

ecc



INTEROFFICE MEMORANDUM

DATE March 10, 1967

SUBJECT RAYTHEON

TO John Jones
Mike Ford

FROM Ken Olsen

I received a telephone call on Thursday, March 9th, from Mr. Gene Tariot at the Wayland Laboratory of Raytheon. He says that they are making a commercial display system which needs a computer with the following specifications:

- 1 - 2 μ cycle time
- 4 - 8,000 words of 16 - 20 bits
- Repertoire of 50 - 70 instructions
- Common I/O bus

They have been designing their own machine for this, but management is losing interest in building their own.

He is going to send me a form to sign saying that we will respect the proprietary nature of their proposal, and then after that they will request us to bid on 1, 30, 50, and 120 units.

It sounds like the PDP-9, but it might be that the PDP-8 will do the job for them.

They want to be sure that we are not doing the same thing for Sanders Associates for the competition. If we are supplying computers to Sanders, please let me know.

Ken

ecc

dec

INTEROFFICE
MEMORANDUM

DATE March 7, 1967

SUBJECT ENGINEERING NEWSLETTER

TO Ted Johnson

FROM Ken Olsen

I hear complaints that we don't get the Engineering Newsletters out to field offices fast enough. I don't know why we send them out to field offices anyway. I think anything of interest should be put in the Sales Newsletter, and then people would feel free to put things in it because I don't think people have 100% confidence that our sales force is truly security conscious.

If we should send them out, then let's send them out by regular mail so they get them on time; however, I would like to hear why they should get them.

Ken

ecc



INTEROFFICE MEMORANDUM

DATE March 6, 1967

SUBJECT

TO Ed Schein

FROM Ken Olsen

There is some question in our house as to whether we are a family that really wants to have a maid because we may appreciate privacy more than we do the help. One thing that it has accomplished, though, is that it has developed a lot of sympathy on my wife's part for my problems in working with employees. It might even help me think out some of my own problems.

We are a casual household, but I like toilets to be very clean. When my wife mentioned to "Leila" that the toilets were not clean, Leila stomped off in a huff saying that with all her experience she knows how to clean toilets and no one should ever question her cleaning. My wife then has two choices; she can either clean the toilets herself or take a chance on losing Leila.

During the history of Digital, if a manager didn't have the background or ability or refused to take on or do a task, often I did it myself. This has not always been a favor to the individuals, because, as their ambitions grew to taking on vast projects, they still expected miraculously somehow the organization was going to take care of the details.

When trying to get people to take over more of the actual responsibility for which people thought they had, I have at times run into conflict with people. From my point of view, it comes about when they refuse to change, to learn new techniques, or to do a job fitting the size of responsibility they have. This happened with Ben Gurley, Harlan Anderson, and Maynard Sandler.

Now, to everyone else, including the Board of Directors and the other managers of the Company, if I had only been more patient, pleasant, and thoughtful with these individuals, I might never have offended them and they would still be happily going on here. I was, however, faced with the responsibility of making sure the Company survived.

I do feel guilty about losing my temper and offending people. However, I believe this comes about when people refuse to acknowledge that there is a lack in what they are doing. They say or imply that they have worked this way before and see no reason why they should change, or that they have worked so hard on the job that no one should criticize them. It is when someone says that he is right, and then puts up a personal front during criticism or discussion, that I lose control of myself.

Nick Mazzaresse is now 32 years old and, even though he has broad responsibility within our Company, in many ways has very limited experiences as a manager. In two or three years, the present plans say that he will be directly responsible for about \$70 million worth of business. He takes it very seriously if I suggest the possibility

that by age 35 if he hasn't picked up the skills for this much responsibility -----.
From a statistical point of view, it is very unlikely that any one man that does well
running a small part of a business will be successful in running \$70 million in two or
three years.

Our business is running well now, and I have no real worries or concerns about our
normal business. When I am irritated, cranky, worn down, and show concerns of
the normal businessman, it comes about because of my concerns of the people directly
under me. This is not only worry, but it is frustration, especially when I can see
little interest in changing.

Ken

ecc



INTEROFFICE MEMORANDUM

DATE March 6, 1967

SUBJECT AGENDA FOR MARCH 13TH BOARD OF DIRECTORS MEETING

TO Executive Committee

FROM Ken Olsen

1. Approval of Minutes for February 15
2. Slide Presentation of History of DEC - (Ken Olsen)
3. Slide Presentation of Results of Sales Offices and Subsidiaries - (Ted Johnson)
4. Five-Year Plans for Personal and Personnel Development - (Product Line Group Managers)

If Ted Johnson is not going to be in town for this meeting, I will present the slides and the results of each of the offices and subsidiaries.

I would like the Group Managers (Stan, Win and Nick) to present, in a very short summary, what the growth of their responsibility will be in the next four years and how they plan to be ready for it. Because I don't believe we will have our \$100 million plan settled, I would suggest that we take last year's five-year plan, break down responsibility the way it falls out naturally, and each man say that this is the plan under which we are now operating even though it may significantly change when we settle down on a \$100 million plan.

I would like each man to explain (in just a few sentences) what he expects to happen in the products and general markets during this period, and then I would like to have him say how he proposes to hire and develop managers under him to take that responsibility. I would also like to have him describe his job, how he plans to develop, and what changes he expects to be made in the way he operates.

I think each man should spell out what responsibilities he would now guess he will have in each of the years. This should be in terms of tasks, like supervising, personnel or drafting, also in terms of dollars of equipment shipped and in terms of number of personnel working for him. It probably would also be good to include for each year what developmental budget he expects to supervise during this period.

We have been trying hard for over a year to develop a polished, consistent presentation on just this question. I don't see that we will have one for a while, and yet we are making commitments for future growth. Even though our presentation may not be polished or consistent, I think it is important that the Board of Directors know the terms under which we are continuing. A man may not have written up plans for his own future development, but the fact that he sees clearly the job he expects to have in the future, and is continuing in that direction, does mean that he is operating under certain assumptions, and spelling them out doesn't make them any less valid.

March 6, 1967

A few weeks from now, when hopefully our detailed plans are more firm, I would like to make a presentation of this same type to General Doriot. Unfortunately, he won't be here for Monday's meeting, but it might be just as well because, in this way, we can make the presentation twice. Maybe if we are alone with General Doriot we will get more valid comments.

At the next Board meeting, on May 9th, I would like Ted, Harry and Pete to make a presentation on their parts of the five year plan; covering much the same as we are covering for the product lines this time.

Ken Olsen

ecc

dec

INTEROFFICE
MEMORANDUM

DATE March 6, 1967

SUBJECT CARPENTER SHOP

TO Pete Kaufmann
Al Hanson

FROM Ken Olsen

I suggest that we change the name of our Carpenter Shop to Cabinet Shop because it describes more clearly what they do.

Secondly, if we hire internal carpenters, I suggest that you consider having it supervised by George Silva who also supervises the Cabinet Shop. This may confuse the administration because they are two different departments, but I think we have a good man here and we should take advantage of him.

Ken

ecc



INTEROFFICE MEMORANDUM

DATE March 6, 1967

SUBJECT ROUTER

TO John Trebendis

FROM Ken Olsen

The type router which I am looking for is not a carpenter's type, but, rather, a unit that operates like a pantograph engraver, has a much more powerful head, and includes a table for mounting work.

The two companies that make units like this are Ekstrom Carlson and Onsrud. In the latest "Used Equipment Directory," there are a few listed on page 376.

Ken

ecc



INTEROFFICE MEMORANDUM

DATE March 3, 1967

SUBJECT WORKS COMMITTEE

TO Dave Packer

FROM Ken Olsen

We are finally ready to redo the Company committees into what we hope will be a much more efficient way. This means that the Works Committee will no longer be in existence, and I want to take this time to express our appreciation for the minutes you have taken for the last couple years.

The attached memo will explain the new committees and what their function will be. If at any time you would like to sit in on one of these meetings to catch up on what is going on, I am sure you will be welcome.

Ken

ecc

dec

INTEROFFICE
MEMORANDUM

DATE March 3, 1967

SUBJECT VENTILATION SYSTEM, FIRST FLOOR OF BUILDING 11

TO Al Hanson
cc: Cy Kendrick
Pete Kaufmann

FROM /Ken Olsen

Before we do drastic things to the ventilation system on the first floor of Building 11, I would like to have a vapor degreaser company look into our vapor degreaser. It seems to me that there should not be that many fumes from a vapor degreaser. Maybe we can turn down the heat or keep it covered, or even buy a new vapor degreaser.

We should also look into ventilating the silk screen room using the present air-conditioning system as much as possible.



INTEROFFICE MEMORANDUM

DATE March 2, 1967

SUBJECT RCA

TO Nick Mazzaresse
Mike Ford
Stan Olsen
Ken Larsen

FROM / Ken Olsen

Mr. David E. Reeves, who used to do purchasing at Stanford University and was the one who bought several of our computers, is now Manager of Materials, Facilities and Planning at RCA's Instructional Systems Division, 530 University Avenue, Palo Alto, California (area code 415 - 321-5000). They are committed to manufacture computer-display systems for educational use, but are realizing the problems in making their own computer for this. Dave Reeves is a senior man in the organization and is pushing hard to have them purchase PDP-8's from us. If they do this, it would mean large quantities and we should treat them with due respect.

I offered to silk screen the front panels with RCA's colors and designs. I would even make a spotted dog listening to a big horn Victrola to get a significant part of RCA's business!

Ken

ecc



INTEROFFICE
MEMORANDUM

DATE March 1, 1967

SUBJECT OUR BOOTH AT ARD'S ANNUAL MEETING

TO Tim McInerney

FROM Ken Olsen

The booth down at ARD looks very good, and I think we should be proud of it. One suggestion that I have, however, is that when we put a booth up on a stage (so that people are looking up at it), I think that we should leave the ash trays off and the barroom type bar off the base of the stands. They become a little too conspicuous when you are looking up at them. I may be the only one that noticed this, so I am only passing it on to you while I am thinking of it.

Ken

ecc

dec

INTEROFFICE
MEMORANDUM

DATE March 1, 1967

SUBJECT PAGING

TO Jim Myers
Jack Pender

FROM Ken Olsen

I have heard complaints from our visitors that our paging is very irritating. The suggestions that I have heard are, first, that we change the tone control on our amplifiers or build a filter into them that would soften the voices, and, secondly, that we try to train our girls to speak in a more pleasant tone of voice.

I never hear our own paging system, but I feel it is important to be sensitive to it for those who visit our plant because they hear things that we never do. As you look into this, let me know what your thoughts are.

Ken

ecc



INTEROFFICE MEMORANDUM

DATE March 1, 1967

SUBJECT SCHEDULE FOR STARTING NEW PROJECTS

TO Loren Prentice
cc: Pete Kaufmann

FROM Ken Olsen

I am concerned about the pressure put on you and your mechanical engineers to start new projects. I would like to develop a systematic way of deciding which project we do work on so that the decisions can be easier and you would be relieved of the pressures of fixing priorities. Will you work with Pete Kaufmann and develop a technique for putting specifications on each project, and then decide where they fit in the priority system.

This probably breaks down into two categories; one being tooling for production, and mechanical ideas for products. I am afraid that there are many projects which we have started that get put aside because of the enthusiastic way in which new ideas are presented directly to your engineers. With some system, we can put these in the right order.

If we insist on a simple set of specifications on each project that is started, this would help fixing the priority and would probably do wonders in thinking of the man who has the idea. I would guess that many of the ideas would disappear if the man had first set down the specifications because it is so much easier to talk generalities to mechanical engineers. However, the weaknesses in ideas fall apart when they are carefully specified.

Ken

, ecc



INTEROFFICE MEMORANDUM

DATE March 1, 1967

SUBJECT ADMINISTRATION CONFERENCE ROOMS

TO Jim Myers

FROM Elsa Carlson

Ken asked me to send an attachment to his memo, listing my requirements for girls using our conference rooms for serving luncheons. They are as follows:

1. Administration will supply dishes, silverware, and coffee supplies only; all extras (such as napkins, place mats, tablecloths, milk, tonic, etc.) must be brought in by the girl serving the luncheon.
2. The girl should look over the conference room prior to the luncheon to make sure it is set up appropriately (enough chairs, etc.), as well as get familiar with where things are located in the kitchen.
3. Food should be brought in at least half an hour before the scheduled luncheon so that the tables can be all set up on time.
4. The girl should be on hand during the luncheon in case she is needed for anything.
5. If pads of paper, pencils, literature, etc. are desired, they should also be brought in.

CLEANING UP

- I. Conference Room
 1. Tables and chairs should be put back in original position.
 2. Tables are to be washed off.
 3. Blackboards, if used, are to be washed.
 4. All literature, or whatever may have been used, should be removed.
- II. Kitchen
 1. All food disposed of.
 2. Dishes are to be washed in the dishwasher and then put away in the cupboards.
 3. All supplies borrowed for the Cafeteria are to be returned.
 4. Counters cleaned off.

dec

INTEROFFICE
MEMORANDUM

DATE March 1, 1967

SUBJECT CONFERENCE ROOMS

TO Jim Myers

FROM Ken Olsen

One task which I think might come under your new job description is to have responsibility for all the conference rooms in the Company.

There is a tendency for departments not to use conference rooms closest to their own area, but to have meetings and luncheons in our Administration conference rooms, so if you were to claim all conference rooms, this may eliminate some of it.

If you are responsible for the scheduling of all conference rooms, it would eliminate the need for local girls setting priorities. You could use local girls for the bookkeeping, however, but if they were doing this only to help you, they would still not have the responsibility for assigning priorities. You might use Judy Broderick to record schedules for the conference rooms down here and then Elsa wouldn't have to assign priorities.

When they want to use conference rooms for serving luncheons, you might have a check list which will make it easy for girls to serve them, and it might also spell out what is involved in cleaning up afterwards.

Ken

ecc



**INTEROFFICE
MEMORANDUM**

DATE March 1, 1967

SUBJECT PLASTIC MODULE PRODUCTION FACILITIES

TO Pete Kaufmann
cc: Stan Olsen
George Wood

FROM Ken Olsen

Will you work out a schedule with George Wood (and anyone else involved) on setting up production facilities for the plastic module.

I suggest that we plan to set up a medium-to-low production facility in the plant soon and have the modules molded on the outside. Then when production needs are high enough, we can build a highly-automated facility in-house with a module molding machine, and then send our low production facility and molding out to the Indian reservation or the north woods plant so that we can have a backup facility in case the Maynard plant burns down or is on strike.

If you lay out a tentative plan for this, we will at least have something to work on and from which to make deviations. A plan like this would take care of Stan's needs and make us content to have an all-source supplier.

Ken

ecc

dec

INTEROFFICE
MEMORANDUM

DATE March 1, 1967

SUBJECT PUBLIC RELATIONS IN MAYNARD

TO Ken Gold

FROM Ken Olsen

We should try to show off what we make to the town. The next time a store building is empty, you might consider renting it for a week. At that time we could show off our products and what we do, both as public relations to the town and to give our employees a chance to show off to their families what they are doing. We can give out our various handbooks to anyone who wants them.

Ken

ecc



INTEROFFICE MEMORANDUM

DATE February 28, 1967

SUBJECT NEW COMMITTEES

TO All Committee Members

FROM Ken Olsen

Our product line organization is working quite well, and everyone is pleased with the results. Each organization structure has its weaknesses, and in our organization the weakness is lack of communication between product lines. Now we are going to reorient our committees to overcome this weakness.

We are establishing three new committees - Marketing, Engineering, and Personnel - and eliminating the Works Committee. The new committees will go into effect on March 6th.

1. Marketing Committee - meets every other Wednesday at 8:30 a.m.

Members: Ken Olsen (Chairman, first three months)

Ken Olsen
Stan Olsen

Nick Mazzaresse

Stan Olsen

Win Hindle

Ted Johnson

John Jones (Secretary, first year)

Mike Ford

Mort Ruderman

Pat Greene

Ron Smart

Saul Dinman

Howie Painter

Dave Cotton

Bob Lane

Al Devault

Bill Landis

Jack MacKeen

Allen Kluchman

Bill Keyworth

Clayton Rix

Chairman: Ken Olsen - first three months; then Win Hindle, Nick Mazzaresse, Stan Olsen, and Ted Johnson will rotate the chairmanship every three months.

- Agenda:
- 1) Product line marketing review. Each product line will present a marketing status report and future plan once each quarter.
 - 2) Applications area marketing review. Each application area (physics, biomedical, typesetting, etc.) will present a marketing status report and future plan once each quarter.
 - 3) Formulate and review trade show plans.
 - 4) Coordinate space advertising plans among product lines.
 - 5) Coordinate promotion literature among product lines.

2. Personnel Committee - meets every other Wednesday at 8:30 a.m.

Members:	Win Hindle (Chairman)	Dick Richardson
	Bob Lassen (Secretary)	Al Hanson
	Jack Shields	Larry Portner
	Bob Dill	Bill Long
	Jack Smith	Ed Harwood
	Roger Handy	Jim Myers
	Cy Kendrick	Paul Chambers

*info. copy
to Henry Crouse*

- Agenda:
- 1) Personnel policy review
 - 2) Fringe benefit review
 - 3) Employee morale
 - 4) Recruiting plans
 - 5) Cafeteria
 - 6) Security review
 - 7) Supervisor development plans
 - 8) Manager development plans

3. Engineering Committee - meets every Tuesday at 8:30 a.m.

Members:	Ken Olsen (Chairman)	Alan Kotok
	Ed de Castro (Secretary)	Larry Seligman
	Nick Mazzaresse	Bill Long
	Stan Olsen	Larry Portner
	Win Hindle	Tom Stockebrand
	Dick Best	Dick Ward
	Bob Savell	Lou Illingworth
	Loren Prentice	Al Devault
	Ed Harwood	Saul Dinman
	Jack Shields	<i>Henry Crouse</i>
		<i>Bob Brown</i>

- Agenda:
- 1) Regular technical review of each project (schedule reviews will continue each Thursday at 4:00 p.m.)
 - 2) Develop engineering standards
 - 3) Corporate quality control
 - 4) Component development review



INTEROFFICE MEMORANDUM

DATE February 28, 1967

SUBJECT DEC TRADEMARK

TO Jim Jordan

FROM / Ken Olsen

Our lawyer is afraid that we are going to lose the trademark DEC if we don't use it somewhere. Will you call him (Bob Cesari) and find out how much we have to use it in order to save it. Then will you incorporate it on our cardboard boxes, or places like that, so that we can keep it.

Ken

ecc



INTEROFFICE MEMORANDUM

DATE February 28, 1967

SUBJECT AD HOC COMMITTEE TO IMPROVE PRESENTATIONS

TO Nick Mazzaresse
Stan Olsen
John Jones
Mort Ruderman
Pat Greene
Stew Ogden
Denny Doyle
Ed Harwood

FROM ✓ Ken Olsen

I think we have done well as a Company in changing our ways of doing things to adapt to our new size. I want to be sure we keep working to adapt our techniques and systems as we continue to grow.

One area in which we are very weak is in making presentations to committees. We are weak here because we have been so used to being a small, informal company where everyone knows what is going on that it is difficult for us to get used to the idea that everyone else in the committee does not have all the same background and all the same thoughts that we have. We are also used to making commitments that are relatively small and short-term so that mistakes are not very serious and corrections can be made. However, now that we are getting to be a medium-sized company, the only contact management has to the suggestion is often that which is presented in the proposal. Our commitments are often for a long period of time, for vast amounts of money, and they are sometimes very critical to the Company. We, therefore, have to learn to make good proposals.

I would like to form an ad hoc committee of you managers to whom this memo is addressed (without me) with Nick as chairman, to help develop our techniques in making presentations. We have three questions which are before us that I would like to use as vehicles for the committee to work on. They are Ed Harwood's proposal for a wire-wrap panel tester, Stew Ogden's plans for the display business, and Denny Doyle's proposal as to what he would like to do in Canada.

These three subjects are quite diverse and give a very good cross section to the proposals we see. I would like to see these people present their proposals to the committee and then have the committee make suggestions to them and keep redoing the presentation until people are happy to have it presented to the Executive Committee or the Board of Directors. Then, hopefully, there will be some general suggestions on proposals that we can write down that will be of help to others. Even if we are not able to systematize our presentations, working out three that are very good and fit the pattern, I believe after that we will have good proposals.

Here is a list of my pet peeves that I haven't been able to phrase constructively; maybe the committee can do better than I.

1. "Why pick on me, no one else makes good proposals."
2. "I have been making proposals like this for five years, why should I change now?"
3. "Ken makes commitments by intuition, why can't I?"
4. "I never really believed in my proposal, but I thought this was what the committee wanted."
5. "I'm sure my group and I have enough capability to double our size each year, but I didn't have time to think about the details of my proposal."
6. "I want the authority and responsibility for this project, but the 'Company' (whoever that is) will take care of all the details."
7. "Ken didn't tell me exactly what he wanted presented." (If Ken knew what he wanted presented, maybe he wouldn't have asked you.)
8. "We have to do this because the Company is committed to it. However, if we charge too much for it we may lose it to a competitor."
9. "My proposal for the large expenditure was shot down. Let me, therefore, build the thing a little at a time and we'll get the same result without a large commitment."

Sometimes when I send people away as a subcommittee to do more detailed work than the main committee can do, they come back to the next meeting and obviously haven't even thought about it, but will stand up and try to bluff their way through and then not even read the minutes of the last meeting to know what they were supposed to do. If we send people away to do work between meetings, it is to save the time of the group, but if none of the work is done, we might as well have continued gassing in the original meeting.

Some people will load the group down with vast amounts of data showing all the special conditions and problems in their area and hint that the group look into this great detail. The implication, as I see it, is that if the committee or the President thoroughly studied the situation and was bright enough and had confidence in the manager, he would come to the same conclusion the manager has vaguely floating around in his head. There is a danger in trying to collect these vague ideas that are floating around because if they happen to be consistent and logical and they are accepted, the poor manager is going to take the responsibility and live with them until their conclusion. It is much safer for the manager to present problems and let the President suggest conclusions because the manager can, in that way, make no mistakes.

Ken Olsen

ecc



INTEROFFICE
MEMORANDUM

DATE February 27, 1967

SUBJECT SALES ADMINISTRATION

TO Nick Mazzaresse
cc: John Jones
Mike Ford

FROM Ken Olsen

I feel that perhaps you have not continued the product line concept down into your organization in the way you have organized Sales Administration. If anything should be under the product line responsibility, this should. It seems to me that there should be one for the PDP-8 and one for the PDP-9.

If you want to combine the two under one, this is perfectly reasonable. However, they should then supervise it directly and when there are problems in Sales Administration it should not be you that straightens them out, it should be John and Mike. When I jump on you with both feet when the unhappy customers send letters to me, you should in turn jump on John and Mike with both feet.

Ken

ecc



INTEROFFICE MEMORANDUM

DATE February 27, 1967

SUBJECT BACKLOG

TO Ted Johnson
cc: Executive Committee

FROM Ken Olsen

I am having trouble with our definition of backlog. Our backlog is small, and, if it is measured relative to our volume, it is getting smaller all the time. Yet, product line people are complaining that their capability is limited, and, because of the large amount of orders, they would like to have increased capability. I think this comes about because of our definition of backlog. We use the traditional definition which I think is the obvious one, and that is, "orders which are firm enough so that they could be delivered and firm enough so that a penalty could be charged if the orders were cancelled." However, there are letters of intent or promised orders which we consider firm enough to commit production on.

There is such a big discrepancy between our backlog figure and our orders which we feel are valid that we get no use out of our backlog figure. It bears no relation to our production plans and inventory plans, and, because it is so useless, we never look at it. Therefore, we have no idea how the order is going or whether we should worry about it or not.

I feel we have to develop a measurement which we can use and agree on. I think you should be the one responsible for working this out and seeing much of this as a measure of your effectiveness. Will you work with the other members of the Executive Committee and propose a way of solving this discrepancy.

Ken

ecc

dec**INTEROFFICE
MEMORANDUM**

DATE February 27, 1967

SUBJECT NEW MODULE PRODUCT LINES REVIEW COMMITTEE

TO Dick Best Mort Ruderman FROM Ken Olsen
Dick Sogge John Jones
Don White Al Devault
Joe Sutton Howie Painter
Larry Seligman

Everyone has been very pleased with the results of our review committees. Even though they do take people's time away from their present job, they appear to be one of the most worthwhile ways to assure the success of a product.

The Module Group is planning to announce two new product lines -- the very low speed industrial line, and the new line of integrated circuit modules. They would like to do this in the next few weeks, and it is important that we review them now to check the technical content, the consistency of the line, and all the other factors that make a successful product line in this complex market. I would like the following committees to review both product lines.

First will be the Engineering Review Committee and will consist of Dick Best, Dick Sogge, Don White, Joe Sutton, and Larry Seligman. I would like Joe Sutton to be chairman of this committee.

Allen Kuchman The second committee is the Marketing Review Committee which will consist of Mort Ruderman, John Jones, Al Devault, and Howie Painter. I would like Howie Painter to be chairman of this committee.

Hopefully, these product lines will not take the amount of time to review as a computer does, and so I would like, if possible, to have the report ready by the 13th of March to be presented to the Executive Committee.

Ken

ecc



INTEROFFICE MEMORANDUM

DATE February 27, 1967

SUBJECT Check-Out and Field Service Installation Reports

TO Angela Cossette

FROM Ken Olsen

Please don't take my note so seriously. If I had a criticism of you or your group I would tell you directly. I knew that Bob Maxcy had set up the file, I also knew that you wanted to get rid of the chore, and so I felt free in sending this note to Dick Best.

Ken

ecc



INTEROFFICE MEMORANDUM

DATE February 23, 1967

SUBJECT Check-Out and Field Service Installation Reports

TO Dick Best
cc: Angela Cossette

FROM Ken Olsen

Some day I would like to see a staff quality control man who has somewhat the same status in the organization that you have. Until we get him, there is part of the corporate quality control function that I would like to have you take over.

We now make out a form describing the details of the check-out of each computer, and Field Service makes out a report on the installation of each computer. These two reports are put together, compared, and then filed.

Having these reports has done a lot to improve the quality of the machines going out, but we haven't followed through in sorting and collating the data to draw conclusions that might be very valuable. Will you consider taking over this file and keeping it up-to-date. You might think out simple systems so that Judy can flag problems and collect important statistics.

This file is now kept in the DECUS library, and for some mysterious reason they are filing them by customer. This is a frightfully expensive way to file them, and makes no sense whatsoever. I would suggest that you have a file for each of our computer types, and maybe for each option, and that you simply file them by serial number. After each 50 or 100 units are assembled, they can be sealed in a box and put in dead storage.

Ken

, ecc



INTEROFFICE MEMORANDUM

DATE February 27, 1967

SUBJECT BLUEPRINT PACKS FOR CUSTOMERS

TO Stan Olsen
Nick Mazzaresse
John Jones
Mike Ford
cc: Roger Melanson
Harry Mann

FROM Ken Olsen

Our drafting room is terribly overworked, and one of the big parts of its job is making up large quantities of drawings for each computer we ship. We are making so many machines now that this is a frightfully backward way of making these collections of drawings. Stan wants to make a thousand PDP-8/S's a year, Mike would like to make many more PDP-8/I's than that, and John is making a good number of 9's. It may be that the computers are not directly charged for these, but, instead, are just part of the Company engineering cost. However the charges are, this is still an awfully lot of money. There is more than just one stack going out with each machine because some customers want several. In addition, several times during the week people charge out complete sets of drawings. Making each of these in a blueprint or a microfilm machine is exceedingly tedious and time-consuming.

The obvious answer to this is to offset print them. The offset printing on B-size paper is much more pleasant, handy to use, and sharper than the blueprint or the microfilm drawings. If we had B-size notebooks with clamp bindings, we could then assemble the offset drawings and still have freedom of making modifications. This would make a very convenient book to use and would be much more impressive when turned over to the customer than this pile of blueprints.

Roger Melanson is somewhat reluctant to push at this because he doesn't have the offset printing facilities. However, this is not necessarily part of his domain. He should simply deliver a set of masters to the product line, and the product line should have them all printed up and collated. This is probably a good job to do inside our own house. With this we could probably keep all our equipment going and turn out some of the complex work to other print shops.

I would like to have John, Mike and Stan make a proposal at the Works Committee on the 8th of March.

Ken

ecc



INTEROFFICE MEMORANDUM

DATE February 23, 1967

SUBJECT SYSTEM FOR RECORDING RESULTS OF OUR SALES OFFICES

TO Ted Johnson
Ron Smart
Bill Farnham

FROM Ken Olsen

We would like to develop a system for recording the results of our sales offices. We could have a system in which we plot against time the budgets and results of each office. I would like to have these presented to the Works Committee or Marketing Committee every month, and, periodically, to the Board of Directors. We are having a Board meeting here on the 13th of March and I would like to see if we can develop a system that we can present to them at that time. It should be one that we would like to keep going indefinitely afterwards.

I would like to use 35 mm slides for giving these presentations. In this way we can update the charts in this office each month and send a slide to the appropriate office. A new slide will be kept on file in my office and will be available for our monthly presentation and for any questions that might come up.

Please propose a method to chart this information on a B-size, horizontal chart. I think we should have a chart for each office and then one or two charts that summarize all offices together. We may want to plot the information by quarters because of the averaging fact, but we might start off plotting them monthly. I would like to see a line for the budgeted orders, another line for actual orders, and a line for expenses per dollar ordered. After we lay out the format for these charts, Elliott Hendrickson will make a professional-looking background for them. After this we can put the actual data in with a wick pen or colored tape. With a professional background, we can get away with labeling freehand.

We should consider two different formats; the monthly one which will cover maybe two years, and the quarterly one which could cover two years of history and three years of future.

If we work out this system well, we may eliminate the confusion in some of our subsidiaries where it is felt that they are evaluated by profit, and we feel they are evaluated by total orders and cost of obtaining them.

Ken

ecc



INTEROFFICE MEMORANDUM

DATE February 23, 1967

SUBJECT DISPLAY BUSINESS

TO Nick Mazzaresse
Stew Ogden

FROM Ken Olsen

Let's try again making a proposal for the display-business. Let's make believe that we are going to present it to the March 13th Board of Directors meeting, at which there is one brand new Board member who has no idea why we are in this display business, or, for that matter, he doesn't even know we are in the display business.

I would like to see half a page made up of a few short sentences that tell why we want to stay in the display business. I would like to test the validity of these statements by seeing what will happen if we threw out some or all of these statements. People will immediately step up and say that we have to be in for this or that reason.

After this first pitch, we could have half a page on each of the products we are in, and hope to be in. Then we could have very simple backup material to justify our being in this.

I am not sure we want to present this to the Board of Directors because we have not as yet laid out the agenda for that meeting, but making the proposal as if it were going to be presented to strangers at least sets the mood that we would like to see for the proposal.

Let's plan to present this to the Works Committee on the 8th of March, and I will be sure to let you know in due time whether we will present it to the Board on the 13th.

Ken

ecc

dec

INTEROFFICE
MEMORANDUM

DATE February 23, 1967

SUBJECT INQUIRY LOG

TO Ted Johnson

FROM Ken Olsen

There are a number of management controls which I institute that in time become obsolete. I would like to be in on the decision when they are turned off because I find it very embarrassing when I tell people about specific controls that I have instituted and then discover that they have been turned off.

I feel very strongly that we have to log all inquiries, both from customers and from sales offices, and record when they are answered. As the number of inquiries gets larger, we need a larger staff. As the Company gets larger and our sales staff gets larger, they will surely develop the feeling that they are working for a large, cold, impersonal company.

Will you, at the next Works Committee, propose a system of logging which will deliver a copy to me periodically so that I can check how long it is from request to answer.

Ken

ecc

3/23/67

Asked John Jones to have Ted make this presentation to the Marketing Committee.



INTEROFFICE MEMORANDUM

DATE February 23, 1967

SUBJECT PDP-6 AT STANFORD

TO Ken Larsen

FROM Ken Olsen

Jim Jordan designed a label to put on the fixed portion of the PDP-6 that I think will satisfy your request. I passed this on to Win Hindle, so if you get no reaction I suggest you contact him.

Ken

ecc

dec

INTEROFFICE
MEMORANDUM

DATE February 13, 1967

SUBJECT FINANCIAL INFORMATION

TO Harry Mann

FROM Ken Olsen

I sometimes get financial statements and budgets from you and don't show due respect for them because I don't identify them immediately. Do you think it would be worthwhile to put all statements of this kind in the pink envelopes so they will always stand out on top of our desks?

Ken

ecc

dec

INTEROFFICE
MEMORANDUM

DATE February 13, 1967

SUBJECT My Daughter's Clothing Allowance and the Product Line Managers' Inventory

TO Win Hindle
Nick Mazzaresse
Stan Olsen

FROM Ken Olsen

cc: Harry Mann
Ted Johnson
Pete Kaufmann

Last week at the Product Line Managers meeting, Nick and Stan were expressing concern that with the new, one plan system of running the Company, we would not have the inventory slop which has allowed us to keep shipments up even though certain products failed in their budgets. I don't feel that this is necessarily a result of having one plan.

The way we have been doing things, many people put random inputs into the system and we had random orders for inventory with a lot of miscellaneous inventory available. In an emergency we were able to collect various pieces of this inventory and make shipments. This is very expensive because, with random ordering of inventory by many random people, there were relatively small percentages of this shippable, and this is a very expensive way to have extra material around that can be shipped. We can accomplish the same thing by specifically thinking out what extra inventory we want to have around for emergency and ordering only that.

There is a reluctance on the part of the Product Line Managers to do this. When they have to specify exactly what they want, they are much more conservative than the situation when many random people completely out of control order inventory and no one feels responsible.

My teen-age daughter likes clothes and she enjoys buying them. She likes to go to Boston two or three times a week and each time make purchases of what she thinks are relatively small. She also is thoroughly convinced that she is a very economical shopper, and she buys only things which are worthwhile and at very low prices. However, the monthly total, I feel, is way beyond what a teen-ager should spend. I proposed to her that she work out a budget and that she fix the total that she should spend each month. She suggested a number and I added on to that for good measure to show my generosity. Since then, it has been a terrible strain on her to live within that budget. The reason is obvious. When she plans ahead and picks a number, she is very conservative; yet, when she makes her purchases at random, it in no way bothers her conscience and she only sees that the individual purchase is very conservative.

February 13, 1967

I think the Product Line Managers are the same way. When they budget inventory in a planned way, they are very conservative, and yet it doesn't bother them at all to have random people make random commitments to random pieces of inventory. The answer is obvious. If we need extra inventory to run the business, specify it, plan it, order exactly that inventory which would be best to have, and in no way allow ourselves to slide back to anarchy - which is an intolerably expensive way to have a little extra inventory.

Ken Olsen

ecc

0160
INTEROFFICE
MEMORANDUM

DATE February 13, 1967

SUBJECT DATA DISC

TO Win Hindle
Nick Mazzaresse
Stan Olsen
Mike Ford
Bob Savell
Ken Fitzgerald
Steve Lambert

FROM ~~Ken~~ Olsen

I received a call recently from Mr. Miller of Data Disc. He would like to sell us their products. They feel they have solved their reliability problems. They now have a large number of DEC computers with their machines on them. He will send me a list of customers so that we can check with them on the reliability. He has two machines on loan to Project MAC, and several in the New York area.

They now have two machines in their basic production line. The first is equivalent to the one we bought three years ago, which, in lots of 50, with electronics, costs \$4,990. This has a movable head and an interchangeable disc, reads only one side of the disc at one time but both sides can be used. There are 6-million bits on one side of 128 tracks. The available section time is 230 milliseconds.

Their other product is a fixed head disc with 6-million bits on 64 tracks. This has a 12-inch head and uses 3,000 bits per inch recording density. It takes only 8 inches of rack space. The price is \$7,450 with electronics in lots of 50.

They make their own discs and heads, and would be willing to sell these units with or without electronics and other configurations.

They sold a few discs to the Systems Division of SDS, but the computer group has not used their discs. GE is not using them either, but may in the future.

Ken

ecc



INTEROFFICE
MEMORANDUM

DATE February 10, 1967

SUBJECT GORDON BELL'S MEMO DATED FEBRUARY 6

TO Larry Portner

FROM Ken Olsen

What do you suggest we do about Gordon Bell's proposal on time-sharing on the PDP-8 and/or PDP-9?

Ken

ecc



INTEROFFICE
MEMORANDUM

DATE February 10, 1967

SUBJECT GORDON BELL'S MEMO DATED FEBRUARY 6

TO John Jones

FROM Ken Olsen

What do you suggest we do about Gordon Bell's proposal on time-sharing on the PDP-8 and/or PDP-9?

Ken

ecc

dec

INTEROFFICE
MEMORANDUM

DATE February 10, 1967

SUBJECT GORDON BELL'S MEMO DATED FEBRUARY 6

TO Nick Mazzaresse

FROM Ken Olsen

What do you suggest we do about Gordon Bell's proposal on time-sharing on the PDP-8 and/or PDP-9?

Ken

ecc



INTEROFFICE MEMORANDUM

DATE February 8, 1967

SUBJECT Tool Thefts

TO Pete Kaufmann
cc: Al Hanson

FROM / Ken Olsen

I have asked Al Hanson to make a proposal to the Works Committee next Wednesday, the 15th, as to what we should do about the recommendations that the Pinkerton detectives have made. Part of their proposal had to do with the system for controlling expendable tools. You might claim that as your prerogative and make a proposal on that independent of Al Hanson because that is largely under your control.

Ken

ecc



INTEROFFICE MEMORANDUM

DATE February 8, 1967

SUBJECT RESULTS OF PINKERTON INVESTIGATION

TO Al Hanson
cc: Harry Mann

FROM Ken Olsen

Will you come to the Works Committee meeting next Wednesday, February 15th, with a proposal as to what we should do about the recommendations made by the Pinkerton Detective investigation.

I would like to know if the guards are now challenging everyone they meet wandering through the plant after hours, and if they make note of the badge numbers and names of those people.

Elsa had some change and Company stamps stolen from her desk about three weeks ago but never told anyone. Would you propose a method of letting people know that they should report all thefts. This should be done in such a way as to not stir up people.

Ken

ecc



INTEROFFICE MEMORANDUM

DATE February 8, 1967

SUBJECT DATAMATION ARTICLE REGARDING IBM AND GENERAL ELECTRIC

TO Roland Boisvert

FROM Ken Olsen

Did you notice in the January issue of DATAMATION magazine that IBM has withdrawn their 2402 dual tape drive and the 2403 drive plus controller from their line? They say this has been interpreted by some as an implicit admission of tape drive reliability problems.

In the same article, but at a different place, it says that General Electric is considering dropping manufacturing of their own tape transport. If you have friends at GE, it might be worthwhile finding out if this is true or not.

Ken

ecc



INTEROFFICE MEMORANDUM

DATE February 8, 1967

SUBJECT Paper Tape Reader

TO Ed de Castro

FROM Ken Olsen

If we were designing the paper tape reader over again, would it be a good idea to use the 72-step slo-syn motor and have one step per hole? Looking at the data, it would appear that this would be faster than our present system and would use a smaller tooth wheel.

I am not at all suggesting you redesign the tape reader, but am asking the question for my own education while considering other peripherals.

Ken

ecc



INTEROFFICE MEMORANDUM

DATE February 8, 1967

SUBJECT Woods Meeting on February 14th

TO Product Line Managers Committee

FROM Ken Olsen

There are three things I would like to cover at the Woods meeting next Tuesday.

First, let's settle the committees.

Secondly, let's lay out our personnel needs and plans for acquiring them in the next five years.

Thirdly, let's lay out long-term responsibilities for the Product Group Managers.

Let's settle the question of committees first thing while we are all fresh and eager to work.

Let's all bring our data on personnel needs for the next five years to next Monday morning's meeting. Then we can be sure that everyone has all the needed data in a consistent format so that Tuesday morning we can work out a consistent plan.

I would like to suggest the following responsibility breakdowns for the long-term between the Group Managers. Nick take the PDP-8/I, which would encompass the PDP-8, PDP-8/S, and the LINC-8, Win take the PDP-10 and PDP-16, and Stan take modules and marketing of peripherals. This proposal, I think, sounds logical if you don't take personalities into account. I am not seriously proposing that this is a complete solution to the problem, but I suggest it as a vehicle to start our discussion.

It is my understanding that at next Monday's meeting Pete Kaufmann and Ted Johnson will let us know how much of the 18-month plans of the Group Managers they will be able to build and sell. It might then be clear how much we can budget for the next 18 months. If it is not immediately clear, we should continue that discussion at Tuesday's Woods meeting.

Ken

ecc



INTEROFFICE MEMORANDUM

DATE February 8, 1967

SUBJECT SALES NEWSLETTER

TO Ted Johnson

FROM Ken Olsen

I have no thought-out plan or policy that I was instituting with the SALES NEWSLETTER. When I am here, and it doesn't hold up publication, I would like to glance through it before it is printed. I would also like to raise the standard of grammar and punctuation within the Company, and so at times I would like to take the opportunity to feed back criticism in this regard to the authors. From some of the things I see within the Company, I am very much afraid of what we may be mailing outside.

The only way people are educated is when their mistakes are pointed out to them. It may be useless to correct the SALES NEWSLETTER if the original authors and typists do not see the corrections. I will leave it up to you to decide what you want to do with the corrections noted on the copy which I am sent to review. If we slow down communication, or if no one learns anything by these corrections, don't do anything about it. I must admit that I am somewhat concerned, however, about giving wide distribution to poorly written material.

Ken

ecc



INTEROFFICE
MEMORANDUM

DATE February 8, 1967

SUBJECT TERMINATION PROCEDURES

TO Bob Lassen
cc: Win Hindle

FROM Ken Olsen

Will you send me a short note spelling out what the termination procedures are. I was surprised to find out that we do not insist on the returning of all Company tools prior to severing employment.

Do we have all badges personally returned by people who are leaving? Are we sure we get back all library books? Do we have a system for being sure that we have all important files (I am still roaringly angry at Jack Atwood for destroying all his files before he left)? Are employees told when they leave that laboratory notebooks, files of literature, and anything else, are all property of the Company?

When people like Bob Maxcy go to 3 C's, do we ask him before he leaves if he has turned in all blueprints? If a man wants to steal a complete set of all our blueprints and take them to our competition, we can't stop him, but I would like to know if we get across the fact that we feel these things are Company property.

Do we have the same system for termination of people at all levels, and do we always have an exit interview even when people of the highest level are leaving?

Ken

ecc

dec

INTEROFFICE
MEMORANDUM

DATE February 8, 1967

SUBJECT SPACE

TO Frank Kalwell
cc: Stan Olsen

FROM Ken Olsen

When we lay out the new half of the third floor of Building 5, we should be sure to claim all three truck docks for the Shipping Department. We should lay out enough space for all the shipping activities, including crating.

Be sure that you are in on the discussion for the floor plan layout and, at the same time, you should probably claim the space needed for a module stockroom. It is probably a good idea to have the module stockroom on the same floor as the shipping dock.

We will be taking on another 30,000 square feet of space, I believe, so the 2,000 feet you need for storage should not be hard to find.

Ken

ecc



INTEROFFICE MEMORANDUM

SUBJECT Capstan
TO Roland Boisvert

DATE February 8, 1967
FROM Ken Olsen

If I understand your report on the capstan correctly, you said that no tachometer and servo system is necessary for the capstan if we go in one direction only, but that we run into trouble because the motor runs at a different speed in each direction.

The obvious question is, "would it be cheaper to build two separate control voltage sources - one for each direction - than go to a tachometer and servo system?"

Ken

ecc



INTEROFFICE MEMORANDUM

DATE February 3, 1967

SUBJECT PROPOSED LINE PRINTER FOR DEC MANUFACTURE

TO Product Line Managers Committee
Bob Cesari

FROM Ken Olsen

cc: Henry Burkhardt

For years we have been waiting for someone to make a line printer that would fill the gap between Teletype speeds and regular line printer speeds. We see no indication of anyone building this, and there is a wide open market for it. Now that there is tremendous demand for remote terminals, I believe it is time that we do something about this.

The machine which I propose here is mainly a compromise on all the speed problems of a standard line printer.

I propose that this be designed to operate at a speed of 100 lines per minute. This is $1 \frac{2}{3}$ lines per second, or 0.6 seconds per line. If we allow a casual 0.1 second for indexing the paper, we then have 0.5 seconds for printing.

I suggest that we design this machine to the characteristics of a Teletype. It should only take 8 1/2 inch wide paper with sprocket holes. This means only 72 characters across the paper. The type front would be limited to standard 64 characters.

If we build it with only 12 hammers, this means the hammers can be 0.6 inches wide, and there will then be 5 blanks on the chain between each character.

The length of the chain is 38.4 inches. If we want to leave a gap in the chain to give it time for indexing, this would add 7.68 inches to total 46.1 inches. If there is not a significant gain in programming, we ought to leave this gap off. The speed of the chain is 76.8 inches per second.

Standardizing on Teletype paper simplifies the design very much. The source paper is kept on a standard roll, and we can do it just as Teletype does it. We can use a two feed platen which is available from Standard Forms Company. We have had experience with many hammers and we can pick out the best ideas of all the hammers we have used. We could exactly copy IBM's because we will probably have a license to build all their equipment soon. I think there are places we can have the chain manufactured.

We should build this in the standard table that should include a keyboard. I think we should build our own keyboard and use magnetic circuits to do the coding. We should then redo the National card reader and make it completely ourselves and have indexing that always works. This should be included in the table as an option. There, of course,

February 3, 1967

should be room for an oscilloscope also as an option. There probably should be room for a 16-inch or 5-inch cathode ray tube. The 5-inch cathode ray tube probably should be 7 inches if we build it into a standard table. We probably should expand the 16 to 24 inches if we design a new cabinet for it.

We might make a very simple card reader by using a stepping motor. At about 300 steps per second, we should be able to read about 200 cards a minute. If we copied IBM's card pusher from their 026 (after we get a license from them), we could then drive the card with a stepping motor and sense of photoelectric cells.

Ken Olsen

ecc

Options with other numbers of hammers.

Characters across	÷	Hammers	Inches of Chain	Inches of Chain per sec.	Width of Hammer	Steps per sec
72	2	36	12.8	25.6	0.2	128
72	4	18	25.6	51.2	0.4	256
72	6	12	38.4	76.8	0.6	384
72	8	9	51.2	102.4	0.8	512
72	12	6	76.8	153.6	1.2	768

This may not
include vital areas

KOK
Jan 14, 1967



INTEROFFICE MEMORANDUM

DATE February 3, 1967

SUBJECT TESTING OF WIRE-WRAP PANELS

TO Ed Harwood
Jack Smith

FROM Ken Olsen

cc: Pete Kaufmann
Dick Best
Stan Olsen

Here are a few ideas on the testing of wire-wrap panels.

When we do wire-wrap panels in-house, we should make note of all wires which are put on by hand so that they can be specifically checked for correctness.

I believe we can speed up the present lamp check-out of modules and eliminate one of the girls if we use a dictating machine. The machine could have recorded on it what light should be lit for every terminal. If we arrange the system so that the modules were put back in the same order each time, or if they were taken from one panel and installed directly into the next one so that they would be in the right order, we could then cover each terminal with spaghetti as it is illuminated. In this way, we could eliminate putting signal into those terminals which have already been checked by the introduction of the signal to an earlier terminal.

I am concerned about the purchase of an expensive, fully automatic machine because of the possibility that it might not work and that it might not be necessary. A semi-automatic device that we could build that would be a step in that direction would be to install lamp modules as we do now and have a girl introduce the signal as she does now, but have her point to each of the lamps that are lit with a digitizing cursor which is fed into a computer. Every time there is a mistake, the computer would mention it and would ask the girl to double check her test. This system might be fast enough to do all the panels we will wire-wrap. The digitizer would be rather simple to manufacture because there are only 44 points in half-inch centers in one coordinate, and 144 points on eighth-inch centers in the other. The digitizer would only have to generate pulses, and the computer would then keep track of where the cursor is located. As in the previous system, one would not introduce signals into those points which have already been illuminated.

A simple, fully automatic system can be made if we are willing to tolerate less than 100% testing. This test would be made in two steps. First, a set of modules are introduced which tests all of one coordinate. There are diodes on the modules for isolation. A signal is introduced into one of the lines in that coordinate, and a record is made in the computer as to what lines parallel to this pick up this signal. After all the lines are done, a new set of modules are introduced with a 100 pulse

Ed Harwood
Jack Smith

-2-

February 3, 1967

switch made by putting 100 read relays in a circle around the shaft of the stepping motor. A permanent magnet is indexed around these 100 poles. An identical switch is used to sample the 100 lines and the output fed to the computer. This system may not do 100% testing, but it would be a very simple system to build.

I assume that in the mounting panel there are 11 x 4 sockets. This means 44 sockets or 352 modules. At 18 pins per module, this means 6,336 pins. For matrix testing, this could be 144 x 44 matrix, or, by splitting the array in half, could be 88 x 72 matrix, which is much more symmetrical and would fit into a system using two 100-pole switches.

Ken

KHO:ecc



INTEROFFICE
MEMORANDUM

DATE February 3, 1967

SUBJECT High Speed Paper Tape Reader

TO Jack Smith

FROM Ken Olsen

If it is not much trouble, I would like to have an approximate breakdown of the cost of the new DEC high speed paper tape reader.

Ken

ecc



INTEROFFICE MEMORANDUM

DATE February 3, 1967

SUBJECT SHOPS

TO Pete Kaufmann

FROM Ken Olsen

Loren Prentice has suggested that we break up the Machine Shop and form a Model Shop. I suggest that you form a committee (that might include Dick Richardson, the Shop foreman, the lead wirer, and maybe a senior machinist) to discuss the problem.

It may come out that giving the shops more model type work without formal drawings and specifications may make their job so interesting that they can keep machinists and keep morale higher.

Without asking the question, you may also find out the attitudes they have on which items should be made and which should be bought.

Ken

ecc



INTEROFFICE MEMORANDUM

DATE February 3, 1967

SUBJECT Capstan

TO Roland Boisvert
Phil Backholm

FROM Ken Olsen

If we ever consider going to a brake/clutch combination to drive a capstan, we should consider doing our clutching at 3600 rpm so that the tork on the clutch and brake would be low. A neat way of reducing the speed would be to build a planetary gear train inside the capstan. The capstan could have bearings that bear on the common shaft, and I think it would make a very neat arrangement.

The difficulty with this is that rewind speed would be also less.

If it is easy to get a planetary to right this, it might make the driving and control of the printed circuit motor easier. The tachometer would be about six times as fast; therefore, easier to build.

Ken

ecc



INTEROFFICE MEMORANDUM

DATE February 3, 1967

SUBJECT CONFERENCE ROOMS

TO Product Line Managers Committee

FROM Ken Olsen

I have a most cooperative secretary who will make a cup of coffee for anyone, but, with the two conference rooms down here, there are days when she can do little secretarial work.

When meetings are held down here, she spends full time making coffee, helping with meals, taking messages, calling people out for telephone calls, and cleaning up the rooms afterwards. I hate to show any lack of cooperation with the important activities of the Company, but I feel we have to do something about this. Maybe we should hire a full time cook and telephone answerer. I would rather see one or two good conference rooms built in Building 5 so that groups could have their own meetings and be serviced by their own secretaries.

Please lay out plans for conference rooms in other areas so that we can review the overall picture and make commitments. I will put this on the agenda for the 13th.

Ken

ecc

dec

INTEROFFICE
MEMORANDUM

DATE January 31, 1967

SUBJECT Methods Improvement Course

TO Pete Kaufmann

FROM Ken Olsen

There is a professor at Dartmouth University named George Taylor, who is inspiring courses on work simplification. He likes a more general title which he uses, "Methods Improvement."

If you would like to send some of your people to take this course, you might drop him a note and ask when he will teach this course again.

I heard about this from Mr. William M. Scranton, President of Miniature Precision Bearings, Inc., in Keene, New Hampshire.

Ken

ecc



INTEROFFICE MEMORANDUM

DATE January 31, 1967

SUBJECT Computer Industry

TO Harry Mann

FROM Ken Olsen

Attached are parts of a study which I picked up somewhere in my travels that gives an interesting background of the computer industry. The numbers are not consistent and I believe it is because they take the results of many different studies. It is interesting, though, to get this picture.

On page 12 of the Computer Industry Report, there is an interesting table. From this table you can break the industry down into three groups of three and IBM.

IBM sells \$1500 million.

Univac, Honeywell, and CDC do \$150 - 185 million.

GE, NCR, and Burroughs do \$60 - 92 million.

RCA, SDS, and DEC do \$30 - 50 million.

This seems a little inconsistent with IBM's gross earnings of \$4250 million (as shown on page 2 of the Donaldson, Lufkin & Jenrette report).

Ken

ecc

Enc.



INTEROFFICE MEMORANDUM

DATE January 30, 1967

SUBJECT DESIGN CONTRACT WITH FORET COMPANY

TO Roland Boisvert
Phil Backholm
cc: Dick Best

FROM Ken Olsen

I would be afraid to invest time and money in the design of a new capstan drive with Foret Company. If they had exactly the product we want, I would agree to careful consideration of it, but when the final design is so far away, I would be very reluctant to agree to it.

We should look into the other possibilities for this clutch. At one time Reliance Electric Company approached us with an idea that they may have developed by now (or they may have dropped it). If I remember correctly, it was a non-magnetic disc on the driven shaft that was in close proximity to a magnet that was rotated by the motor source. When this magnet was actuated, it would drag on the non-magnetic disc and approach almost synchronous speed.

Another company we had talked to at one time is now part of Technology Instrument in Acton. They made a dry powder clutch and brake combination which was fast moving, but which had other problems. We might look into this one.

People who make simple mechanical clutches have also advanced in the last few years and we should consider them. If we stick to 75 inches per second speed, we need relatively slow clutch and brakes. The problem, of course, is complicated because we want to both start and stop in both directions. Some of the combinations we had explored at one time were to have a simple clutch/brake combination for starting and stopping driven by a fast reversing servomotor. This means that we can start and stop very quickly, but it takes a little longer to reverse.

Another combination that we considered was to drive a gear differential with two brake/clutches. When the two inputs were braked, or when the two inputs were driven at the same speed, the capstan is stopped. When one input is braked and the other one driven, it goes in one direction, and it goes in the opposite direction when the inputs are reversed. These speeds have the advantage of using simple brake/clutch combinations that appear to be readily available.

We also ought to look at the high speed motor that we have seen several times at trade shows that a Japanese company is making for tape transports. This appears to have the characteristics of the printed circuit. Somewhere I think we have literature on this.

There is a company on Route 128 in Waltham that Dick Best and I visited several years ago who makes exceedingly high speed, high density valves and motors. You might consider a complete high density system and tape transport to drive a capstan.

ecc

Ken



INTEROFFICE MEMORANDUM

DATE January 27, 1967

SUBJECT Expense Inventory

TO Henry Crouse

FROM Ken Olsen

cc: Harry Mann

Could you make a rough, approximate guess as to the debts we keep in expense inventory in categories such as maintenance supplies, hand tools, shop supplies, paper, lumber, and expensed parts.

Ken

ecc



INTEROFFICE MEMORANDUM

DATE January 27, 1967

SUBJECT Backlog of Materials and Leasehold Improvement Jobs

TO Al Hanson

FROM Ken Olsen

Will you prepare a rough guess for me as to the backlog of materials and leasehold improvement jobs that we have which should be done in the next few years. I would like to develop an idea as to what we will spend in this category during this period of time so that we can adjust the timing to best fit our other needs.

Ken

ecc



INTEROFFICE MEMORANDUM

DATE January 23, 1967

SUBJECT Gifts

TO Harry Mann

FROM Ken Olsen

It would be useful if you could plot out an estimated gift giving backlog for the next few years. If you simply assumed the 5-year plan profits, when would we be free to give gifts again?

If this is plotted out, we can then see how we are as actual profits change relative to the predicted profits.

Ken

ecc



INTEROFFICE MEMORANDUM

DATE January 23, 1967

SUBJECT Ad Hoc Committee for Ordering Procedures

TO Dave Packer

FROM Ken Olsen

We have had excellent results in having ad hoc committees to review engineering projects before we go into production of them. This has not only made very good technical contributions and found weakness in design, but has also done a lot to give people the feeling of openness.

At the Product Line Managers Committee meeting this morning, we decided to try extending this concept to other parts of the Company, and we would like an ad hoc committee to review the ordering procedures within the Company. It was unanimously agreed that you would be the best chairman for this committee.

We would like to have a report come from the committee outlining what happens to RFQ's and orders all the way to delivery, and a list of suggestions as to how to improve this system. The committee might even check with a few customers to see if they are happy with the system, and to find out where the system has fallen down in the past.

The members of the Product Line Managers Committee are going to suggest members for the committee. Their first suggestions are listed below, and you might want to modify this later on:

Al Alexanian
Jim Hagerty
Bill Farnham
Brad Towle
Frank Kalwell
Jim Myers
Steve Mikulski

Ken

ecc



INTEROFFICE MEMORANDUM

DATE January 23, 1967

SUBJECT Problems at Mitre

TO Mike Ford
Nick Mazzaresse
Al Alexanian
Dave Packer
cc: Ted Johnson

FROM / Ken Olsen

I received a call from Mr. Pike of the Mitre Corporation on Friday, January 20th. He says he has been having a long list of problems in communicating with our Company. He didn't want to get anyone in trouble, so he didn't say anything specific about the long list, but three things he finds to be very serious.

They have had a PDP-8 with tape and Teletype for sometime, and have not been able to get anyone to go there and make it work. He says that we are tied up in paperwork, and he has called seven times to get it straight.

He sent in an RFQ on December 30th and received no answer from us. When he called about it he discovered that we had lost it.

They received some large modules from us in which the quality control was poor.

Let me know what you find out about these problems.

Ken

ecc



INTEROFFICE
MEMORANDUM

DATE January 23, 1967

SUBJECT Product Line Managers Committee Meeting, January 30

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

FROM Ken Olsen

Next Monday, January 30th, is going to be the first of our long-range planning meetings. At this time, each member of the Committee will present a job description of his job as it is now and note any ways in which it will be different when we are a million dollar company. You will also prepare an organization chart for your group when we are a million dollar company. We will arbitrarily assume that the structure is the same as it is now and that there is a separate sales manager and European manager.

Ken

ecc

COMPANY CONFIDENTIAL

dec

INTEROFFICE
MEMORANDUM

DATE **January 23, 1967**

SUBJECT **Adams Associates**

TO **Stan Olsen
Nick Mazzaresse
Win Hindle
Larry Partner**

FROM **Ken Olsen**

When we do business with someone, I expect them to use the knowledge of our organization with respect.

I think it would be a good idea to terminate all business with Adams Associates if they continue to threaten to hire our people.

Ken

ecc



INTEROFFICE MEMORANDUM

DATE January 17, 1967

SUBJECT Report on Switches and Indicators

TO Bob Savell
cc: Win Hindle

FROM / Ken Olsen

I should have told you what I was trying to prove when asking for a report on the indicator and switch design for the PDP-10. Every time we design a new machine, we feel some great compulsion to completely change the mechanical design from anything we have built before. The result is that no parts are interchangeable. Whole new manufacturing techniques have to be developed, and it usually delays the final shipment of the machine. It ties up everyone for a fraction of their time during the design of the machine, and, because this is more important than production of modules, we take mechanical engineers away from the two dozen or so production devices and put them on these design problems.

We are now starting the PDP-8/I and are considering the PDP-16. It is automatically assumed that each of these machines will be done like all previous machines and develop a completely new design. I am trying to collect support for the idea that mechanical design is a time-consuming part of a project and a very significant part of the cost, and, therefore, we should consider the novel idea of using one of the many designs we already have in production.

Please don't rewrite your memo, but if you at all agree with my theory, please use your influence in this direction.

Ken

ecc

bcc: Mike Ford
Loren Prentice

dec

INTEROFFICE
MEMORANDUM

DATE January 13, 1967

SUBJECT Air-Conditioning

TO Al Hanson
Harry Mann

FROM Ken Olsen

When we moved people to the top floor of Building 12, I promised them they would have air-conditioning for the summer. Will you start getting bids on this, and plan to do it before the one or two hot days we get in May. Please do it quietly so that the rest of the Company will not try to get into the act.

We built a wall with doors along side the corridor so that we wouldn't lose cold air down the stairway or into Building 3. We should be sure this wall is high enough and that the doors are kept closed for air-conditioning.

We were going to experiment with exhausting air from the top of the north end of the building and hope that the cold air would stay on the lower seven or eight feet without being disturbed. Air would then come from the corridor, go across the top of the floor and out the far end.

Ken

ecc



INTEROFFICE MEMORANDUM

DATE January 11, 1967

SUBJECT Discussions for the Woods Meeting on the 17th

TO Product Line Managers
Harry Mann
Ted Johson
Pete Kaufmann

FROM Ken Olsen

Here is an outline of the things I want us to talk about at the "Woods" meeting next Tuesday.

First of all, I would like to lay out an organization chart and define titles.

Then I would like to lay out a list of committees, including responsibilities and personnel for them.

I would like to suggest that we schedule the first Product Line Managers meeting each month to be a discussion of one-year and five-year plans, the second meeting to be general business, the third meeting Company philosophy, the fourth general business, and, if there is a fifth week in the month, I suggest that we have no meeting that Monday.

I would like to suggest that we budget a certain amount of "seed money" to be saved to use on projects which are proposed during the year but not known about when the budget is being made up. This would not be contingency money, but used only in starting or studying new projects. Before this money is spent, proposals would have to be made, however, and obvious checkpoints included in the proposal.

Xerox has a spring and a fall planning conference. These are scheduled the same dates every year, and are usually well away from Rochester. Should we plan to do the same? They discuss things in the spring, but only change their five year plan in the fall.

Ken

ecc



INTEROFFICE
MEMORANDUM

DATE January 11, 1967

SUBJECT Digital Test Proposal

TO Win Hindle
Pat Greene

FROM / Ken Olsen

As part of your proposal next week to the Product Line Managers meeting, I would like to have you list the checkpoints on your schedule, and also state what the conditions would be at those checkpoints that you would suggest if we modify the plans for the group, and under what conditions you would drop all activities in the digital testing. I would like to have you do this now as part of your plan so that the question is faced ahead of time.

Ken

ecc



INTEROFFICE MEMORANDUM

DATE January 9, 1967

SUBJECT Strate Needs Within DEC

TO Tom Stockebrand
cc: Dick Best
Bob Brown
Stan Olsen
Harry Mann
Pete Kaufmann

FROM Ken Olsen

Will you prepare for me a prediction for the next three or four years of the use of strates within DEC. I do not know of strates that people are planning to use in their new integrated circuit line. This surprises me, but it might be that we just haven't sold them on the idea. It might also mean that our plans for production equipment and personnel are just extrapolations of history and have no validity at all.

If, when you interrogate the 8/1 people, the 16-bit people, and the module people, you find there is no future use for strates, you might rearrange your budget and schedule to cut back on production equipment and to concentrate more on the development of new devices.

This report probably should be part of your capital equipment needs summary due on the 13th of this month.

Ken

ecc



INTEROFFICE MEMORANDUM

DATE January 6, 1967

SUBJECT Automated Drafting Steering Committee

TO Persons Mentioned in Memo

FROM Ken Olsen

Everyone is enthusiastic about the future of automated drafting within DEC, but some people show fear that it is not being directed in the way they feel it is important. I think the problem is that we have very little feedback between potential users and those designing the system.

I would like to set up a steering committee to guide the work and educate the future users. I would like the committee to meet once a month on the Tuesday approximately in the middle of the month. Because the committee will meet so rarely, I will ask Elsa to call the meeting a week before it is due. The people I would like to have on the committee are as follows:

Dick Best •
Jack Shields ✓
Norm Rheault
Roger Melanson
Bill Segal
Dave Gross
Bill Long
Bob Savell
Saul Dinman
Ed de Castro
Pat Greene
Larry Seligman *per. [unclear]*

Some of the things we will discuss during the meetings are:

1. Standardization of symbols
2. Signal naming conventions
3. New symbols for I. C. schematics.
4. The relative value to the Company of various new projects which are natural outgrowths of the present system.

The first meeting will be held in my office on Wednesday, January 18th at 1:00.

Ken

ecc



INTEROFFICE MEMORANDUM

DATE January 6, 1967

SUBJECT INQUIRIES

TO Ted Johnson

FROM Ken Olsen

I am afraid that we have inquiries come into field offices and different departments of the Company which take forever to get answered. People worry about Company policy in doing business with Mexico, or the advisability of a special bid, etc., and then I, at times, am afraid we just don't have time to answer the inquiries. This is inexcusable. If we don't want to do business with Mexico we should say so, but say it quickly rather than sitting on the letters.

Will you report to the Works Committee next Wednesday on the system we have for recording inquiries and when the inquiries are answered. If we don't have a satisfactory system, please propose one.

Ken

ecc



INTEROFFICE MEMORANDUM

DATE January 6, 1967

SUBJECT Status of Dual DECtape Units

TO Nick Mazzaresse

FROM Ken Olsen

Will you have a note sent to me on the present status of the dual DECtape units. I would like to know what the present manufacturing rate is, when we expect the order rate to drop off, are we discouraging or encouraging sales, would we rather sell these than single units, and when we stop making them what inventory will be left?

Ken

ecc



INTEROFFICE MEMORANDUM

DATE January 6, 1967

SUBJECT Feedback of New Systems

TO Nick Mazzaresse
Mike Ford

FROM /Ken Olsen

It has always been our policy to have the engineer who designs a product or system to also have the responsibility to make it work. This is the only feedback we have to make sure that we do not design things that cannot be built. The engineer who designs equipment with a lot of troubles spends more of his time solving production troubles and has little time for developing new products. If systems have feedback in the right direction, after a while most of our products would be designed by engineers who design equipment with little troubles.

I want to point out that if you are breaking this tradition in the PDP-8/1, I am not against breaking the rule, but I do want to make sure we enforce extra controls on this to make sure they design equipment which can be tested and manufactured. With integrated circuits, there is going to be a very serious danger of building modules with R210 and R211 problems. After the quad size board in the PDP-6, we swore that we would never put a lot of logic on one board. We may be tempted to commit the same crime again, and, in this case, the man who commits the crime may not have to live with the results.

Ken

ecc

dec**INTEROFFICE
MEMORANDUM**DATE **January 5, 1967**

SUBJECT

TO **Product Line Managers
Harry Mann
Ted Johnson
Pete Kaufmann**FROM **Ken Olsen**

We have to make a serious effort to cut down on the duties of the Product Line Managers. I am embarrassed that we are taking so much of their time in meetings and preparation of meetings.

I would like to have Harry Mann and Pete Kaufmann make a proposal as to how they can, with their staff, take on much of the work involved in making up the budgets. Clayton Rix might develop a simple questionnaire from which he will then make out the budgets in the same way that an income tax specialist would collect data and then make out income tax forms. The Product Line Managers and Clayton can go through several iterations to make sure all questions are answered before the final budgets are proposed.

Pete should propose how he can take the list of shipments and take care of all the ordering, inventory, and budgeting without any effort to the product lines. He probably won't be able to do this immediately, but, if he lays out a plan, he can then develop the staff and eventually do it all.

A significant part of the problem is to present all of the problems in a concise, open way so that everyone knows what is going on and has confidence in it.

The Product Line Managers will still have responsibility for the length of time units are held in check-out. This should be considered a figure of merit in addition to a piece of data which Pete has to use in his planning. The product line people should schedule this check-out time as part of their budgeting. They should predict improvements in it in the same way they predict other things in the future.

I would like to see us start working on this immediately and, in addition, make a list of time-consuming activities which the Product Line Managers are involved in that they may want to alleviate in the future. This should be part of our discussion in the "Woods" meeting on the 17th.

In spite of the difficulties in some of the meetings we have had on budgeting and planning, I am very pleased with them because they have been educational to us all, but now I think people are educated, and we have a production manager which we never had before, and it is time we organize for greater efficiency.

Ken

ecc

dec**INTEROFFICE
MEMORANDUM**

DATE January 5, 1967

SUBJECT Notes on Budgeting Philosophy

TO Product Line Managers
Harry Mann
Ted Johnson
Pete KaufmannFROM Ken Olsen

We realized a long time ago that we can only do business with one set of books because it is impossible to understand any more than one set of figures. This is even more true of budgeting, and I want to define once and for all that budgets are what we actually expect to do. We can afford no exaggerations to compensate for expected deliveries or for performance. We will not allow budgets to be used to tease people into greater performance by committing them to goals beyond what they can possibly do.

Budgets are also a commitment of Company resources which we have allowed between the product lines. They are not a promise of shipments. If a product line misses delivery in one period, there is no implied promise that additional resources will be allowed to make total shipments for the year equal the budgets.

Harry Mann will take into account the risk of not performing completely up to the budget as he plans for cash. I may tell the Board of Directors that, as a Company, we expect a total budget to be somewhat less of the sum of the product line budgets.

Above all, we will not allow resources to be committed on one set of numbers and pass judgment on a small set of numbers. There will be only one set of numbers on which we will pass judgment and assign resources.

Ken

ecc