Box 5
Folder 8

Memos from Olsen

Ken Olsen memoranda, 1969, 1969-01-04-1969-12-29
Digital Equipment Corporation records
Executives' papers: Ken Olsen papers: Memoranda
X2675.2004, *Box 5* 102737392

1 of 5

THE COMPUTER HISTORY MUSEUM
1 027 3739 2

digital INTEROFFICE MEMORANDUM

DATE: January 4, 1969

SUBJECT: GENERAL RADIO INQUIRY

TO: Nick Mazzarese

FROM: Ken Olsen

cc: John Cohen
Les Silvern
George Rice
John Jones

I got a call on January 2nd from Bob Foulks, Chief Engineer at General Radio, asking about our plans for 16-bit computers.

I know that Data General caught their imagination with the NOVA, so I told him I would be happy to let him know a little bit about our plans. I said that the riffraff in the words have committed themselves to specifications and prices, we're not feeling so secretive.

I told him that we have two machines which are 16-bit oriented; one that takes the memory out in single, 8-bit bytes, and another one that takes it out in two bytes, and that they would be announced in March and demonstrated at the IEEE. He feels that it is important that they use read-only memories.

I told him that I would, in two to three weeks, send him some internal memorandums to let him know the details of this machine.

KHO

ecc

digital INTEROFFICE MEMORANDUM

DATE: January 3, 1969

SUBJECT: PUBLICITY FOR OUR NEW PRODUCTS

TO: Nick Mazzarese

FROM: Ken Olsen

cc: Ted Johnson
Roger Handy
Ron Wilson
Mark Nigberg

I got a call from Herb Ross of LFE, asking if we could speed up delivery of his PDP-8.

In the course of our conversation, he told me that he was at a party with a Mr. R. W. Nichols, who is a lawyer in Boston and lives in Wellesley, and is a director of about a dozen companies. One of the companies is Foxboro. He said the people of Foxboro told their directors that they are going away from DEC and will probably go to SDS. It appears to them that DEC is not interested in the design of new computers.

We ought to somehow get the message across that we are developing new computers; in fact, some people are critical of our coming out with too many new computers. Maybe we should get some news releases in the Boston newspapers about our new machines. Perhaps we should have a mailing list of key people to send information to. We might send this information to all financial analysts, and to directors of those companies which are key customers of ours. We probably should send annual reports to all of the directors of our key customers, anyway.

Ken

ecc

digital INTEROFFICE MEMORANDUM

DATE: January 5, 1969

SUBJECT: ARTICLE FOR "ON LINE"

TO: Dimitri Dimancesco

FROM: Ken Olsen

The automatic drafting and semiautomatic wire-wrap machine programs that DEC has are tremendous contributions to the Company, and I would like to suggest that they be covered in a special article in "On Line." These programs took a lot of planning and a lot of cleverness, and should be appreciated. Some of this may already have been covered in "On Line," however.

Ken

ecc

digital INTEROFFICE MEMORANDUM

DATE: January 6, 1969

SUBJECT: DECTAPES

TO: Dick Best

FROM: Ken Olsen

cc: John Leng

Why are we testing DECtapes at humidity which is so low that it is almost impossible to obtain? Can't we just specify to customers that humidity can't get below some number that is readily obtained?

Ken

ecc

digital INTEROFFICE MEMORANDUM

DATE: January 6, 1969

SUBJECT: RECEPTION AREAS

TO: Stan Olsen

FROM: Ken Olsen

What would it cost to fix up the lobbies so they look decent and to vacuum the floors every day?

Ken

ecc

digital INTEROFFICE MEMORANDUM

DATE: January 7, 1969

SUBJECT: IMPERIAL COLLEGE

TO: Geoff Shingles

FROM: Ken Olsen

cc: Win Hindle
Ted Johnson
Jean-Claude Peterschmitt

Thank you for your answer to Harry Mann's memo to Win Hindle about the stories he heard about Imperial College from ARD.

You took care of the problem very well. Don't spend any more time on the subject. We have to look into every complaint we hear, but we can't take them too seriously when we feel we've done our job.

Ken

ecc

KO - SellingDEC
to Singer

digital INTEROFFICE MEMORANDUM

DATE: January 13, 1969

SUBJECT: PROPOSALS MADE TO THE MARKETING REVIEW COMMITTEE

TO: Marketing Review Committee FROM: Ken Olsen

There is something that bothers me about the Marketing Review Committee every time I read the minutes. After some meditation, I have concluded that this is a hangover from my unhappy childhood. Let me tell you the sad story because it may help the Marketing Review Committee avoid the very serious problem I once got myself into.

Back when the Company was run by the "Works Committee," the sales volume was decreasing and the costs were mushrooming. It had gotten to the point where I even started talking to General Doriot about who we should sell the Company to because I had no control over it. The Works Committee would gather in my office and sit around like wise sages and decide what should be done. Each member would make contributions on ideas discussed, but very rarely were there any contributions which would lower the cost. After a decision was made, it was not clear as to whose idea it was, no one felt responsible, and there was no one to follow through on it. If things didn't work out, there was no one to blame, and if things did work out, everyone took the credit.

Instead of selling the Company to Singer Sewing Machine Company, I disbanded the Works Committee and set a very firm rule that we would listen to no proposals as a group, but, instead, would only listen to firm, written proposals by the individual who was going to do the work, who believed in the idea, and who would take the criticism if the idea didn't work out. This revolutionized the Company, and we may, instead, buy Singer because our profits and volume have increased regularly ever since. Most of the members of the Works Committee quit, however, because they felt themselves so old and wise that they didn't need to take responsibility, and they refused to believe the Company could get along without their contributions to each proposal.

I suggest that the Marketing Review Committee develop the very firm rule that it will not generate proposals, but that each proposal must be presented by an individual who will be responsible for it, who believes in it, and who will sell it and live with the results. I then suggest that the minutes contain the name of the man who proposes it, and the names of all those who make negative comments. The minutes now read like they were generated by a vague, amorphous mass, and if things don't work out, the vague, amorphous mass will not at all feel they had anything to learn from the failure.

Committees cannot design; they can, however, check the logic, criticize, and add formality to proposals.

ecc Ken

digital INTEROFFICE MEMORANDUM

DATE: January 14, 1969

SUBJECT: ENVIRONMENTAL ROOM

TO: Joe St. Amour

FROM: Ken Olsen

The cost of the environmental room brought before the Operations Committee for approval seemed very high. We would like some justification for extremes in humidity which are way beyond what we expect our customers to ever tolerate. It might be a good idea to bring this up to the Engineering Committee and have that group work out what the specifications should be.

Ken

ecc

digital INTEROFFICE MEMORANDUM

DATE: January 14, 1969

SUBJECT: CATASTROPHE PLAN

TO: Operations Committee FROM: Ken Olsen

Sometime ago we asked a number of managers what records they would need to keep in case we wanted to start the Company over again after a castrophe (such as a fire). We now want to ask the question again, but with more detail and a little more emphasis this time.

We want each manager to lay out a plan of how he would start business again after a catastrophe, and then list what documents he should have and which ones should be microfilmed in order to make the new start. This should be a more forceful question than what we asked the last time, because this time the individual manager should feel he has all the responsibility for starting up his group after a catastrophe.

With the list of managers we have for the catastrophe plan, we should be able to cover the whole Company. If you see any holes after you get started, please let me know and we will add them to the list.

Ken

ecc

digital INTEROFFICE MEMORANDUM

DATE: January 14, 1969

SUBJECT: PUBLICITY FOR OUR SOFTWARE

TO: Mark Nigberg

FROM: Ken Olsen

I am told that the box of software we send along with the PDP-8/L is as large as the 8/L itself. You might use a picture of that to make interesting publicity in local newspapers. We still have to get the message across to the world that we do a lot in software.

Ken

ecc

digital INTEROFFICE MEMORANDUM

DATE: December 13, 1968

SUBJECT: BATTELL NORTHWEST

TO: Stan Olsen
John Jones

FROM: Ken Olsen

Mr. Benham of Battell Northwest, in Richmond, Washington (area code 509, 946-2361), called to discuss a significant major development of theirs. They, with the help of Jim Teaze, a software consultant (area code 206, 454-4058), have developed a system for simulation of PDP-7 and PDP-9 which he feels revolutionizes problem-solving. (Frantastic is the word he used to describe it.) It makes the PDP-7, with 8K of memory, faster than the 1108.

He wanted me to go out right away to appreciate the system. They feel it is worth millions to Battell.

I told him I would like to talk around here first to see what our people think about it. He said that John Jones has a copy of the software handbook called, "SIMPLE," and he suggested we talk with Jim Teaze, also.

What shall I do next?

Ken

ecc

January 14, 1969

Mr. M. Benham
Battelle N. W.
P. O. Box 999
Richland, Washington

Dear Mr. Benham:

We very much appreciate your efforts in keeping us informed on the progress of your simulation software. We are all in agreement that it has definite merit.

Unfortunately, our ability to support any given software package must be limited by our available resources, and our current commitment in the simulated area is directed toward supporting hybrid configurations.

While we must decline your interesting offer at this time, we will periodically review our requirements and you may be assured we will be in contact if we seek to expand our simulation software.

Sincerely,

Robert D. McInnis
Manager
PDP-9 Marketing

jl
Bcc K. OLSEN
" J JONES
" J TRASK (S.F.)

Ko - DEC vs DIGITAL

Logo

digital INTEROFFICE MEMORANDUM

DATE: January 14, 1969

SUBJECT: COMPANY IDENTIFICATION AND LOGO

TO: Gabe d'Annunzio
John Bellantoni

FROM: Ken Olsen

cc: Marketing Review Committee

When we started DEC eleven or twelve years ago, we used the initials DEC on our literature, letterhead, and products. After awhile we found that we were being known mainly as "Digital," so we started using that word on our letterhead, advertising, and products. No product since the original aluminum-cased module has used the DEC logo.

We now have nine or ten years of advertising and product identification tied to the block letters "digital." Indeed this is weak because it is a commonly-used word, and because some of our friends call us DEC, others pronounce it as such, and because PDP is a very popular set of initials. However, life is full of problems like this, and we have to learn to live with some of them.

Because we have a big investment in the block "digital," and all our products, all our literature, and all our advertising for ten years have used it, I think there is little likelihood of changing it to DEC now. I would, therefore, not suggest any great effort be put on this proposal. In fact, I would refuse to take it to the Board of Directors for approval unless there is some overwhelming proof that people never notice our block letters and that with "DEC" we would finally catch the attention of the public.

A number of years ago "the experts" talked me into changing our logo to modern upper case letters to spell DIGITAL. The Board of Directors forced me to go back to the old logo, and I believe they were right because it is the one which the world recognizes as us. The letters may not be easy to read, and we may not be able to get a copyright for it, but this is the trademark which registers with people's eyes, even though they say DEC with their mouth.

Ken

ecc

digital INTEROFFICE MEMORANDUM

DATE: January 15, 1969

SUBJECT: CONTACT WITH CONSULTING FIRMS

TO: Ted Johnson

FROM: Ken Olsen

cc: Operations Committee
Ron Smart
Larry Portner
Gabe d'Annunzio

We do not often make out well when consulting firms are asked by clients to make studies on computer problems. This might be because we often ignore them and don't spend the time necessary to win them over to our side.

I understand that some companies have a special program laid out to supply all consultants with information and product literature. I suggest that we consider having a single individual whose sole responsibility will be to make sure all consulting firms have all our product literature and sales pitch, and maybe even visit them periodically. Part of this should also be an offer on our part to let potential clients know about each of the consultants.

Will you let me know where you think this man should fit into the operation and how he would go about doing this.

Ken

ecc

digital INTEROFFICE MEMORANDUM

DATE: January 15, 1969

SUBJECT: DISCUSSION WITH ARNAUD DE VITRY

TO: Ted Johnson
Pete Kaufmann

FROM: Ken Olsen

I met with Arnaud de Vitry on Monday night, January 13th, just for general conversation.

He said that he does not believe there is any political advantage in manufacturing in Germany, but does feel we should increase our manufacturing in Europe for the long-term good, and that, for other reasons, Germany is the best. They have unions, but they are local and work for the local people, which is quite different than France where the unions are national political arms and have relatively little interest in the workers themselves. The only other alternative he suggested was Holland. There, too, he felt there would be little political advantage in manufacturing.

He feels there will be a tightening of controls in Germany, making it more difficult to sell there, but that they will loosen up in time, as he thinks they are in France and England.

He said that it is very important to fulfill all our promises to the British Government so they have no excuse for hurting us in that country.

Ken

ecc

digital INTEROFFICE MEMORANDUM

DATE: January 22, 1969

SUBJECT:

TO: Nick Mazzarese
Stan Olsen
Win Hindle

FROM: Ken Olsen

I would like to schedule a meeting of the Operations Committee on Friday morning, January 24, after Schedule Review. For the meeting, I would like you three to bring a written statement (for each product line) of the procedure by which the date is set for taking orders of new products and peripherals. I also want to know who is responsible for fixing this date, and who is responsible and how we decide on specifications for products, including, or especially, environmental specifications.

Ken

ecc

bcc: Pete - It is cloudy thinking on your part to think you're going to solve the problem by red tape in your organization.

KHO

digital INTEROFFICE MEMORANDUM

DATE: January 27, 1969

SUBJECT: SCHEDULING OF MEETINGS ON SUNDAYS

TO: John Leng

FROM: Ken Olsen

cc: Ted Johnson

We always try to be very respectful of our employees' private lives, and, because of this, try never to schedule work or meetings on Sundays.

Sometimes we do ask that they travel on a Sunday night when there is a meeting scheduled for Monday, and we don't mind people working any amount of hours when they, as individuals or as a group, don't meet commitments they have made; however, I would like to discourage Sales Meetings on Sundays.

Ken

ecc

digital INTEROFFICE MEMORANDUM

DATE: January 27, 1969

SUBJECT: RESPONSIBILITIES AND AUTHORITIES OF THE MARKETING REVIEW COMMITTEE

TO: Ted Johnson

FROM: Ken Olsen

There are many things the Marketing Review Committee should take responsibility for, but, rather than my defining them, I would like the Committee to find and explore them. I only ask that as they take authority they also take responsibility, and that they never get to be twelve people giving random instructions to people in the Company, but act as a committee with a formal vote. (It would be useful to always keep a record of negative votes, and even minority opinions.)

My fear is to have a committee for which marketing plans or trade show rules have to go through twelve individuals to make each of them happy.

In reviewing marketing plans, if a list of comments were delivered to the Operations Committee, a real contribution would be made. The Operations Committee, and the man making the proposal, can then adopt those suggestions which are desirable. This way, someone in the Marketing Review Committee can say it is too large and another one can say it is too small, but there is no obligation on the proposer to make each of them happy.

In making proposals such as island booths, the proposal should list what products are going to be in the booth and some indication as to how the goals are going to be met. If people have their name on a proposal, they are much more likely to feel responsible for such things as an island booth than if they feel they have just joined in a chorus chanting for an island booth.

If we build an island booth, for example, and there is less room for visitors than with a linear booth, I would like the people who proposed it to feel enough responsibility for the island booth to at least learn from the experience.

Ken

ecc

digital INTEROFFICE MEMORANDUM

DATE: January 30, 1969

SUBJECT: TURKEY DONATIONS

TO: Ed Steinberger
Bob Underwood

FROM: Ken Olsen

It was thoughtful of you to think of the needy at Christmas, and to devote much of your own time to getting turkeys to them.

Your activities reflected extremely well on Digital and all of us working here. Thank you.

Ken

ecc

Kenneth H. Olsen
Memos Sent, January, 1969

TO:	FROM:	RE:	DATE:
Ed Steinberger Bob Underwood	Ken	Turkey Donations	1/30/69
Ted Johnson	Ken	Responsibilities and Authorities of the Marketing Review Committee	1/27/69
John Leng cc: Ted Johnson	Ken	Scheduling of Meetings on Sundays	1/27/69
Nick Mazzarese Stan Olsen & Win Hindle	Ken	Operations Mtg - 1/24	1/22/69
Ted Johnson Pete Kaufmann	Ken	Discussion with Arnaud deVitry	1/15/69
Ted Johnson	Ken	Contact with Consulting Firms	1/15/69
Gabe d'Annunzio John Bellantoni	Ken	Company Identification and Logo	1/14/69
Mr. M. Benham Battelle N.W.	Bob McInnis	simulation software	1/14/69
Mark Nigberg	Ken	Publicity for our Software	1/14/69
Operations Committee	Ken	Catastrophy Plan	1/14/69
Joe St. Amour	Ken	Environmental Room	1/14/69
Marketing Review Cmte.	Ken	Proposals Made to the Marketing Review Cmte.	1/13/69
Geoff Shingles	Ken	Imperial College	1/7/69
Stan Olsen	Ken	Reception Areas	1/6/69
Dick Best	Ken	DECtapes	1/6/69
Dimitri Dimancesco	Ken	Article for "On Line"	1/5/69

TO:	FROM:	RE:	DATE:
Nick Mazzarese	Ken	General Radio Inquiry	1/4/69
Nic Mazzarese	Ken	Publicity for New Products	1/3/69

digital INTEROFFICE MEMORANDUM

DATE: February 3, 1969

SUBJECT: SUGGESTED SYSTEM FOR ACCEPTING PURCHASE ORDERS

TO: Ron Smart

FROM: Ken Olsen

cc: Ted Johnson
Dave Packer

While meeting with the Regional Managers last week, I was told that they have no respect whatsoever for answers they get from Maynard. Let's solve enough of the problem immediately so we can have the respect of this sales force.

I'm afraid the systems we set up, and I suspect the system that the consultants will propose, try to automatically solve all the problems, but don't ever make individuals responsible when there are failures.

I want a system set up so that when there is a problem we can go back and find out exactly who failed. After this is done, we will probably never have to go back and check.

I would like to see a man in Sales Administration be responsible for a specific group of customers. This may mean that we will need more men of greater capability than we now have. Each man would keep a tub file in which an 8½" x 11" card should carry all the information for each order. The front side would contain all the information for the customer, and would be photocopied and used as an acknowledgment. The back side would contain all the commitments made by manufacturing, purchasing, engineering, programming, and marketing, with dates and checkpoints, and maybe even the signature of the man making the commitment.

All checkpoints would then be transferred to a master checkpoint calendar for each manager responsible for commitments. From this, we can check every day with all the managers involved to see how they're doing on their commitments.

When changes occur during the process of producing an order, the man who is responsible for the tub should be in a position to catch each one. If commitments are written down with dates, we should never get into the position of promising delivery before engineering is promised to be completed (or other illogical situations). When we get into trouble, it will be very clear whether the mistake was made by the man who accepted the purchase order, someone who had a special commitment, or manufacturing.

I don't really feel presumptuous enough to design a solution when I don't even understand all the problems; however, I present these suggestions to let you know how strongly I feel that the whole job should be broken down into individual responsibility so that the successes and failures can be traced to individuals.

I want to gain the respect of our field force!

ecc

Ken

digital INTEROFFICE MEMORANDUM

DATE: February 4, 1969

SUBJECT: AUTOMOBILE LICENSE NUMBER FILE

TO: Stan Olsen

FROM: Ken Olsen

cc: Bob Lassen
Al Hanson
Nick LoRusso

I have gotten the impression that our file of automobile license numbers has never worked out very well. Part of this is because we have three groups involved in it. Personnel collects the information, the telephone people use it for paging, and Al Hanson uses it for parking enforcement.

I suggest we make someone in the telephone area responsible for maintaining this list, and that it be the only list which is maintained. I don't think Personnel has any need for it. When the guards want to get information, they can simply call the correct operator and get all the data they want.

The telephone people should also be responsible for sending around the questionnaire when this information needs to be updated, and then they should make up the file themselves. They might have operators who are not too busy during certain parts of the day who can even telephone those people who didn't return their form on time.

I further suggest that every time we page or look for the operator of a car whose license number we don't have on file, that we enter the number in our file so it will only be necessary to page a license number over the public address system once. If we conclude that the license number belongs to a salesman or visitor, we should enter this information into the file. If there is no answer to the page, and/or if we conclude that he doesn't work here, we should enter that information into the file, too. We might also make note in the file of how many times these people block traffic. If there is someone who doesn't work here but gets in the way of our traffic often, it might pay to find out who it is.

Ken

ecc

digital INTEROFFICE MEMORANDUM

DATE: February 4, 1969

SUBJECT:

TO: Nick Mazzarese

FROM: Ken Olsen

cc: Bob Collings

In the November 21st issue of "Machine Design," there is a long article (page 136) from Lockheed-Georgia Company about Computer Stress Analysis, and it looks like they're using our light pen and display, and probably our computer, for this. We should find out more about this and use it for our selling activities.

Ken

ecc

digital INTEROFFICE MEMORANDUM

DATE: February 7, 1969

SUBJECT: PLASTIC BAGS FOR WASTEBASKETS

TO: Al Hanson FROM: Ken Olsen

While visiting other offices around the Company, I decided that maybe we should use clear plastic bags in all our wastebaskets, rather than the light green color, because they seem to be more attractive.

Ken

ecc

digital INTEROFFICE MEMORANDUM

DATE: February 7, 1969

SUBJECT: PLANT SECURITY

TO: Stan Olsen

FROM: Ken Olsen

Who is responsible for our plant security and watching for such things as doors being left open and unguarded so people can walk in and out at any time?

I have noticed that the center door in Building 1 is left open all the time, and that technicians use it for going out to lunch, people come and go at all times, and trucks even park there at the foot so anything could be taken out at any time by anyone.

Also, the parking lot near Building 12 has suddenly become all jammed up, and I notice that it happens well before 7:45 a.m. I think I know the reason why. People no longer park in the big parking lots, but park over here instead because they can go in and out of Building 1 easily, without any guards or security, and most of them can park right by the center entrance.

Do we have anyone who worries about these things, or do we just wait until we find something being stolen? How many other doors are left wide open, and, those that are left open, are they ever closed at night?

Ken

ecc

digital INTEROFFICE MEMORANDUM

DATE: February 12, 1969

SUBJECT: PLANT SECURITY

TO: Al Hanson

FROM: Ken Olsen

While walking through the plant on a Saturday recently, I found that the fire door leading into Building 8 from Building 6 was fixed so it wouldn't close by dropping the counterweight out the window. It might be a good idea to have the guards check all the fire doors when they make their rounds.

It might also be a good idea to have the guards make note of any weaknesses they are aware of in our security system. I think they are conscientious in pointing out things that are unlocked or broken into, but, as we make changes in our layout, I'm afraid we may not always take into account ways in which people might get into the plant at night.

Ken

ecc

digital INTEROFFICE MEMORANDUM

DATE: February 13, 1969

SUBJECT: APRIL ANNOUNCEMENT

TO: Gabe d'Annunzio

FROM: Ken Olsen

I am enthusiastic about the idea of presenting a clear, concise picture of our whole product line for the April announcement. This is great, but I'm afraid the message will soon get lost if we don't have significant follow-through. Part of this could come from ads that include small pictures and list each of our computers, and we should probably run them for two or three months. This is the kind of message that bears repeating and hammering for a long period of time, and then the same ad could be converted into a brochure.

A few years ago, SDS had an advertisement that was particularly effective. It had, all on one page, small pictures of all their computers, and a description of their characteristics and differences. I have always been suspicious that we avoided this because we never wanted to figure out what the differences were between our computers. I never know how the salesmen figure them out in their own minds, much less tell our customers.

A few of the ads could be in color to take advantage of the psychedelic colors in our console. In fact, the pictures could be close-ups of the consoles themselves. In this area, however, I believe the ads should be repetitive, or at least be very much alike to take advantage of repetition.

Ken

ecc

digital INTEROFFICE MEMORANDUM

DATE: February 13, 1969

SUBJECT: MIT ALUMNAE MAGAZINE

TO: Gabe d'Annunzio

FROM: Ken Olsen

MIT's alumnae magazine, which I would guess is read by a number of influential people, is going to have an issue entitled, "Computers in the Service of Society." It seems to me that our computers have been used more in the service of society than anyone else's, so we may want to put in an appropriate ad. Advertising space reservations close on March 3rd. We may also, from the generosity of our heart, offer pictures to them.

Ken

ecc

digital INTEROFFICE MEMORANDUM

DATE: February 17, 1969

SUBJECT: TRIP TO NCR

TO: Nick Mazzarese

FROM: Ken Olsen

cc: Dick Best
Bob Collings

Our trip to NCR went very well. They put us up in their guest house, which, I think, used to be Orville Wright's home. It was most beautiful, and they were all so gracious. I'm glad you didn't go, however, because we really didn't need to spend any more man-power on the problem, and we didn't get away until late Friday night.

They were not interested in our terminal. They have a very complicated terminal (with an enormous amount of electronics in it) which they propose to solve by using LSI.

I feel we should continue our work on this delay line/TV system. This is something we should have in our product line, but, also, if NCR loses interest in their present approach, we could be ready to take over.

They had several printers, one of which interested me very much because it was almost exactly the system Menno Koning was given when he came to work for us. He proved it wouldn't work, but NCR has it working very nicely.

One of their people sees the need for simple terminals for other than the cash register problem. There are many places where data has to be taken into the system this way, so I'm sure that if we have this terminal, work it out well, and sell it well, we can sell it in quantity. It has to be exceedingly simple and exceedingly reliable, though.

They also have needs for special interfaces to other people's equipment (they call this foreign equipment). This includes several Teletypes, the IBM 1050, Univac computers, Remington Rand computers, and other IBM computers. We say we have interfaces to the 8 for many of these, and, with an interface to the Century Series, we may be able to solve many of their problems. We have to be careful not to do too many special systems at a price which isn't worthwhile, but this is a good way to get to know NCR.

Ken

ecc

digital INTEROFFICE MEMORANDUM

DATE: February 18, 1969

SUBJECT: INSTANT ENTREPRENEURSHIP

TO: Stan Olsen

FROM: Ken Olsen

cc: Operations Committee

In the "Woods" meeting last week, you made the suggestion that we give complete autotomy, almost make divisions, out of many of our groups. I would like to clarify my attitude on this a little bit.

It might seem that I was saying I am the only one bright enough to have truly general managership, and everyone else needs help or can only take part in it.

This definitely was not my point at all. What I meant was that we have to make sure people are tremendously brighter than I am if they are going to learn the things which I only partially learned over many years and through many mistakes. DEC spent quite a few years at relatively low-level learning many of the things involved in running a business, and now we want to give a man a group and have him responsible for 10, 15, 40 million dollars in a year or two. I'm not sure anyone can learn these things that fast, but if we say one can, we have to be sure we make a list of them and that he does learn them all.

In addition, as we were growing, we made many mistakes which we were able to tolerate because of the nature of the business then and because we were relatively small and diversified. If we force many million dollars' worth of business on a man with no previous experience, we have to be sure we can tolerate failure, either from a financial point of view or our reputation's point of view.

Even more important than this, I feel that we sometimes are trapped into thinking that if we move people to certain geographical relationships to other people, or if we do engineering in a product line or not in a product line, or if we do mechanical things, there is no need then to learn how to manage. I feel very strongly that we have to identify what it means to manage, make sure we learn how, and that we do these things. Location and entrepreneurship, or these other good things, help motivate, but they do not make up for lack of knowledge or interest in managing.

Ken

ecc

digital INTEROFFICE MEMORANDUM

DATE: February 20, 1969

SUBJECT:

TO: Mort Ruderman FROM: Ken Olsen

General Doriot said there is a man named Anderson who has a company in Vancouver, Canada, that does medical work. He heard they need a small computer, and plan to have a man named Dr. Gordon Dowerwill at the American Heart Convention in New York on February 26th. General Doriot would like to have us make it a point to meet with Dr. Dowerwill, if at all possible.

Ken

ecc

digital INTEROFFICE MEMORANDUM

DATE: February 20, 1969

SUBJECT: UNIVERSITY OF UTAH

TO: Stan Olsen

FROM: Ken Olsen

Dave Evans, a partner of Ivan Sutherland, gave me a sample print of the modules they are using. It is a very large board with fairly high density of integrated circuits. The local salesman told him he should use our facilities for making these boards, but I told him that I would guess, because their quantity is low, they should buy them anywhere they can get them.

Ken

ecc

digital INTEROFFICE MEMORANDUM

DATE: February 20, 1969

SUBJECT: REDESIGN OF OUR SWITCH

TO: Loren Prentice

FROM: Ken Olsen

cc: Jim Jordan
Roger Cady

After we finish the mechanical design of the PDP-11, I would like to suggest we do some design work on our own switch.

I would like to see a switch something like this. On the printed circuit board would be a small reed relay for each switch. In front of that would be a steel plate about 1/2 an inch away with an odd-shaped hole in it. Into this hole would go a handle that might have a 1/4-inch diameter, and a 1 1/2-inch long cylindrical bat handle (in psychedelic colors, of course). Where it goes through the odd-shaped hole, there would be an almost-round pivet molded at right angles to the main shaft. This would fit into the odd-shaped hole, over which there is a clamp made of steel or plastic.

The shaft handle would extend beyond the pivet, and on its end would be a place where a small, permanent magnet, which actuates the relay, is permanently snapped into place.

There would be detents in the plastic pivet which would be used to switch to definite positions.

For the spring return switches, the pivet could be completely round, and, inside, a coil spring could be used to return the handle. There are very few spring return-type switches used, and we can probably afford to install the coil switch by hand.

The mechanical parts of this would be exceedingly simple, and the electrical parts would be automatically installed. The mechanical arrangement can be assembled separately and can be readily maintained by taking off the mechanical assembly. Hopefully, the switches are approaching the reliability originally promised for them.

Ken

ecc

digital INTEROFFICE MEMORANDUM

DATE: February 20, 1969

SUBJECT: MEETING WITH DR. DAVID EVANS OF THE UNIVERSITY OF UTAH

TO: Win Hindle
Bob Savell

FROM: Ken Olsen

On Thursday morning, February 13th, I met with Dave Evans and discussed cooperation between his company and the PDP-10. They have a display device which they have on the PDP-10 that makes it one of the most sophisticated and powerful displays available. They sell this for $8,000 (I told him this price is probably too low), and plan to make first deliveries this coming Summer. The first number of these will probably use our PDP-10. One is going to BBN, one to MIT, and they have several other orders lined up.

I told him we were very enthusiastic about cooperating with them, and I suggested that we jointly, or we, Digital, would print a brochure explaining their system with ours. I think this would generate many more orders for both of us. I further suggested that we might go to trade shows together sometime. They have very exciting-looking displays, and they give dramatic demonstrations.

Dave asked if we would like to do the marketing of this, and I said I didn't think we would; it is a special item, and we would have difficulty getting, training, and keeping salesmen for it. He then asked if we would be willing to service them, and I said I didn't want to give an off-hand answer to that question.

I think we should encourage this and go about it enthusiastically. I would guess it will mean a large number of customers over the next few years if these people do a good job, and I think we might encourage them to do just that.

We might also consider the optical reading device (which Ed Fredkin is developing for use on the PDP-10) as part of our product line, or in conjunction with III. With this optical reading device, we may have a very powerful business in data processing systems. I think Ed Fredkin is planning to use this for reading mail for the post office.

Ken

ecc

digital INTEROFFICE MEMORANDUM

DATE: February 24, 1969

SUBJECT: GENERAL, LONG-TERM PROBLEMS OF THE CORPORATION

TO: Operations Committee

FROM: Ken Olsen

As we discussed at the Operations Committee meeting today, we will have a "Woods" meeting in my office all day next Monday, March 3rd.

For this meeting, I would like each Vice-President to:

1. Make a list of his responsibilities, and, for each, how much time is spent on those responsibilities (maybe hours per week would be a good measure).

2. List the weaknesses of his operation.

3. List the things he is going to do to overcome the weaknesses.

4. List the things he is going to do in order to make his operation grow to take care of added responsibilities next year.

We will summarize these and present them to the Board of Directors the following Monday, March 10th.

We will then go to the next level of managers and ask them to put down on paper their answers to the same specific questions.

Ken

ecc

digital INTEROFFICE MEMORANDUM

DATE: February 24, 1969

SUBJECT: NEW OPERATING POLICIES

TO: Operations Committee

FROM: Ken Olsen

Last week was a hectic week, but I learned a lot about our organization. Here are some specific rules I am arbitrarily laying down.

1. There will only be one sales meeting in any one week.

2. Sales meetings will not be held during weeks which are popular for vacations.

3. The majority of senior people from each product line will not be out of the plant at the same time.

4. Any time a senior person is out of the building, there shall be a specific, well-understood, well-laid-out plan for covering all telephone calls and emergencies directed to him. We shall fix order processing problems immediately.

5. No product shall be sold, nor its price fixed, until there is written approval from the Operations Committee. The presentation may be exceedingly brief, but the formality is important. With this rule, I am specifically taking the prerogative away from the Vice-Presidents and placing it in the hands of the Operations Committee.

Ken

ecc

Kenneth H. Olsen
Memos Sent, February, 1969

TO:	FROM:	RE:	DATE:
Operations Committee	Ken	New Operating Policies	2/24/69
Operations Committee	Ken	General, Long-Term Problems of the Corp.	2/24/69
Win Hindle Bob Savell	Ken	Meeting with Dr. David Evans of the U. of Utah	2/20/69
Loren Prentice	Ken	Redesign of our Switch	2/20/69
Stan Olsen	Ken	University of Utah	2/20/69
Mort Ruderman	Ken	Dr. Dowerwill	2/20/69
Stan. Olsen cc: Operations Committee	Ken	Instant Entrepreneurship	2/18/69
Nick Mazzarese	Ken	Trip to NCR	2/17/68
Gabe d'Annunzio	Ken	MIT Alumnae Magazine	2/13/69
Gabe d'Annunzio	Ken	April Announcment	2/13/69
Al Hanson	Ken	Plant Security	2/12/69
Stan Olsen	Ken	Plant Security	2/7/69
Al Hanson	Ken	Plastic Bags for Wastebaskets	2/7/69
Nick Mazzarese	Ken	article conceming Computer Stress Analysis	2/4/69
Stan Olsen	Ken	Auto License Number File	2/4/69
Ron Smart	Ken	Suggested System for Accepting Purchase Orders	2/3/69

digital INTEROFFICE MEMORANDUM

DATE: March 10, 1969

SUBJECT: CHEAP TAPE

TO: Bill Long

FROM: Ken Olsen

cc: Roger Cady

I have a friend at RCA who has offered to send me some detailed studies on cassette tapes. He suggested that we also contact George Barr of Norelco, 42nd Street, New York City (across the street from Grand Central). Norelco gives free licenses and a lot of information on the use of their cassettes and the design of transports. They give free licenses because they would like to encourage theirs to be the standard cassette in the world.

Ken

ECC/lmm

digital INTEROFFICE MEMORANDUM

DATE: March 10, 1969

SUBJECT: NEW LAYOUT FOR THE PDP-11

TO: Roger Cady
Loren Prentice

FROM: Ken Olsen

cc: Dave Nevala
Jim Jordan
Nick Mazzarese
Dick Best

Here is a very rough model of a mechanical layout for the PDP-11 which I think has a number of interesting features.

First of all, it is exceedingly simple and readily visualized by the customer. It is truly modular, and installing a memory is just dropping in one bar of blocks and plugging in new bus.

The bus would be two pair of single modules that will jump all units together. The power will come over the same set of wires so that no extra power wiring is necessary.

The power supply will be mounted in the back of the cabinet. There will be a socket there for the power supply, etched board, and room for the circuitry to transform the bus for outside use. The internal bus and the outside bus will plug into the same socket, also.

The computer portion will pull out with or without slides. When there is a table, the computer portion will be pulled out and turned on its side for troubleshooting. When there is no table, it will be pulled out on slides that can be lifted up to expose the wiring on the bottom.

The customer can buy anything he wants. He will pay extra for the cabinet, slides, and console. If he wants, he can buy only the power supply, the cp, and 4K of memory.

If this packaging works out as well as I'm imagining it does now, we may want to redo the 8 and maybe even make a 16-bit 8 using the same rack.

Ken

ecc

KO - 8/i + 8/L
shuntage

digital INTEROFFICE MEMORANDUM

DATE: March 10, 1969

SUBJECT: THE IMPORTANCE OF BEING RIGHT

COMPANY CONFIDENTIAL

TO: Regional Sales Managers

FROM: Ken Olsen

cc: Operations Committee
Product Line Managers

This year, we have manufactured just about everything that was requested at the start of the year; however, the order rate for PDP-8/I's and 8/L's has mushroomed way beyond our estimates, and it appears that the Sales force has concentrated on these items rather than the 9's and 10's.

The shortage of 8/I's and 8/L's has been a frustration to the Sales force. When we look at next year's sales estimates, it appears that people are planning to avoid the frustration of wrong deliveries by overestimating on all product lines. (The sum is approximately 50% higher than what I think is a reasonable amount for us to sell next year.)

The seriousness of overestimating cannot be overemphasized. If we underestimate the demand, we live with a broken heart resulting from long deliveries and lost orders. If we overestimate, we live with the cost of extra plant, extra personnel, and all the extra expenses. The result of this will be new management, and will probably mean that Digital will be part of a conglomerate.

We not only have to be right in our estimates when we budget at the beginning of a year, but we also have to take our commitments very seriously during the year to make sure we sell those units which have been manufactured because of previous estimates.

Ken

ecc

digital INTEROFFICE MEMORANDUM

DATE: March 10, 1969

SUBJECT: THE DIFFERENCE BETWEEN BUDGET AND INVENTORY

TO: Operations Committee

FROM: Ken Olsen

We have one set of plans, but it is possible to order more production than we budget to ship. This can be part of one plan, so long as it is a planned inventory and so long as the production rate each month is not greater than shipments. We should plan for a budgeted inventory level, if that is what we desire, and we should make sure that inventory plus shipments add up to production.

The budgeted shipments is the number around which we budget expenses. With inventory, we can agree to make shipments, but we won't plan expenses around these.

Ken

ecc

digital INTEROFFICE MEMORANDUM

DATE: March 11, 1969

SUBJECT: SCHEDULE REVIEW MEETINGS

TO: Larry Portner

FROM: Elsa Carlson

cc: Steve Sobel

This will confirm our conversation of yesterday when I asked you, at Ken's request, to become a permanent member of the Schedule Review Committee.

Please get in touch with Steve Sobel for any detailed information you might require.

Elsa

digital INTEROFFICE MEMORANDUM

DATE: March 11, 1969

SUBJECT: OFFICERS AND DIRECTORS LIABILITY INSURANCE

TO: Win Hindle
Ted Johnson
Pete Kaufmann
Nick Mazzarese
Stan Olsen

FROM: Ken Olsen

The Officers and Directors Liability Insurance has been increased, making it necessary for 1/10th of the additional premium to be paid by the Officers and Directors.

Your portion is $22.35, and I would appreciate your forwarding your personal check for this amount to Bob Dill in the Accounting Department. (Checks should be made out simply to Digital Equipment Corporation.)

Ken

lmm

digital INTEROFFICE MEMORANDUM

DATE: March 17, 1969

SUBJECT:

TO: John Cohen

FROM: Ken Olsen

cc: Nick Mazzarese
Roger Cady

I read in the March 10th issue of Electronic News that SDS is making two 16-bit computers. Do you think the information we gave Xerox is being used in these machines, or maybe even as a basis for them?

Ken

ecc

digital INTEROFFICE MEMORANDUM

DATE: March 18, 1969

SUBJECT: FIELD SERVICE INSTALLATION REPORTS

TO: Jack Shields

FROM: Ken Olsen

cc: Jim Cudmore

If I read Jim Cudmore's monthly Module and Computer Quality Summary report correctly, it seems to me that of the 304 installations in January, we only received 87 Field Service Installation reports.

Ken

ecc

digital INTEROFFICE MEMORANDUM

DATE: March 20, 1969

SUBJECT: HEAT ON FIRST FLOOR OF BUILDING 12

TO: Al Hanson

FROM: Ken Olsen

Please do something about the temperature in our area. Some days it is real cool, and others it is uncomfortably hot. Can't it be regulated so that it is the same every day?

Ken

Co-design of
classrooms

digital INTEROFFICE MEMORANDUM

DATE: March 20, 1969

SUBJECT: BUILDING FOR CLASSROOMS

TO: Stan Olsen
Al Hanson

FROM: Ken Olsen

Here is how we could make very inexpensive classrooms. I got this idea from the Haynes School in Sudbury.

The building would be made in long wings, and have classroms on each side, with a corridor running down the center. The floor would be poured concrete slab. We would use concrete block walls for all the inside walls, but not for the outside wall. The doorway into each room would be in the center of the room. The walls on the side of each classroom would extend about two feet out beyond the outside walls.

The ceiling would be supported by open web-welded beams hung from the side walls of the classrooms. The corridors would be only six or eight feet wide, and supported by beams running in opposite directions. The open web beams in the ceiling would be left exposed as an interest factor.

After the walls and roof are done, the whole building would be spray painted, probably a light beige. Then a curtain wall would be put up for each of the outside walls.

Each of the wings would come into a main building, which would be a lounge and receptionist area (this might contain coke machines and the like). This would be constructed the same as the others, but, for looks sake, the roof would be higher, and it would be a clear span of maybe 30 to 50 feet. This would take quite a bit heavier beams, but, like the classrooms, the glass would go all the way to the roof, and, from the outside, you can see the open web beams.

The standard classroom size would be 24' x 24'. We could put the boys' and girls' rooms in the same modules, and we could put five or six instructors in one for an office. They would have to share the privacy with several other people, but they would have a very soundproof area.

A warehouse on the same grounds could be partitioned off to make a laboratory area. The laboratory area could also be an extention off the lounge, which would have a higher ceiling and a much wider span.

Ken

ecc

digital INTEROFFICE MEMORANDUM

DATE: March 27, 1969

SUBJECT: TRANSFORMERS FOR NEW SMALL COMPUTERS

TO: Don White
Roger Cady

FROM: Ken Olsen

cc: Bill Long
Nick Mazzarese
Henry Crouse

When we send out for bids on a power transformer for our smaller computers, I would like to suggest that we request two bids. One for the most economical transformer, which is probably the one we should get bids on now, and the other one for using grain-oriented core material, with high temperature insulation.

With the grain-oriented material, I think we could cut down the core by approximately one-third in weight and size, and with a high temperature insulation, we could cut down the copper size. The result might be a significantly smaller and lighter-weight transformer, which may be worth the extra cost in our small computers.

Ken

ecc

Kenneth H. Olsen
Memos Sent, March, 1969

TO:	FROM:	RE:	DATE:
Don White Roger Cady	Ken	Transformers for New Small Computers	3/27/69
Mark Nigberg	Ken	Yale University Letter	3/24/69
Stan Olsen & Al Hanson	Ken	Building for Classrooms	3/20/69
Al Hanson	Ken	Heat on First Flr. of Bldg 12	3/20/69
Jack Shields cc: JimCudmore	Ken	Field Service Installation Reports	3/18/69
John Cohen	Ken	info given to Xerox	3/17/69
Operations Committee	Ken	Officers and Directors Liability Insurance	3/11/69
Larry Portner cc: Steve Sobel	Ken	Schedule Review Mtgs.	3/11/69
Operations Committee	Ken	The difference between budget and inventory	3/10/69
Regional Sales Managers	Ken	The importance of being right	3/10/69
Roger Cady Loren Prentice	Ken	New Layout for PDP-11	3/10/69
Bill Long cc: Roger Cady	Ken	Cheap Tape	3/10/69

digital INTEROFFICE MEMORANDUM

DATE: April 4, 1969

SUBJECT: RECORD OF TRADE SHOWS

TO: Gabe d'Annunzio

FROM: Ken Olsen

I would like to suggest that you keep a notebook on trade shows in which we, after each trade show, include a land camera photograph of the booth, notes on transportation, attendance, travel, interest, orders, and everything else we can get out of a debriefing session from people who were there.

In addition, for those shows where we are doing something different or dramatic, like the slide show and island booth, include a copy of the original proposal (and its date), a copy of the final bill, and comments on the things which were different. We keep reinventing ideas which a year or two before we swore we would never use again. If we recorded our comments after a show, they would be much more valid than comments people remember a long time afterward.

For the amount of money we're putting in trade shows, it is worth this little bit of red tape.

Ken

ecc

digital INTEROFFICE MEMORANDUM

DATE: April 4, 1969

SUBJECT: TELEPHONE COSTS

TO: SALES NEWSLETTER

FROM: Nick LoRusso
Approved by Ken Olsen

Communications are very important to our operation, and we are willing to pay the price for them; however, our interest in good communications has generated carelessness with respect to the use of the telephone. Our telephone bill is now approximately a million dollars a year, which means that it is worth a lot of effort to develop some economy.

It is particularly noticeable that casual attitudes have developed in our transatlantic calls. Because the cost per minute is so very high, we will start by putting some very simple controls on transatlantic calls.

From now on, for every transatlantic call, we would like the following form filled out. Each call, on the average, comes to many dollars, and the effort involved in making out the form should be relatively small, but will help us identify whether these calls are important or not.

The questions on the form are simply who made the call, who was called, how long the call took, and an offhand guess of what the charges were.

ecc

digital INTEROFFICE MEMORANDUM

DATE: April 7, 1969

SUBJECT: PIERRE SCHNEEBELI'S MEMO ON COMMUNICATIONS (Dated April 3, 1969)

TO: Joe St. Amour FROM: Ken Olsen

Indeed, we are lacking in communications in a number of places, but I would be very interested if you could find out for me: (1) which of these are limiting Pierre's success, and (2) now that he knows the weaknesses (and not being particularly bright we probably won't correct them), can he possibly schedule a project that would be successful without using these weaknesses as an excuse after the fact?

Ken

ecc

Copy given to Nick only, not Bill

digital INTEROFFICE MEMORANDUM

DATE: April 15, 1969

SUBJECT: CALCULUS OF PRICING FOR FIXED PROFIT

TO: Bill Long

FROM: Ken Olsen

cc: Nick Mazzarese

Our intuition on the effect of price changes is never valid because we are talking about small differences in large numbers.

If my rusty attempts at calculus are somewhat correct, a 1% increase in the price of a PDP-8 in next year's budget would mean we could sell almost 4% less units and still have the same profit.

Ken

ecc

Calculus of Pricing for Fixed Profit

let
- n = number of units
- P = price per unit
- C = manufacturing cost per unit
- K = costs that are proportional to volume
- f = fix costs
- U = cost proportional to number of units

$Pn - nC - K(Pn) - nU - f = \text{Profit}$

$n(P - K) - n(C + U) - f = \text{Profit}$

$(P - K)\,dn + nd(P - K) - (C + U)\,dn = 0$ differentiate

$dn(P - K - C - U) = nd(P - K)$

$$\frac{dn}{n} = \frac{d(P - K)}{P - K - C - U}$$

If K =
- .055 engineering
- .081 selling cost
- .070 administrative
- .206

$C = .57$

$U = 0$

$$\frac{dn}{n} = \frac{d(P - K)}{P - K - C - U} = \frac{.8}{.23} = 3.8$$

1% change in price = 3.8% change in number of units

= 2.2% change in volume

digital INTEROFFICE MEMORANDUM

DATE: April 22, 1969

SUBJECT: SUGGESTION FOR A CHEAP TAPE TRANSPORT

TO: Pete Kaufmann FROM: Ken Olsen

Here is an idea for a cheap tape transport that Ernie Luttig can work on when he is through with the DECtape.

I'm very doubtful that the cartridge tapes, either the automobile type or Norelco type, would be reliable enough for computer operations. I suggest that we use all the mechanics from a DECtape, but that we, instead, use a single track head and develop a mechanism that would move at 8 or 16 positions across the tape.

This would then give us the biggest cost saving that we were looking for in a cartridge tape, and we would have a serial unit with very high density. The mechanics might be a little more expensive than a cartridge tape, but they would be much more reliable. In addition, it would cut down our inventory and service problems.

Ken

ecc

Copy to: E Savage
Clayton Rix

digital INTEROFFICE MEMORANDUM

DATE: April 22, 1969

SUBJECT: BUDGETING

TO: Operations Committee

FROM: Ken Olsen

There are a number of things I would like you to do this week for budgets.

First of all, I think we should break down each product line the way Clayton Rix started to on the PDP-8 product line. This should be columned for Display, Data Acquisition, A-D, etc. With this layout, we can tell if each product is profitable, and see how they add up for the product line. (We might also include Ken Larsen's and Mort Ruderman's activities the same way.)

I also suggest that we very carefully scrutinize the Company-sponsored developmental funds. We should cut out those things which are for one product line, or those things, like the display, which have a number of things, some for several product lines. We should cut out those projects that are for just two product lines, such as the memory for the PDP-11 which might also be used on the PDP-10.

It is, of course, not at all valid to say something developed for a product should be Company sponsored because it might later on be of value to others. This would open up Pandora's box so that all our traditional ways of budgeting would fall apart.

I would like to see us turn off the cartridge tape transport project immediately. I don't believe it is being supervised or that there are any specific goals, and we need the engineering time and money for other projects. I also think we should turn off the TU79 for the same reasons.

We should save the 2% budgeted for Company-sponsored developments for future developments. The fact that we don't now know how to spend that much money doesn't mean we shouldn't save it for the rest of the year.

I don't think there is any reason to go over the Company-sponsored project this week. If we assume it is going to be a 2% fund, we can delay until a more casual time going over each of those budgets. Right now, we have to get the overall Company budget going, and that is the highest priority.

Ken

ecc

digital INTEROFFICE MEMORANDUM

DATE: April 22, 1969

SUBJECT: SUMMER HELP

TO: Pete Kaufmann

FROM: Ken Olsen

What would you think about hiring a large number of college students for the summer and using them to overstaff the plated-through-hole facility to get way ahead of the board production? If we pay them well enough, we might get them to work hard, and work three full shifts, twenty-four hours a day, seven days a week.

We could make them understand that, without a doubt, we will pay them well, that they will have to work very hard, and that we will let them go as soon as the work drops off.

Ken

ecc

digital INTEROFFICE MEMORANDUM

DATE: April 28, 1969

SUBJECT: OLIVETTI

TO: Nick Mazzarese

FROM: Ken Olsen

cc: Win Hindle
Jean-Claude Peterschmitt

I had dinner with Roberto Olivetti the other night. I think he is equivalent to President of Olivetti, which is a very large company. It was a very pleasant dinner because he is so unassuming and unimpressed with himself.

They need a number of computers, but, interestingly, are not in love with the idea of making them themselves, as so many others are. They had already sold their central processor business to General Electric, and now just want to get a job done.

The machine they want is a small central processor with about 1,000 words of read-only memory and 1,000 words of active memory. This sounds very much like the PDP-11 that we first started talking about building. If we concentrate on making that combination economical, I'm sure we could sell it to many people for communications.

The second project they're interested in working on is timesharing. They said they want to do timesharing in order to have a vehicle for selling their new timesharing console. It is equivalent to Teletype, but they think it is better. When I pressed them and told them that our PDP-8 would be a less expensive way to go into the timesharing business, if that is all they want to accomplish, they admitted that they would like to explore it to see if it is worthwhile as a regular business; in which case, the PDP-10 would be the obvious machine.

They would like to start off this business without any great investment in programming of their own, even though they have a large programming staff. If it turns out to be worthwhile, then they would make a significant investment.

I think we should work hard to get their business and contribute to it significantly. I feel they have an awfully lot to offer, and that they are experts in telecommunications in Europe. If we offer to put manpower into this problem to help them, our manpower could also learn how to tie communication lines to a central processor in Europe and how to work with each of the telephone companies. If we had to do this alone, it would be very time-consuming, and would delay us significantly.

They also would like to have us use their terminal as part of our computers. I suggested to Jean-Claude that he start investigating this in Europe, and try a few there where they are closer to Olivetti. It is obvious that we have to start slowly somewhere, and it might as well be close to Italy.

They have two terminals which might be of interest. One is the one which they were pushing, which is about 15 characters per second, and the second one is a faster one, which goes about 40 characters per second. They are pushing the slower one because they make in in the same form as Teletype, with paper tape reader and punch. We should, however, become expert in the 40 character printer because it comes in a wide carriage and would be very useful for data logging and other applications.

Ken Olsen

ecc

digital INTEROFFICE MEMORANDUM

DATE: April 28, 1969

SUBJECT:

TO: Stan Olsen

FROM: Ken Olsen

cc: Fred Gould

While talking with our temporary module man in Munich, it came out that he feels our Module Group, more than any other groups in the Company, is not European-minded. I told him that you are planning to be over there soon, and that he should organize his thoughts to give you at that time.

The first reaction of an American to what they mean by being European-minded is that we should lower our prices, give more service, and take a longer time for payment. If we spend time considering what they want, I'm sure we can win them over to the idea that we are European-minded.

Ken

ecc

digital INTEROFFICE MEMORANDUM

DATE: April 28, 1969

SUBJECT: COMPUTERS FOR THE ELECTRICAL ENGINEERING DEPARTMENT AT MIT

TO: Win Hindle
Bob Savell
Dave Cotton

FROM: Ken Olsen

The Electrical Engineering Department at MIT is planning to have a timesharing system set up so students will have a place to do their homework. They would like to have 10 - 20 consoles, and plan to get about 100 hours a week on each. They expect the cost to be $1.00 - $1.50 per console hour.

I don't know what machines they have been considering, but they did say they had one picked out as the optimum, but, when the Institute wanted a larger one for the whole School to use, another manufacturer's became more worthwhile.

If we have an opportunity here, I think this will be a worthwhile area to make a significant contribution. In fact, I might even make a personal contribution toward this use.

Ken

ecc

digital INTEROFFICE MEMORANDUM

DATE: April 28, 1969

SUBJECT:

TO: Ted Johnson

FROM: Ken Olsen

As I visited different offices of the Company, it seems that each one is so proud they found the best bargain in office space. Some don't even know that we only pay 50¢ a square foot per year here in Maynard, and they think anything approaching that per month is a great bargain.

It might be good if you make a chart of what price each office is paying per square foot and how many square feet they have, and maybe compare that with the dollar volume. It might help clarify some thinking.

Ken

lmm

digital INTEROFFICE MEMORANDUM

DATE: April 28, 1969

SUBJECT: CABINETS FOR EUROPE

TO: Pete Kaufmann

FROM: Ken Olsen

cc: Ted Johnson
Jean-Claude Peterschmitt

In Europe, they had pretty much decided on buying cabinets locally until we came out with the new cabinet. The imported price of the new cabinet is less than they can get locally-built cabinets for. It seems, therefore, that they should buy cabinets from us, but it would be nice if they were made locally because we should have some cabinets compatible with those used on the Continent.

I suggest that you look into shipping the cabinet components over and have them welded, or weld them in our own shop, and maybe even paint them in our shop. It would take very little in the way of equipment to do the welding there, and, if we do it in low quantity, we could also paint in our own shop if we can exhaust the paint right to the outside without having to go to a water bath.

There is nothing that more psychologically convinces people that you are really manufacturing in an area than doing welding does. We could set the welding up in an area that would show it off to visitors, and we could take pictures of it when we want to make points with the local citizenry.

Ken

lmm

digital INTEROFFICE MEMORANDUM

DATE: April 28, 1969

SUBJECT: PDP-8/I POWER SUPPLY

TO: Jean-Claude Peterschmitt

FROM: Ken Olsen

cc: Pete Kaufmann
Ted Johnson
Nick Mazzarese
Bill Long

Please let me know your thoughts on engineering and producing a European model power supply for the PDP-8/I.

Ken

ecc

digital INTEROFFICE MEMORANDUM

DATE: April 28, 1969

SUBJECT: COMPETITION AT THE HANOVER FAIR

TO: Jean-Claude Peterschmitt FROM: Ken Olsen

cc: Ted Johnson

I think it might be a good idea for you to ask each of the sales people who went to the Hanover Fair to write a summary of their observations on the competition. I was there for about seven hours on Saturday (until I couldn't stand it any more), but I still didn't get a very good picture of the machines. If you had a written summary from our own sales people who attended, a condensed version would make a good entry for the "Sales Newsletter," and I would like to get a personal copy for myself.

It would be good to also have a summary of what Nixdorf is doing. The only interesting thing that I could see, other than their desktop bookkeeping-keyboard machines, was a keyboard-CRT-tape recorder terminal. This looks very much like what Viatron is doing, but it uses a larger tape cartridge made by Philips.

Olivetti also has one of these machines, and it uses the medium-size tape cartridge, like the one that is becoming popular for home use.

I picked up some German literature on the two typewriters by Olivetti, but it would be good if you could get some more complete information for us. They are the ones who made the 40 character-per-second printer, and we should consider putting them in our product line. They are pushing the slower one because it was made in a Teletype configuration with paper tape reader and punch, but this one is much faster and comes with a wider carriage.

Their key-CRT-cassette console is DE521, and their 40 character-per-second printer is SB40.

Another German computer is a 24-bit one made by Donier. I wasn't able to get any information on it.

Ken

ecc

INTEROFFICE MEMORANDUM

DATE: April 28, 1969

SUBJECT:

TO: Jack Shields

FROM: Ken Olsen

We're still having too many goof-ups. I want a system set up which will identify each goof-up so we can follow up to make sure we do something to eliminate them in the future.

I believe the Field Service Report is the vehicle we can use to stop goof-ups. I would like to have you, in this country and in Europe, collect all Field Service Reports once a week, summarize all the goof-ups, and send seven copies of your summary to Elsa to include with the Operations Committee material weekly. Your report must be simple, but should be current.

Field Service Reports should be sent to the European and Maynard headquarters to be summarized at least once a week. In Europe, there are now so many steps involved that it would take forever before they came out the other end. I think they should make a photocopy of the Field Service Report and send it on to headquarters immediately so the information is current. When something is a few weeks old, it is awfully hard to pursue to find out where the goof-up was.

This report should also include the percentage of Field Service Reports we have. We should list the number of installations, the number of Field Service Reports received, and then itemize the goof-ups. If any of them are significant in themselves, the Field Service Reports should be sent on to the Operations Committee, or at least some comments made about them.

Ken

lmm

digital INTEROFFICE MEMORANDUM

DATE: April 28, 1969

SUBJECT: EUROPEAN STANDARDS

TO: Jean-Claude Peterschmitt

FROM: Ken Olsen

cc: Ted Johnson
Denny Doyle

We often hear the complaint that Americans do not take into account the differences between America and Europe. When I question a European about some point which they feel the Americans are not duly sensitive about, however, I find that they haven't looked into it enough to know exactly what the situation is themselves, even though they are closer to the problem.

I suggest that you prepare a book, a group of memos, or one memo at a time, on the standards in Europe. With this book, we can use it throughout the Corporation, and perhaps make fewer mistakes in preparing equipment and literature for all countries.

The first part should be the very obvious things we assume everyone knows, but some may not. It should then include charts showing the differences in measuring temperature and distance. At the same time, perhaps we ought to include a chart showing the different time zones, taking into account Daylight Savings Time and the date on which it is normally changed. We should probably also include a chart of holidays for each of the countries so they won't make the mistake of trying to do business on those days. This is a little complicated in the States because different states have different holidays, but the fact that it is complicated probably makes all the more reason for doing it.

We should then include standard cabinet mounting dimensions. We should spell out for the Europeans what they are in the States, and then we should list the European standards for the people in the States. Our standards for DEC are spelled out very well, including widths and tolerances. The money system in the States is a little complex because it is a system compatible with that used by the Bell Telephone System and that which was started by Radio Amateurs.

We should include the specifications for power sources in each of the countries we do business with, and probably those countries we might do business with. This should include voltages, notes on grounding systems, and tolerances in both frequency and voltage. If possible, we should also list the connectors that are commonly used in each country.

We should also give hints for people laying out literature so we can use the same artwork in each country. If the fact that it takes some percentage more space to give text in German and French than in English were taken into account when we lay out the literature in Maynard, it would make it very easy to translate in Europe.

We might also list certain words that are strange and should not be used in different countries. It seems like it would be worthwhile to translate some of the commonly used words that might be put in headings so that when we lay out the literature we can, at the same time, lay out the headings for each of the different countries.

Another chart which would be interesting is the markup we use in each country. It might be possible for us to take prices in Maynard that would multiply out in some nice way in at least two or three other countries, if we knew what the markups were in each country.

I'm sure there are many other things that because I'm American I'm not sensitive to in Europe that should be included in this book.

Ken Olsen

ecc

digital INTEROFFICE MEMORANDUM

DATE: April 30, 1969

SUBJECT: VR-12 LITERATURE

TO: Klaus Pichler

FROM: Ken Olsen

I have been concerned about the literature we send out with some of our newly-developed products. We have become so dependent on professional writers that we haven't forced our engineers to do the obvious thinking necessary to present the product to customers and servicemen.

I want to make sure we have literature and drawings for the VR-12 which anyone can pick up and quickly understand the machine and know what drawing to go to answer any questions he might have.

Sometime in the next week or two, I would like you to send me the literature and drawings you now send out with the product, and then I would like to visit with you about it. Bob Collings has some ideas as to what I'm looking for, so you might want to discuss it with him.

Ken

ecc

digital INTEROFFICE MEMORANDUM

DATE: April 29, 1969

SUBJECT: HANOVER FAIR

TO: Ted Johnson
Jean-Claude Peterschmitt
Gabe d'Annunzio
Roy Gould
Steve Bowers
Jim Crowther

FROM: Ken Olsen

I think we did a good job at the Hanover Fair. Our booth was quite presentable, but I have some doubts as to whether it was worthwhile or not. Our people were most conscious of the fact that the stand was small, and had the feeling that we could have given a better image if it were bigger. My impression was that we were lacking something, but the size was not it.

I feel that being off in Building 11A was probably the problem. We had very few people going by the booth, and most of those were either looking for electronic parts or lost from the main show. All the computer people were in Building 17, and Control Data was in 17A.

I feel the usefulness of the Hanover Fair is to get our name known and to attract attention. I don't think the size of the booth is important, but I would suggest that, in the future, we, first of all, try to get into Building 17, and then concentrate on a demonstration which will attract attention.

Honeywell attracted attention by giving out a toy computer that looked like a cross between a Rube Goldberg machine and a Bavarian animated clock. I think we could attract attention with a booth that has a very exciting cathode ray display playing Bach from the PDP-10 in the background, and then hand out a specific piece of literature in large numbers to everyone who walks by, whether they want it or not.

Europeans are limited in their business because they want to do everything the way they always did in the past, and our sales people feel underprivileged if we don't do everything our competition does. We should not have a large booth because of usefulness alone and just because our competition does, but we should compare its usefulness with having the space for something else, like an operating computer.

Our PDP-8/L sitting in the middle of an empty 6-foot rack was rather deadly. IBM's booth did not attract attention because it had nothing very animated. They had two or three movies of CRT art and color going continuously. I stopped and admired these for the longest period of time because I have wanted to use the same idea myself, but it seemed like no one else paid any attention to it at all. Those demonstrations, such as Nixdorf and Olivetti, where they had a sit-down computer or sit-down adding machine, seemed to be crowded

with people. It is also very popular to have large numbers of typewriters where people can sit down and try them (if that's what you're selling). Other years, they even had try-it-yourself electric razors, and that was very popular with people who were selling razors. I can't think of any way we can use this idea, but I throw it out as an observation.

Our psychedelic posters seem to go over well, which is a surprise to all our local experts. There is one give-away which we might use very effectively. We could have our four-part Bach recorded on plastic records and include a sales pitch on the PDP-10 timesharing system. I would guess this might go over very well, although it would probably cost us between 25¢ and 50¢ per record.

Ken Olsen

ecc

digital INTEROFFICE MEMORANDUM

DATE: April 29, 1969

SUBJECT: PRESENTATION FOR THE MAY 12TH BOARD OF DIRECTORS' MEETING

TO: Operations Committee
Bob Dill
Steve Sobel

FROM: Ken Olsen

I would like to have plots made on the enclosed form to demonstrate our plans and predictions for the future.

The form has seven years across the bottom of the scale, from 1966 - 1972, and everyone should use the same format. There are two forms available for the vertical scale, one with seven divisions and one with ten, so we can use the vertical scale which works out the best.

For each of the product lines, I would like two plots -- one for volume, and one for profit -- for the last few years, next year's budget, and a guess for the two years after. This should include the products and their predecessors on one line as if they were all one product. However, in the future (for example, when the PDP-10/1 takes over for the 10), I would like to have two lines; one showing the present product dropping off, and the other showing the sum of the old product and the new. This would demonstrate which product lines are investing for future replacements. I would also like, on separate paper, to plot the new products, such as the PDP-11 and 14.

I would like Pete Kaufmann to plot the people and space we have had, and his predictions for the next few years. Then I would like him to make two more plots; one of the space per million dollars shipped, and the second, production people per million dollars shipped.

I would like Bob Dill to plot the assets we have used and those which he predicts. Because we haven't added up the volume for years after 1970, he may not be able to plot beyond that. This probably should be broken down into inventory, accounts receivable, and total assets. It might be interesting to break inventory into two or three components: 1) raw material, 2) work in process, and 3) finished goods.

These are rather simple plots, so the information should be readily available. I suggest that each member of the Operations Committee make his own plots because it is a very simple exercise, and a way in which each could really learn about his own product line.

Ken

ecc

Kenneth H. Olsen
Memos Sent, April, 1969

TO: Klaus Pichler FROM: Ken RE: VR-12 Literature DATE: 4/30/69

Ted Johnson, J.Claude, Gabe d'Annunzio, Roy Gould, Steve Bowers, Jim Crowther	Ken	Hanover Fair	4/29/69
Operations Committee Bob Dill & Steve Sobel	Ken	Presentation for the May 12th Board of Directors' Mtg	4/29/69
Jean-Claude Peterschmitt	Ken	European Standards	4/28/69
Jean-Claude Peterschmitt	Ken	Competition at the Hanover Fair	4/28/69
Jean-Claude Peterschmitt	Ken	PDP-8/I Power Supply	4/28/69
Pete Kaufmann	Ken	Cabinets for Europe	4/28/69
Ted Johnson	Ken	office space in DEC	4/28/69
Jack Shields	Ken	system to identify goof-ups	4/28/69
Win Hindle, Bob Savell Dave Cotton	Ken	Computers for the Electrical Engineering Department	4/28/69
Stan Olsen	Ken	Modules in Munich	4/28/69
Nick Mazzarese	Ken	Olivetti	4/28/69
Operations Committee	Ken	Budgeting	4/22/69
Pete Kaufmann	Ken	Summer Help	4/22/69
Pete Kaufmann	Ken	Suggestion for a cheap tape transport	4/22/69
Bill Long	Ken	Calculus of Pricing for Fixed Profit	4/15/69
Joe St. Amour	Ken	Pierre Schneebeli's memo on communications	4/7/69

TO:	FROM:	RE:	DATE:
Gabe d'Annunzio	Ken	Record of Trade Shows	4/4/69
Nick Mazzarese Bob Collings	Ken	Braniff Monorail System ~~at Dallas to begin Soon~~	4/1/69
Sales Newsletter	Nick LoRusso (approved by Ken)	Telephone Costs	4/4/69

digital INTEROFFICE MEMORANDUM

DATE: May 5, 1969

SUBJECT: ENGINEERING PROJECTS

TO: Operations Committee

FROM: Ken Olsen

During the month of March, a large percentage of engineering costs were not reflected by Discrete Projects. These might be engineering projects which Vice-Presidents don't know anything about, or might be time for which job tickets weren't filled out.

I suggest you look into this to see why these numbers are so high because it implies we have little control over our engineering.

Ken

ecc

Operations Committee

PERCENTAGE OF PRODUCT LINE ENGINEERING COSTS NOT REFLECTED BY DISCRETE PROJECTS (March, 1969)
(raw data provided by Norm Kennedy)

Product Line		Total Eng.*	Non-Segregated by Discrete Project*	% Non-Segregated by Discrete Project
(6,7,&99)	Trad.	3.8	3.8	100%
(8)	8	28.2	12.0	43%
(28)	8S	.2	.2	100%
(26)	8I	54.9	23.4	43%
(27)	8L	9.1	1.3	14%
(10)	10	151.1	55.3	37%
(11)	11	57.6	1.5	3%
(9,15,&29)	9/15	150.9	59.3	39%
(12,36,&38)	LINC-8/12	39.1	23.0	59%
(14,50)	Modules/14	101.4	14.6	14%
	CORP	596.3	194.4	33%
	times 12		$ 2.3 million	

* Thousands of dollars

digital INTEROFFICE MEMORANDUM

DATE: May 6, 1969

SUBJECT: KV-8/I FOR CASE WESTERN RESERVE UNIVERSITY

TO: Nick Mazzarese FROM: Ken Olsen

I received a telephone call at 4:00 p.m., on Tuesday, May 6, from Ted Glasier of Case Western. He is exceedingly unhappy with our handling of the KV-8/I problem, and particularly unhappy with Bob Collings. When I insisted on his telling me about the way we're handling him, he told me in detail.

He feels that Bob Collings is acting like a used car salesman, and is not at all straightforward or honest with him. He also feels that Bob is over his head in this project, and doesn't know how to handle the problem or show respect for technical people.

He says he has been getting promises of delivery every two weeks for the last five months, and now when he calls a technician (his only source of information), he finds that there are still severe noises in the analog, and that the engineer is out of the country installing instead of solving the problem.

He agreed with Bob Collings on the change 3 1/2 weeks ago, and Bob was to acknowledge it immediately, but he still hasn't heard from him. When he asked Bob why, he said he was preparing a system for SJCC.'

The delays are particularly discouraging to them because they have a large PDP-10 system with only Teletypes as inputs, and are supposed to be doing a project with ARPA. They are understanding of engineering delays, and, to my surprise, are sympathetic with Murray Ruben, but find Bob Collings' slippery attitude intolerable.

I told him I would call back with an answer on how you're going to handle the system.

Ken

ecc

6/6 Held for a few weeks. Ken to mention at Engg. Comm.

digital INTEROFFICE MEMORANDUM

DATE: May 8, 1968

SUBJECT: BIWEEKLY REPORTS

TO: Operations Committee

FROM: Ken Olsen

I have always believed in our Biweekly Reports. I believe that the professional man who is working pretty much on his own can afford to write a paragraph once every two weeks saying what he has been doing. Management is continuously being forced, in one way or another, to report on what it is doing, but somehow we feel engineers are so conscientious, honest, and wise in their use of time that there is no need for them to report.

Now that three people have left us to go into business for themselves, we are trying to figure out what they were doing for the last six months. We have practically no record, and we have no statement from them as to what they had been working on. If they have stolen anything from us, we are going to have difficulty proving that they really developed it here.

Bob Collings has been working on a proposal that he wants to make to us. I think he has commanded time from Pat Greene's people, Jim Jordan, Purchasing, and a number of others, to work on this proposal. I will have very little sympathy with people who say their project is behind schedule because they have been working on something for Ken Olsen. I know nothing about it, and when people think it's below their dignity to report on what they are spending their time on, I can't sympathize with them.

I would like the Operations Committee to again consider having Biweekly Reports. We are getting more and more engineers, and they are getting less and less supervision from senior people. I would very much like to have it a standard rule that every engineer must write a report every two weeks, even if it is never read.

Ken

ecc

digital INTEROFFICE MEMORANDUM

DATE: May 12, 1969

SUBJECT: INCLUDING THE "DIGITAL NEWSLETTER" IN "ON LINE"

TO: Mark Nigberg
Dimitri Dimancesco

FROM: Ken Olsen

I would like to suggest that you consider including the "Digital Newsletter" as an insert in "On Line." Maybe items in the Newsletter are of more interest to some of our employees than the normal content of "On Line," so it should be sent to them. If they are sent together as one unit, I think it would be much more impressive to the employee.

I also suggest that we date the "Digital Newsletter." (I really mean that I insist we date the "Digital Newsletter.")

Ken

ecc

digital INTEROFFICE MEMORANDUM

DATE: May 12, 1969

SUBJECT:

TO: Al Hanson

FROM: Ken Olsen

The road that runs alongside Building 21 is filled with litter, and I think we should clean it up. Most of it probably comes from our rubbish trucks.

The "No Parking" signs there are very hard to understand. There is one sign that says "No Parking Between Signs," but it is impossible to find the other sign.

Among the litter are a few broken-down saw horses, some 2 x 3's, and a step ladder. Are these supposed to mysteriously mean that you're not supposed to park between them?

The faintly-stenciled signs on the cinder block wall are sometimes very hard to see, and it's not really obvious where the no parking area is. I suggest we keep the no parking area to a minimum, and that we make it exceedingly clear, by very large signs, exactly where the no parking area is.

Ken

ecc

digital INTEROFFICE MEMORANDUM

DATE: May 12, 1969

SUBJECT: INCONSISTENCIES IN DELIVERY QUOTATIONS

TO: Ted Johnson
Ron Smart
Don Berman
Steve Sobel

FROM: Ken Olsen

We need to get a handle on the inconsistencies in delivery quotations. There are three groups in the Company involved in this, and whenever there is a goof-up, it is usually true that all three are completely innocent.

I feel we can eliminate errors if we all know what is going on. In order to do this, I would like to ask you to prepare a report each month listing all the deliveries which were late relative to the original quotation. In addition, a list should be made for each one giving the dates customers were told about late deliveries and when they were finally made.

If possible, I would like to have this sorted out and done for the month of April. For normal months, it ought to be relatively easy because we make a record each day of the history of everything that has been shipped. We might simplify this in some form that can be readily reproduced.

We will always make some goof-ups, but this way we can all know about them and not be surprised.

Ken

ecc

digital INTEROFFICE MEMORANDUM

DATE: May 13, 1969

SUBJECT:

TO: Stan Olsen FROM: Ken Olsen

(Telephone message read to Stan.)

Start planning staffing for PDP-8. One item to look at is how many customers can one product line staff man take care of each month. If we plan to ship 300 - 500 computers per month, this means a good size staff.

Start looking into plans for cheap 8 and/or 16-bit 8.

Al Hanson's staffing plans should be laid out. He needs a staff for each installation.

Be sure girls look good for SJCC. No white or colored stockings, etc., and they should not look kooky.

Ken

ecc

digital INTEROFFICE MEMORANDUM

DATE: May 13, 1969

SUBJECT:

TO: Ed Savage

FROM: Ken Olsen

Two weeks from today, we have a meeting with General Doriot to present our final budget.

As the first step in preparation of this, we would like to include 4th quarter of 1969 and four quarters of 1971 so we can check consistency of budget. Adding 1971 to this is going to take a lot of time during the next two weeks, but this is what we want to accomplish. Please start telling people right away.

Ken

ecc

(Telephone message read to Clayton Rix in Ed's absence.)

digital INTEROFFICE MEMORANDUM

DATE: May 15, 1969

SUBJECT: SALARY INCREASE LETTERS

TO: Bob Lassen
Graydon Thayer

FROM: Ken Olsen

cc: Win Hindle

I think we have now reached the point where we should have a form letter instead of typing out individual salary increase letters.

Ken

ecc

digital INTEROFFICE MEMORANDUM

DATE: May 15, 1969

SUBJECT: POCKET HANDBOOKS FOR THE PDP-10

TO: Bob Savell

FROM: Ken Olsen

cc: Win Hindle

I am very much interested in having a pocket handbook for the PDP-10. If we had half a million of these spread around the world, the PDP-10 would be the best-known large computer. With a few pieces of expensive, hard-to-read literature and a few dozen salesmen, the PDP-10 will never get to be well-known.

I would like to have you come to the Operations Committee on May 27th to discuss this. If this idea is not wise, we would like to hear why, and if it is, we would like to have your suggestions for a table of contents, a schedule, and a budget.

Gordon Bell has written a chapter for a book which would make a good introduction for a volume entitled, "Time-Sharing Primer." He is trying to get permission to have this printed as the introduction to our book, which would give us a good head start.

Ken

ecc

digital INTEROFFICE MEMORANDUM

DATE: May 15, 1969

SUBJECT: EASTERN STATES EXPOSITION

TO: Gabe d'Annunzio

FROM: Ken Olsen

cc: Ted Johnson

I like the idea of our having an institutional-type exhibit at the Springfield Exposition, if it isn't too expensive (or difficult for other reasons).

The only place I would consider at the Fair, however, would be in the Massachusetts building. The Better Living Center is the place they would normally sell space for this, but that is for people who sell lightening rods, the Encyclopedia Britannica, etc.

Ken

ecc

digital INTEROFFICE MEMORANDUM

DATE: May 28, 1969

SUBJECT: PAPER FOR NEREM CONVENTION

TO: Marv Cothran
Norm Doelling
Ron Noonan

FROM: Ken Olsen

Dr. Edmond (Ed) Cohler, formerly of Sylvania and now President of Computer Signal Processors, asked me to present a paper at the NEREM session on Small Computers. I turned him down, but Nick suggested that it would be good if one of you presented a paper.

Saul Dinman is going to tell about the wonders of his new computer, and someone from ADL is going to present a survey and predictions for the future of small computers.

We really should be on the program, but our simple, straightforward approach to small computers doesn't make good copy for meetings.

I believe he is in a hurry to know if someone from DEC wants to present a paper, so if you would like to do it, please contact him directly. His telephone number is 272-6020.

Ken

ecc

Norm Doelling was elected. He suggested to Dr. Cohler that he present a paper on the timesharing - 8. cc

digital INTEROFFICE MEMORANDUM

DATE: May 28, 1969

SUBJECT: DELOS COMPUTER LEASING CORPORATION

TO: Win Hindle

FROM: Ken Olsen

John Stratton of BBN visited me today to request an extension of their contract with us; for two years, if possible. When you come back from Europe, I would like to hear your reaction to this.

Ken

ecc

100 State Street
Boston, Massachusetts
02109
Telephone 617 227-4654

Delos Computer Leasing Corporation

August 27, 1968

Mr. Harry S. Mann, Vice President, Finance
Digital Equipment Corporation
146 Main Street
Maynard, Massachusetts 01754

Dear Mr. Mann:

We are setting forth in this letter the salient features of the oral arrangements that we have discussed relating to the program of leasing computers and equipment ancillary thereto, manufactured and/or sold by your Company through the medium of a Delaware Corporation, Delos Computer Leasing Corporation and any subsidiaries thereof (such corporation and such subsidiaries being hereinafter referred to as the "Corporation"). G. D. C. Leasing Corporation and Bolt Beranek and Newman Inc. will provide management services to the Corporation.

Digital Equipment Corporation ("DEC") agrees that it will make first referral of all third party lease situations involving its computers and ancillary equipment manufactured and/or sold by it to the Corporation for the purpose of having the Corporation conduct all financing and leasing relationships with the lessees. The foregoing notwithstanding, if a customer of DEC wishes to utilize its own leasing arrangements, we hereby agree that such customer is free to do so without in any way violating this agreement. It is further understood that DEC will not sell to such a financing organization on more favorable terms than those provided to the Corporation under like circumstances.

Digital Equipment Corporation will extend to the Corporation's lessees all equipment warranties and will seasonably provide maintenance services at normal charges to such lessees. It is contemplated that the Corporation will work closely with DEC in connection with the leasing of this equipment and that DEC will extend to the Corporation, during its period of interest in the equipment, refurbishing services so that the Corporation can offer competitive used equipment for lease or sale. Such refurbishing will be undertaken at the following percentages of the original list price of the equipment, provided such equipment is maintained under maintenance

contracts with DEC: 3% for electronic equipment and 5% for mechanical and electromechanical equipment which has been in service for less than two years, such percentages to increase to 4% and 7%, respectively, after such equipment has been in service for more than two years. DEC will also provide up-dating services for the Corporation on the same basis as those given to other customers.

In the event that the lessee does not wish to enter into a maintenance contract with DEC, the charge to the Corporation for refurbishing such equipment will be established on a case-by-case basis before such refurbishing work is undertaken. The Corporation must approve in advance any installation which is to be made without such a maintenance contract.

It is understood that it will be necessary for the Corporation to resell and re-lease equipment sold to it under this agreement. It is our further understanding that the Corporation may call upon DEC for assistance in implementing this marketing program and in this event DEC will assist the Corporation in finding appropriate customers. In those cases where the Corporation calls upon DEC for marketing assistance, and where the DEC sales organization is, through its own efforts, successful in consummating a resale or re-lease of such equipment, the Corporation will pay DEC a fee for their services as follows: (a) with respect to equipment in service for less than two years, an amount equal to 10 per cent of the original list price of such equipment, (b) with respect to equipment in service for two years or more, a reduced fee to be negotiated on a case-by-case basis reflecting the fair market value of the equipment in lieu of the fee provided for in (a) above. The Corporation is, of course, always free to accept or reject any business generated by the DEC sales organization.

DEC will extend maintenance contracts, at DEC's normal charges, to all customers of the Corporation who either purchase or re-lease equipment which was originally purchased by the Corporation under this agreement.

The Corporation agrees, at its sole cost and expense, to exert its best efforts to promote the leasing of your computers and ancillary equipment pursuant to the referrals from you described above.

This agreement shall continue for one (1) year from the date hereof and shall thereafter be extended for mutually agreeable periods of time. It is our mutual intent to extend this agreement provided the Corporation adequately services the leasing market in such computer and ancillary equipment and that both parties find the arrangement, as modified from

XEROX COPY

time to time, satisfactory. In the event of termination, DEC will have responsibility only for the refurbishment and maintenance aspects of this agreement, as outlined above, together with its continued assistance in locating new customers for those machines which have been delivered under this agreement. In no case shall such obligation extend beyond four (4) years of the date in which any equipment has been first delivered or two (2) years after the termination of this agreement, whichever occurs later.

Within the framework of this agreement, the Corporation, its employees and agents, may from time to time obtain privileged information concerning the operations of DEC and its products. The Corporation acknowledges that such of this information that is identified in writing by DEC as proprietary and as to which the Corporation through a duly authorized officer agrees in writing to receive the disclosure of the same and that does not otherwise than through the Corporation become public or was not theretofore known by the Corporation, will be dealt with in confidence and the Corporation will assume full responsibility for direct damages to DEC following from improper disclosure.

The Corporation further agrees that this agreement is for its exclusive use and may not be assigned to others without the express approval of DEC.

If the above correctly reflects your understanding of the arrangements we have discussed, would you please sign the duplicate copy of this letter and return same to us. We look forward to working with you and your associates at DEC.

Sincerely,

DELOS COMPUTER LEASING CORPORATION

BY Laurence R Leduc President

ACCEPTED AND AGREED TO

DIGITAL EQUIPMENT CORPORATION

BY Harry S. Mann
Vice President - Treasurer

digital INTEROFFICE MEMORANDUM

DATE: May 28, 1969

Dave answering this memo - 6-17

SUBJECT: COMMERCIAL APPLICATIONS

TO: Dave Packer

FROM: Ken Olsen

I would like to hear your impressions of John Cohen's rpoposal on Commercial Applications (copy attached). I would like to know if you think it is possible to do, and secondly, if you think it is wise.

Ken

ecc

digital INTEROFFICE MEMORANDUM

DATE: May 29, 1969

SUBJECT: CARTRIDGE TAPE

TO: Nick Mazzarese

FROM: Ken Olsen

cc: Stan Olsen
George Fligg

It seems that we have the technology at hand for coming out with a cartridge tape very quickly. If we are going to, I would like to be the first one in our field to come out with it and not have us follow someone like Data General, who probably has access to all our inside technology.

There are some decisions we have to make which are not very deeply involved in the technology:

1. Do we want to read and write, or just read?

2. Will this only be a replacement for paper tape? In this case, we don't have to find blocks of information on the tape, but just push the restart button after a tape is stopped in the same way we use paper tape.

3. How can we guarantee that it will not receive hard usage? These machines will definitely not tolerate constant use.

Here is a system I would suggest, even though I haven't thought it out at all.

First, I suggest we use the technology as developed in the module group and package a mechanism with solenoid added so it can be electrically controlled. We should pick the mechanism so we will have the speed control we need.

We might buy a mechanism from someone in Japan without any electronics and get it very inexpensively. When there is trouble, we could just replace the mechanism instead of repairing it.

I like the idea of separate mechanisms, one for reading and one for writing, and which are sold separately, also. They would then be used exactly as paper tape, and under the same conditions. I would use the same tape speed as is standard for the Norelco cartridge, and a rather low density recording, even if this makes the unit relatively slow.

Before we make a final decision, we should compare this with a simple paper tape reader which doesn't stop at each line, but goes all the way until there is a gap between blocks.

Ken

ecc

digital INTEROFFICE MEMORANDUM

DATE: May 29, 1969

SUBJECT:

TO: Al Hanson

FROM: Ken Olsen

The following message was telephoned to Al today:

Get new Treasurer's office ready.

Keep Ken up-to-date on design of new building.

Show him color chips of metal siding for new building.

Elsa

digital INTEROFFICE MEMORANDUM

DATE: May 29, 1969

SUBJECT: EUROPEAN DECUS

TO: John Jones

FROM: Ken Olsen

Sept. 11, 12, 13

I had a visit from a couple of our English customers after the DECUS meeting last week. They suggested that we send some strong technical people to the meeting in Stockholm next Fall to represent our products, that the sales types really aren't satisfactory. They said they would also like to have Angie Cossette go over.

Will you let me know what your attitude is so we can make a decision on this soon.

Ken

ecc

Rec'd 6-2-69

digital INTEROFFICE MEMORANDUM

DATE: May 29, 1969

SUBJECT: PRESENTATION TO THE BOARD OF DIRECTORS ON JULY 28

TO: Jack Shields FROM: Ken Olsen

I feel that what you have accomplished in Field Service is one of the most significant things we have done in the Company. I would like you to have the opportunity to brag and hear criticisms from the Board of Directors sometime. Would it be possible for you to make a presentation to them at our next meeting on July 28th?

This would give you an excuse to plot out and organize your results, costs, and predictions. I think we have a technique worked out for using the view graph in interesting ways. As the time draws nearer, I'll let you know what we have organized.

We can delay your presentation to a later meeting if July is not convenient for you.

Ken

ecc

digital INTEROFFICE MEMORANDUM

DATE: May 29, 1969

SUBJECT: SOMEONE TO MAKE DIGITAL A SUCCESS IN SWEDEN

TO: Ted Johnson

FROM: Ken Olsen

At the SJCC, I met someone named something like Roulette Roubet (I'm quite sure I don't have it right). He used to work in Sweden and married a Swedish girl. He now claims that he is the only one in the whole world who can make Digital a success in Sweden. I'm not sure I ever met anyone before with this humility and lack of self-confidence. He claims he speaks Swedish, but I can't imagine any Europeans getting along with a personality like his.

Ken

ecc

digital INTEROFFICE MEMORANDUM

DATE: May 29, 1969

SUBJECT: ACCOUNTING SYSTEM FOR TRADITIONAL PRODUCTS

TO: Bob Lane

FROM: Ken Olsen

It seems to me that you promised to send us an idea for an accounting system that would show how well you are doing and still take into consideration those things over which you have no control.

Ken

ecc

Read to Stan before sending.
cc

digital INTEROFFICE MEMORANDUM

DATE: May 29, 1969

SUBJECT: ACCOUNTING SYSTEM FOR TRADITIONAL PRODUCTS

TO: Bob Lane FROM: Ken Olsen

It seems to me that you promised to send us an idea for an accounting system that would show how well you are doing and still take into consideration those things over which you have no control.

Ken

ecc

Ken

I have requested accounting, via a copy of the attached memo to Ed Savage (may 8), to assist me in this. I should be measured on those as well because it is my job to "affect" them. I was only pointing out how drastically Field service effected my profit margin.

Also, turn over time" from P.L. to "Traditional" usually take place at Fiscal year end. the company in attempting to max. profits, may not wish to write off certain equipments until the following year. I was just pointing this out and did not wish to sound as if I were making excuses or establishing an out.

Bob Lane
5-30-69

File

digital INTEROFFICE MEMORANDUM

DATE: May 8, 1969

SUBJECT: FIELD SERVICE REPORTS (FLYING BLIND)

TO: Ed Savage FROM: R. L. Lane

It is mandatory that we receive certain summary reports showing the profitability of Field Service by Product Line and by class of service: i.e.,

Contract Customer Income and Expense by Product Line or Major Equipment.
Non-Contract Customer Income and Expense by Product Line or Major Equipment.
Material Sales Income and Expenses by Product Line or Major Equipment.
Installation Income and Expense by Product Line or Major Equipment.
Warranty Expense by Product Line or Major Equipment.

Major Equipment is defined as PDP-1, 4, 5, 6, 7, 8, 8S, 8I, 8L, 9, etc. In some cases these are Product Line, in others they are not. We must group to break out Computer Packs as well. For example, Type Set should be separate.

This information is important to show adequacy of our pricing and to know and project current and future profit and loss more accurately.

Please acknowledge how and where we start to insure we are in operation prior to Fiscal Year 1970.

el
cc: Jack Shields
Phil Feeney

digital INTEROFFICE MEMORANDUM

DATE: May 29, 1969

SUBJECT: VR-12, THEN WHAT?

TO: Klaus Pichler

FROM: Ken Olsen

cc: Nick Mazzarese
Bob Collings

I have heard a number of people express opinions as to what project you should take on after the VR-12, and I'm sure you have several ideas of your own. Will you make a list for me of all the ideas you have received, or you have generated, as to what would be a worthwhile next project in the Display area.

Ken

ecc

digital INTEROFFICE MEMORANDUM

DATE: May 30, 1969

SUBJECT: DELOS COMPUTER LEASING CORPORATION

TO: Brewster Kopp

FROM: Ken Olsen

cc: Win Hindle

We have a contract with Delos Computer Leasing Corporation, and, if we are willing, they would like to have an extension on it for two years.

Harry Mann was the one who conceived of this and worried it through originally. I would like to hear your opinions as to whether we should continue it or not.

Ken

ecc

Agreed over telephone

digital INTEROFFICE MEMORANDUM

DATE: May 29, 1969

SUBJECT: EUROPEAN DECUS

TO: John Jones

FROM: Ken Olsen

I had a visit from a couple of our English customers after the DECUS meeting last week. They suggested that we send some strong technical people to the meeting in Stockholm next Fall to represent our products, that the sales types really aren't satisfactory. They said they would also like to have Angie Cossette go over.

6-2-69

— not completely necessary, and not cost-justifiable.

Will you let me know what your attitude is so we can make a decision on this soon.

good idea — at least Product Line Mgrs.

Ken

ecc

J. A. J.

John

Ken
6-10-69

digital INTEROFFICE MEMORANDUM

DATE: May 30, 1969

SUBJECT: HANDBOOK OF INTERNATIONAL BUSINESS

TO: Denny Doyle FROM: Ken Olsen

I like your ideas and the initiative you showed in generating a handbook on international business. I do think it would be good to make a separate one for each country, however. Each country could then take the initiative, and it could just be a duplicated or mimeographed affair that could be added to informally by that country, or that continent, as needed. If we make it a Corporate-wide thing, it then gets to be a large project, set in type, beautifully bound, etc., etc.

Ken

ecc

Kenneth H. Olsen
Memos Sent, May, 1969

TO:	FROM:	RE:	DATE:
Denny Doyle	Ken	Handbook of International Business	5/30/69
Ted Johnson	Ken	Someone to Make DEC A Success in Sweden	5/29/69
Jack Shields	Ken	Presentation to the BOD on July 28	5/29/69
John Jones	Ken	European DECUS	5/29/69
Bob Lane	Ken	Accounting System for Traditional Products	5/29/69
Al Hanson	Ken	messages for Al	5/29/69
Nick Mazzarese	Ken	Cartridge Tape	5/29/69
Marv Cothran Norm Doelling & Ron Noonan	Ken	Paper for NEREM Convention	5/28/69
Gabe d'Annunzio	Ken	Eastern States Exposition	5/15/69
Bob Savell cc: Win Hindle	Ken	Pocket Handbooks for "10"	5/15/69
Bob Lassen Graydon Thayer	Ken	Salary Increase Letters	5/15/69
Ed Savage	Ken	final budget for Gen. Doriot	5/13/69
Stan Olsen	Ken	staffing for PDP-8	5/13/69
Al Hanson	Ken		5/12/69
Ted Johnson, Ron Smart, Don Berman, Steve Sobel	Ken	Inconsistencies in Delivery Quotations	5/12/69
Mark Nigberg Dimitri Dimancesco	Ken	Including the "Digital News-Letter" in " On Line"	5/12/69

TO:	FROM:	RE:	DATE:
Nick Mazzarese	Ken	KV8I for Case Western Reserve University	5/6/69
Operations Committee	Ken	Engineering Projects	5/5/69
Bob Lane	Ken	Accounting System for Traditional Products	5/29/69
John Jones	Ken	European DECUS	5/29/69
Dave Packer	Ken	Commercial Applications	5/28/69
Klaus Pichler	Ken	VR-12, then what?	5/29/69
Brewster Kopp cc: Win Hindle	Ken	Delos Computer Leasing Corporation	5/30/69

Acc - Brewster Kipp

digital INTEROFFICE MEMORANDUM

DATE: June 2, 1969

SUBJECT: BUDGETS

TO: Bill Long
John Jones
Bob Savell
Al Devault
Dick Clayton
Bob Lane
cc: Operations Committee
Ed Savage

FROM: Ken Olsen

We did not do all the things that should normally be done in a budget, but we have to get back to our everyday work, so we'll bind up the budget sheets as they are now and send them off to the Board of Directors. There are a few things that we want to do in the next few months to make the budget complete, however.

First, we would like half a page (or up to two pages) of your notes on each of your budgets. We would like to hear your ideas, enthusiasm, or worries about the budget you have presented, and we'd also like your ideas on the sequence we have gone through.

We would then like to invite you to a session with the Operations Committee to review each of your major engineering and marketing projects for the last two years. We'd like you to tell us what they cost, what you think about their success or failure, and what you're planning in engineering and marketing for this next year. The schedule we suggest is:

Bill Long	- June 16
John Jones	- June 23
Bob Savell	- June 30
Al Devault	- July 7
Dick Clayton	- July 14
Bob Lane	July 21

The one item which should have been done for this budget, but which we will delay for awhile, is the 1971 budget. We want to budget that year because commitments for '71 are going to be made during '70, and if we wait until the Spring of '70, the commitments will have already been made and it will be too late. To give people more freedom now and forget a little bit about budgets, we'll delay this until the 25th of July. We would like to have you, for each of your product lines, present the bookings, backlogs, and shipments for each of the quarters of 1970 and '71. We won't ask for all the rest of the budget because it is probably too much detail for now, but we would like to recommend some of the things you go through to make sure the numbers are reasonable. Ed Savage will send you a form so all the information can be put on one sheet. We would like 1969 actual figures included because they give a good reference. This sheet has 1972 on it, and if you feel so moved, it would be good to put this in, also. As we go over this each quarter, we'll add new figures on into 1972.

Ken

ecc

digital INTEROFFICE MEMORANDUM

DATE: June 2, 1969

SUBJECT: SATURDAY MORNING WORK SCHEDULE

TO: Operations Committee
Dick Best

FROM: Ken Olsen

I haven't received comments from any of you about the results of our working on Saturday mornings. We set up this schedule so we could find out what people are doing and to have someone with authority in the plant at that time.

I am going to put this on the agenda for next Monday's Operations Committee meeting, so please organize your thoughts and be prepared to talk about it.

Ken

ecc

digital INTEROFFICE MEMORANDUM

DATE: June 18, 1969

SUBJECT: DECISION-MAKING AT DEC

TO: Operations Committee

FROM: Ken Olsen

We have set about to make the Operations Committee a vehicle for airing all problems and making decisions. I believe that most middle management feels they can have a hearing for all their proposals with this group.

I worry, however, that at the next level down there is not the feeling that people can have a hearing for their problems. I sometimes think that ideas are summarily dismissed by product line managers, marketing managers, or engineering managers, and there is no vehicle for a broader hearing of ideas that might need evaluation.

Sometimes this is due to the fact that people feel in order to prove their job they have to make arbitrary decisions, and occasionally it is just because they have no other way of sharing the decisions with others.

At our "Woods" meeting next week, I would like each of you to discuss how decisions are made within your group.

Ken

ecc

digital INTEROFFICE MEMORANDUM

DATE: June 23, 1969

SUBJECT: MURRAY RUBEN

TO: Bob Collings
Graydon Thayer

FROM: Ken Olsen

It is my intuition that Murray Ruben will never make a completely competent engineer or a good team member. Will you prepare a written report on him for me so that, together, we can decide if my intuition is right or wrong.

If my intuition is right, Murray would probably be better in a tiny organization where he can learn how everything fits together and not be burdened by the establishment. In that case, Bob Collings would be tremendously better having a professional engineer who could relieve him of burdens rather than being a burden.

In this report, I would like to have you discuss Murray's work habits, work hours, how well he proposes, how well he schedules his own work, and how well he schedules the work of the services, technicians, and engineers working with him.

I'd also like to hear what the services think of him. Does he give them work in a reasonable schedule, and does he give work to them with enough preparation so they can do their work easily? Does he communicate well?

I'd also like to know what his ambitions are personally and with respect to DEC.

I'd like to encourage you to do this fairly soon because Bob has the problem of selling confidence in his group with a group largely made up of people he inherited. His job might be made tremendously easier if he had the opportunity to go out and hire the best display engineer.

Ken

ecc

digital INTEROFFICE MEMORANDUM

DATE: June 24, 1969

SUBJECT: MAIL RECEIVED FOR OUR BOARD OF DIRECTORS

TO: Mail Room

FROM: Elsa Carlson

We occasionally receive mail addressed to DEC for members of our Board of Directors. It is usually junk mail that just ends up in my wastebasket, but I thought it would be helpful if I listed their names so you can forward the mail to me.

Dr. Vernon R. Alden
John Barnard, Jr.
William H. Congleton
Arnaud de Vitry
Dr. William H. McLean
Miss Dorothy E. Rowe

digital INTEROFFICE MEMORANDUM

DATE: June 25, 1969

SUBJECT: PAY TELEPHONES

TO: Stan Olsen

FROM: Ken Olsen

cc: Nick LoRusso
Pete Kaufmann

Another piece of information I learned at the tea party I had with the supervisors of our production girls is that they can't get to use the pay phones during their lunch hour. Will you figure out some way of making it possible for them to use the phone without having to wait in line the whole lunch hour.

They feel one of the problems is that technicians get hold of the phone and some talk to their girls and others to their wives who are in the hospital having a baby. One thing we might do is get more pay phones. We might also post a sign saying that no more than five minutes are allowed per call.

The telephone company doesn't want to put in more pay phones because the usage isn't high enough, but they would probably do it for a small price.

Ken

ecc

digital INTEROFFICE MEMORANDUM

DATE: June 25, 1969

SUBJECT: SPEED IN PARKING LOT

TO: Stan Olsen

FROM: Ken Olsen

cc: Al Hanson
John Kulik
Pete Kaufmann

I had a tea party the other day with the supervisors of our production girls. They had surprisingly few complaints, but the one thing they felt overwhelmingly concerned about was the parking lot.

They say the young fellows race up and down the hill at 90 miles an hour, and even have races within the parking lot at lunch hours.

They say there are no signs specifying speed limits or the direction of traffic flow.

They are also terrified by the motorcyclists.

I would like to see us specify the flow of traffic, maybe on the ramp, or maybe allow no traffic at all. Then I'd like to see speed limit signs posted which are enforced.

The girls feel that the guards pick on them for parking a little bit odd with respect to the parking lot lines, but allow the young fellas to race past them at 90 miles an hour.

Ken

ecc

digital INTEROFFICE MEMORANDUM

DATE: June 25, 1969

SUBJECT: TU79 - MASSACHUSETTS INSTITUTE OF TECHNOLOGY, E.E. DEPT.

TO: Ken Olsen

FROM: R. L. Lane

Professor Lee visited me on Tuesday, June 24th to look at obsolete material for possible contribution by DEC to M.I.T.

He looked at TU79 specifically, both completed units and partially completed units.

It is rumored that you initiated this. Please advise me if you had anything specific in mind. They can use the TU79 on their PDP-9s with a TC59 Control priced at $10,000.

These are for experimental use only, and definitely not for production use on a computer. We should engrave something on the panel like "reject," "obsolete," or "engineering prototype."

el

Ken

cc

Kenneth H. Olsen
Memos Sent, June , 1969

TO:	FROM:	RE:	DATE:
Operations Committee Dick Best	Ken	Saturday Morning Work Sched.	6/2/69
Operations Committee	Ken	Decision-making at DEC	6/18/69
Bob Collings Graydon Thayer	Ken	Murray Ruben	6/23/69
Mail Room	Elsa Carlson	Mail Received for our Board of Directors	6/24/69
Stan Olsen cc: Nick LoRusso Pete Kaufmann	Ken	Pay Telephones	6/25/69
R.L.Lane	Ken	TU79 - MIT, E.E.Dept.	6/25/69
Stan Olsen	Ken	Sppeeed in Parking Lot	6/25/69
~~Dave Packer~~	~~Ken~~	~~Commercial Applications~~	

digital INTEROFFICE MEMORANDUM

DATE: July 1, 1969

SUBJECT: INCREASE IN PRICE OF PDP-8/I and PDP-12

TO: All Field Sales Offices
"Sales Newsletter"

FROM: Ken Olsen

We have decided that we must make an increase in the price of some items in our small computer products -- PDP-8/I and PDP-12. This increase will allow us to make the added investments we feel are necessary for the future in new Computerpacks and new peripherals, while still sustaining good profit.

If it were possible, we would, of course, prefer to keep our present price levels, but the importance of continued, new investments in our 12-bit machines has convinced us that this small increase is required.

The PDP-8 series of machines have had the most enthusiastic response of any small computers ever produced. Our commitment is to keep this series of computers current and competitive in the future, and the investments for the future are necessary now. We are proud of the contributions these machines have made and will make for many more years.

Ken

ecc

digital INTEROFFICE MEMORANDUM

DATE: July 1, 1969

SUBJECT: PLANS FOR TIMESHARED-8

TO: Ted Johnson

FROM: Ken Olsen

I think it might be a good idea if you get Norm Doelling to lay out a schedule for the "Sales Newsletter" that will tell your sales people what the plans are for the Timeshared-8 for next year and what sales help and literature they can expect. He should also indicate what part of the educational market he will be covering.

Ken

ecc

digital INTEROFFICE MEMORANDUM

DATE: July 1, 1969

SUBJECT:

TO: Henry Crouse

FROM: Ken Olsen

cc: Pete Waldron
Brewster Kopp

I feel we should have controls on how we spend money, but we should also make an effort to cut down paperwork where expenditures are small or where we can have safety without paperwork.

We get approximately six half-pint containers of milk every week in the year to serve with coffee to our visitors and at meetings. Do you think there is an easier way to buy this than making out a requisition for them each week?

Ken

ecc

Tobin's Vending Service, Inc.

16 WALNUT STREET
MAYNARD + MASSACHUSETTS
TELEPHONE (Maynard) 897-8651

IN ACCOUNT WITH

Digital Equipment Corporation
Main Street
Maynard, Mass. 01754

ACCOUNTING

May 21, 1969

	Ken Olsen	Invoice #	
5/1/69		4902	6.75

here is the copy you Requested
Pete

FROM A SINGLE MACHINE TO FULL LINE VENDING

TOTAL

All claims and returned goods MUST be accompanied by this bill. 503-6

4902 REC'D BY

264

X477

X477

Debbie Powell X264

Irene Platt

THIS IS MY:

____ FIRST REQUEST ____ SECOND REQUEST

clw
10/30/68

digital INTEROFFICE MEMORANDUM

DATE: July 1, 1969

SUBJECT: CRT PRINTER

TO: Bob Collings

FROM: Ken Olsen

cc: Nick Mazzarese
Klaus Pichler
Dick Best
Joe St. Amour
Gordon Bell
Alan Kotok
Allan Kent
Tom Patch

I would like to have a meeting with you next week (please let Elsa know if you will be available on Thursday, July 10, at 3:30 p.m.) to brainstorm all the possible ways of making a CRT printer. I would like to make a list of ways it can be done, even though some of them may seem impractical at this time.

Part of the problem is to lay out a system that will lend itself to the hard-copy printer. One idea to consider would be to make a nonstandard TV scanner which would have only the horizontal lines necessary to generate the character. In this way, we might store all the spots in a single delay line.

Another idea would be to make a special CRT gun with seven grids that would generate seven spots for the character. This would then make a system which would drive a Motorola-type line printer from the same character-generating matrix that drives a CRT.

At the meeting, I would also like to list all the possible configurations that might be desirable so we can try to build a line of equipment that will solve most needs.

Ken

ecc

digital INTEROFFICE MEMORANDUM

DATE: July 3, 1969

SUBJECT:

TO: Joe St. Amour

FROM: Ken Olsen

Is it a good idea to put 16-bit words in our 12-bit, small disk? The PDP-11 people think it is, but I would like to hear your opinion.

Ken

ecc

KO
1st memo to
Gordon Bell

digital INTEROFFICE MEMORANDUM

DATE: July 3, 1969

SUBJECT: THINGS FOR YOU TO DO

TO: Gordon Bell FROM: Ken Olsen

Here are a few things I would very much appreciate having you look into for me.

I would like to hear your opinion of what we should do in the cheap cassette tape area. Our module group has the modules just about worked out for this, and we have mechanical devices ready to go, but no one has figured out how we should use them in a computer. We definitely don't want to use them in the continuous mode, but they might be good for a single program read-in device to replace paper tape. If the things didn't stop until the whole program was read in, it would be relatively simple and reliable.

If the tape isn't going to stop, maybe the competition, then, isn't a high speed paper tape reader, but a special paper tape reader which doesn't stop. So far, I have gotten no sense on this question from anyone, and I would like to hear what you think.

Should we have an IBM Selectric typewriter as part of our standard product line for those who want this kind of output on their computers?

How big a market is the KV-8/I and ARD's display? If it is a worthwhile market, what do we have to do to get hold of it? Is ARD's making any money in what they're doing?

Should we do anything to get the PDP-11 out sooner? If we get hung up on one thing, like a faster buss, does this hold up the central processor and mechanical design of other things?

We are going to give MIT some obsolete TU79's to use in their laboratory, and they'll probably use NOVA computers with them. I think they would love to use PDP-11's, but we don't ever seem to get off the ground enough to freeze our specifications. They feel they need them by February. Do you think we can talk them out of this or get something to them in time, or should we keep improving the PDP-11 for another year or two?

Ken

ecc

digital INTEROFFICE MEMORANDUM

DATE: July 3, 1969

SUBJECT: QUOTING DELIVERY DATES

TO: Ted Johnson

FROM: Ken Olsen

It seems that we keep getting into trouble by quoting delivery dates to customers. We quote one date to them over the telephone, and then weeks later, when the order actually comes in, the delivery date is quite different. Is there some nice way out of this?

Ken

ecc

digital INTEROFFICE MEMORANDUM

DATE: July 7, 1969

SUBJECT: BIOMEDICAL CAPABILITIES BROCHURE

TO: Gabe d'Annunzio

FROM: Ken Olsen

cc: Mort Ruderman
Win Hindle

I don't like the Biomedical brochure at all. It is much too wordy, very misleading, and I don't think anyone is going to bother reading it.

Let's not go into the whole history of the Company, and all the general remarks about computers and medicine, but simply, in a few words, tell what we can do with the equipment we have without promising anything we don't have right now. If you want to brag about our broad background, pick a few choice photographs, and, with these, indicate what our background is.

Ken

ecc

digital INTEROFFICE MEMORANDUM

DATE: July 7, 1969

SUBJECT: GOALS FOR NEW PROPOSED TRADE SHOW SYSTEM

TO: Roy Gould

FROM: Ken Olsen

I would like to have a list of the goals for the new trade show system you are proposing, and, in addition, please send me a photocopy of the goals we had when we laid out the last system (this is the same information you showed me a few weeks ago).

I think we are asking for things quite different for the new system simply because we are tired of the present one, not because we are right this time. You heard me complain that the PDP-10 group alternates between wanting equipment and wanting no equipment at trade shows, and I want to make sure we don't alternate length in our specifications for booth systems, even if the cycle time is longer.

Ken

ecc

Meeting scheduled for 7-30-69

digital INTEROFFICE MEMORANDUM

DATE: July 7, 1969

SUBJECT: IBM COMPETITION

TO: John Cohen

FROM: Ken Olsen

cc: Nick Mazzarese

Our marketing and sales people keep saying they never have competition with the IBM 1130 except for typesetting; however, there are thousands of these machines doing scientific calculations like the ones we would like to do with our machines. If you have any ideas as to why they sell so many and why our sales people feel they are no competition, I would like to hear what they are.

If the reason is that they have a large number of scientific software packages and we are never considered for these applications, it will be interesting to get a list of what their scientific applications are. We could then estimate the cost of getting most of them for the PDP-11 so we can take all the business. If IBM has the specifications published, it seems to me that we could make a good guess as to the cost of doing the packaging for ourselves.

I would also be interested in knowing what peripherals would be ideal or desirable on a PDP-11 to get all of this business.

Ken

ecc

digital INTEROFFICE MEMORANDUM

DATE: July 7, 1969

SUBJECT: IBM COMPETITION

TO: Larry Portner

cc: Nick Mazzarese

FROM: Ken Olsen

Our marketing and sales people keep saying they never have competition with the IBM 1130 except for typesetting; however, there are thousands of these machines doing scientific calculations like the ones we would like to do with our machines. If you have any ideas as to why they sell so many and why our sales people feel they are no competition, I would like to hear what they are.

If the reason is that they have a large number of scientific software packages and we are never considered for these applications, it will be interesting to get a list of what their scientific applications are. We could then estimate the cost of getting most of them for the PDP-11 so we can take all the business. If IBM has the specifications published, it seems to me that we could make a good guess as to the cost of doing the packaging for ourselves.

I would also be interested in knowing what peripherals would be ideal or desirable on a PDP-11 to get all this business.

Ken

ecc

digital INTEROFFICE MEMORANDUM

DATE: July 7, 1969

SUBJECT: COMPETITION WITH THE IBM 1130

TO: Ted Johnson
Ron Smart

FROM: Ken Olsen

cc: Nick Mazzarese

Our marketing and sales people keep saying they never have competition with the IBM 1130, except typesetting; however, there are thousands of these machines doing scientific calculations like the ones we would like to do with our machines. If you have any ideas as to why they sell so many and why our sales people feel they are no competition, I would like to hear what they are.

If the reason is that they have a large number of scientific software packages and we are never considered for these applications, it will be interesting to get a list of what their scientific applications are and estimate the cost of getting most of them for the PDP-11 so that we can take all the business. If IBM has the specifications published, it seems to me that we could make a good guess as to the cost of doing the packaging oorselves.

I would also be interested in knowing what peripherals will be ideal or desirable on a PDP-11 to get all of this business.

Ken

ecc

digital INTEROFFICE MEMORANDUM

DATE: July 7, 1969

SUBJECT: COMPETITION WITH THE IBM 1130

TO: Gordon Bell

FROM: Ken Olsen

Our marketing and sales people keep saying they never have competition with the IBM 1130 except for typesetting; however, there are thousands of these machines doing scientific calculations like the ones we would like to do with our machines. If you have any ideas as to why they sell so many and why our sales people feel they are no competition, I would like to hear what they are.

If the reason is that they have a large number of scientific software packages and we are never considered for these applications, it will be interesting to get a list of what their scientific applications are. We could then estimate the cost of getting most of them for the PDP-11 so we can take all the business. If IBM has the specifications published, it seems to me that we could make a good guess as to the cost of doing the packaging for ourselves.

I would also be interested in knowing what peripherals would be ideal or desirable on a PDP-11 to get all of this business.

Ken

ecc

digital INTEROFFICE MEMORANDUM

DATE: July 7, 1969

SUBJECT: SCHEDULE FOR INCORPORATING THE MONODISK INTO THE PDP-12

TO: Dick Clayton

FROM: Ken Olsen

cc: Win Hindle

Do we have a schedule for incorporating the Monodisk into the PDP-12? If so, I would like to have a copy.

Ken

ecc

digital INTEROFFICE MEMORANDUM

DATE: July 7, 1969

SUBJECT: SCHEDULE FOR INCORPORATING THE MONODISK INTO THE PDP-8

TO: Bill Long

FROM: Ken Olsen

Do we have a schedule for incorporating the Monodisk into the PDP-8? If so, I would like to have a copy.

Ken

ecc

digital INTEROFFICE MEMORANDUM

DATE: July 7, 1969

SUBJECT:

TO: Dave Cotton

FROM: Ken Olsen

cc: Win Hindle
Bob Savell

I gather from our salesmen that the PDP-10 is not as good for batch-processing as the Sigma 7, and that they give up and don't try to sell to those customers who need it. Is this true, and will we lose out in both time-sharing and batch-processing when Sigma 7 gets time-sharing?

Ken

ecc

Ken Olsen

digital INTEROFFICE MEMORANDUM

DATE: July 9, 1969

SUBJECT: Status and Proposed Approach for European Manufacturing

TO: T. Johnson
J. C. Peterschmitt
P. Kaufmann

FROM: D. Knoll

cc: A. Gordon
K. Olsen
E. Savage

I U.K. Proposal Status

Full utilization of the U.K. plant has been proposed and tentatively accepted. Details remaining before a final decision are as follows:

A. Final Proposal - A month-by-month plan with controls, etc. Al Gordon will have this wrapped up by July 15, and it will be presented to the Operations Committee hopefully on July 28.

B. The tax effect of this proposal is being looked at by Ed Savage. He will have final answers before the proposal is submitted. Preliminarily, the deeper he gets, the less the tax effect becomes. It now looks like about half of the tax difference between U.K. and the U.S. or about a 3½% penalty on gross savings.

C. The proposal and savings are based on making an eventual capital investment of about $120K in wire wrap machines. I will be getting the details to Ed Savage by July 18 so he can prepare the best way of handling this. Factors are U.S. foreign investment restrictions, hedging against devaluation, and potential grants by the U.K. government. At least two alternatives will be investigated - (1) a direct investment with a 25% grant as a rebate, and (2) a sale and leaseback arrangement which hedges against devaluation.

D. The real and apparent effects of the U.K. proposal on any future German plans must be agreed upon.

II My Proposed Approach to Germany

Al has arranged for the services of Bernard Schuster (U.K. special systems) for one week in August, one week in September, and as much time as is required in the October and November period to investigate the German situation and gather data so we will have some numbers to look at. Schuster's involvement would be only as an available German-speaking fellow with some DEC background. He would play no roll in eventual production. Ground rules of this investigation are as follows:

A. Arbitrarily pick a location (Frankfort, unless Jean-Claude has another idea).

B. Arbitrarily pick 3 products (PDP-15, 8I, 8L).

C. Use Common Market volumes.

D. Determine availability, sources and firm prices on all parts for these products.

E. Determine labor and space rates and some idea of availability.

The outcome of this work will be a proforma proposal by Al Gordon to produce either the PDP-15 or the PDP 8I and 8L in Germany for the Common Market which compares this production over a 3 year period with production in the U.K. Very careful attention will be paid to getting an accurate projection of start up costs.

These products were chosen as the only ones where enough information now exists to make a cost estimate and are also products allowing a direct comparison of German and U.K. production. I expect a good preliminary feel for the situation by January 1. At this time we will have a good idea of what factually are the direct costs/savings of German production once we get going, and also what are the start up costs involved in getting started. At this point we can balance the manufacturing situation against sales intangibles and decide what should be done in Germany. Our work on the PDP-15 and 8I/8L will not be lost since the cost situation will be relatively the same on any product. Also, the vendors we develop would be the same for any product.

III Relationship of Germany to the U.K. Proposal

In my mind the only relationship here is that acceptance of the U.K. proposal carries with it a commitment to maintain production and primarily people in the U.K. This in any mind means that we must either "save" the PDP-11 for U.K. production after the 8I and 8L die, or save something else. Right now, I know of nothing else. I would oppose considering German production of the 11 until another alternative is available for the U.K. if the U.K. proposal is accepted.

Finally, I think we need to decide on what basis we want to go to Germany before we go much further. I do not think we should hire a German production man until we have decided (1) that we are going to produce in Germany, (2) what product(s), and (3) why or on what basis we are doing this production, and (4) what is the real and intangible cost or savings expected.

With the plan I propose above, we should be able to make a decision on Germany by February 1970, and if it is "go", have something in operation by September 1970. Al will proceed on this basis.

I would be interested in your comments.

Dave

jkl

digital INTEROFFICE MEMORANDUM

DATE: July 11, 1969

SUBJECT: PRICE OF OUR NEW PLANT PER SQUARE FOOT PER YEAR

TO: Brewster Kopp FROM: Ken Olsen

Can you make an estimate for me of what the price of our new plant will be per square foot per year if we pay $10.00 a square foot, and then compare this with our present space when you include everything.

One of the questions we have to decide on immediately is whether to build for $500,000 a square foot, or go $250,000 now and add another $250,000 a year later.

Al Hanson has the figures on the two proposals.

Ken

ecc

digital INTEROFFICE MEMORANDUM

DATE: July 15, 1969

SUBJECT: USE OF DEC VS. DIGITAL

TO: Gabe d'Annunzio

FROM: Ken Olsen

We are now working on a procedures manual, and I would like you to propose a procedure to be included in it on the use of DEC and Digital. After you propose something, we'll very readily get suggestions and opinions, but, without a proposal, we can't get people interested enough in it to discuss it.

Ken

ecc

digital INTEROFFICE MEMORANDUM

DATE: June 27, 1969

SUBJECT: Use of DEC vs. Digital

TO: Mark Nigberg
Elsa Carlson

FROM: D. Dimancesco

I see considerable inconsistency in the use of abbreviations for Digital Equipment Corporation . Sometime ago, I tried to get a clarification and thought that I understood how and when to use the various abbreviations.

My understanding is:

That we are known by our various publics both as "Digital" and "DEC". That generally customers refer to us as "DEC" and the general public - particularly in the communities where our plants are located know us as "Digital" - (in some cases 'Digitahl').

That our logo says "Digital" and so officially at least this is the preferred abbreviation - although we don't mind being known as "DEC". That Ken Olsen is definitely opposed to changing the logo.

That articles in ON LINE and other employee publications should generally use "Digital". When several references are made to the company in an article, "DEC" can be used to avoid repitition. "DEC" can also be used when there could be confusion between "Digital" and the generic appellation. (Like in a "Digital Computer").

That news releases should follow the same rule, the only difference being that the first reference to the company should always be "Digital Equipment Corporation".

That references to the company in both product and recruiting ads always use "Digital", never "DEC".

Would you please let me know if my interpretation is correct.

I think it would be good to write out a policy or procedure and get it in circulation, although I'm not sure what the mechanics for doing this are. Maybe the new secretaries' procedures manual and the PR Procedures Manual would be good starting points.

DD:eb

D

digital INTEROFFICE MEMORANDUM

DATE: July 18, 1969

SUBJECT:

TO: Joe St. Amour

FROM: Ken Olsen

I think it would be nice if Pierre (or someone else, now that he is leaving) would make a study of all the ways that have been published, and all ideas that we have, for positioning a head in a single disk tape recorder. This would be a good document to have on file because we periodically want to have a linear device that is positioned digitally.

It would also be good to make a study (to be documented for history) on the ways of driving an electric typewriter and keyboard. We should probably offer an IBM Selectric typewriter, with their coding and driving system, in our product line. If we had a cheap way to do it, however, we might make a real contribution.

Ken

ecc

1969 JUL 18 PM 2:58

MSG 5337 7.18.69

TO J C PETERSCHMITT
FROM KEN OLSEN

THERE IS A COMPANY IN FRANCE CALLED LAGABAX, WHO ARE SUPPOSEDLY BUYING A MECHANICAL DOT MATRIX PRINT HEAD FROM PHILLIPS OF HOLLAND AND ARE INCORPORATING IT IN A 15 INCH WIDE PRINT OUT DEVICE.

I AM INTERESTED IN WHO THE COMPANY IS, WHAT TYPE OF PRODUCT THEY MANUFACTURE AND IN PARTICULAR, ALL YOU CAN FIND OUT ABOUT THIS PRINTING DEVICE.

WE ARE INTERESTED IN UTILIZING THIS PHILLIPS PRINT HEAD OUR SELVES. WE HAVE ONE AND LIKE IT. PLS RESPOND TO ED CORELL AND MYSELF HERE IN MAYNARD WHEN YOU FIND OUT ANYTHING.

ALSO

MSG 5355 7.18.69

1969 JUL 18 PM 5:26

TO PIERRE JAILLET
FROM KEN OLSEN

THERE IS A COMPANY IN FRANCE CALLED LAGABAX, WHO ARE SUPPOSEDLY BUYING A XCHANICAL DOT MATRIX PRINT HEAD FROM PHILLIPS OF HOLLAND AND ARE INCORPORATING IT IN A 15 INCH WIDE PRINTOUT DEVICE.

I AM INTERESTED IN HOW THE COMPANY IS, WHAT TYPE OF PRODUCT THEY MANUFACTURE AND IN PARTICULAR, ALL YOU CAN FIND OUT ABOUT THIS PRINTING DEVICE.

WE ARE INTERESTED IN UTILIZING THIS PHILLIPS PRINT HEAD OURSELVES. WE HAVE ONE AND LIKE IT. PLS RESPOND TO ED CORELL AND MYSELF HERE IN MAYNARD WHEN YOU FIND OUT ANYTHING.

digital INTEROFFICE MEMORANDUM

DATE: July 18, 1969

SUBJECT: MC FERSON INSTRUMENT CORPORATION

TO: Nick Mazzarese

FROM: Ken Olsen

I received a telephone call today, Friday, July 18th, from Paul McFerson of the McFerson Instrument Corporation, 530 Main Street, Acton; telephone 263-7733. He would like to buy small computers to use with their instruments.

He said he has not done well with our local salesmen in getting the technical information he needs. He also wants to know our policy for doing business with OEM's, and I told him I would have either you or Bill Long call him. I said you could tell him all the technical information he needs or would line him up with someone else who could help him.

He asked to visit me the week of July 28th.

Ken

ecc

digital INTEROFFICE MEMORANDUM

DATE: July 21, 1969

SUBJECT: REVIEW AND DEFINITION OF YOUR JOB

TO: Steve Sobel

FROM: Ken Olsen

I meant to talk with you last week before taking off on vacation about reviewing and defining your job. Let's do it when I get back, but here are a few ideas I'd like you to think about until then.

I think we have a problem because I am not used to working with someone who wants formal outlining of individual jobs, and I'm sure you are frustrated with my habit of only half defining jobs.

Will you think about what you have done and accomplished, and then outline the job as you think it should be to be most worthwhile so we can use this as a basis for our discussion when I get back.

If you want to try out your ideas before I get back, you might try them on Graydon Thayer or Win Hindle.

Ken

ecc

digital INTEROFFICE MEMORANDUM

DATE: July 21, 1969

SUBJECT: BIG DISK

TO: Joe St. Amour

FROM: Ken Olsen

The problem with the big disk is getting to be so serious now that we have to do some drastic things. We have to forget efficiency, and, to some degree, cost. We have to get big disks in quantity, and we have to get them soon.

Please make a list of all the bold, brave things we can do to get these disks.

As part of our longer term needs, I like the idea of starting to slowly do the manufacturing of the disk ourselves.

Ken

ecc

digital INTEROFFICE MEMORANDUM

DATE: July 21, 1969

SUBJECT: PRINTED CIRCUIT LAYOUT

TO: George Gerelds

FROM: Ken Olsen

cc: Stan Olsen

I would like to meet with you next Tuesday, July 29th, at 10:00 a.m., to discuss a printed circuit layout in the Model Shop. We would like to develop a system by which people can have boards laid out in the Model Shop and have all standards met the first time so they don't have to be laid out again.

In addition, we have to be able to make quick and dirty boards that demonstrate feasibility and have no constraints on them at all. It seems to me that we should be able to set up a system, and probably you have already, so we can accomplish both these things in the Model Shop. We have to lay out rules, though, so people won't do them quick-and-dirty and then criticize you if they have to be done over.

Ken

ecc

digital INTEROFFICE MEMORANDUM

DATE: July 25, 1969

SUBJECT: TU79'S FOR MIT

TO: Bob Lane

FROM: Ken Olsen

As a reminder, will you be sure that when we give TU79's to MIT (or anyone else) that we engrave and/or stencil on the back of each panel that it is an engineering breadboard, not for production use.

Ken

ecc

digital INTEROFFICE MEMORANDUM

DATE: July 28, 1969

SUBJECT: PDP-12 BUDGET CHANGES

TO: Dick Clayton

FROM: Ken Olsen

cc: Win Hindle
Brewster Kopp
Ed Savage

A short time ago, we approved an increase in your PDP-12 budget. As of today, Ed Savage has not received any changes (hopefully, no changes in expenses).

We have changed the policy on budget revisions. No budget changes will be considered or approved until Ed Savage has written a note to the Operations Committee saying he is satisfied and has all the necessary budget figures.

Ken

ecc

digital INTEROFFICE MEMORANDUM

DATE: July 28, 1969

SUBJECT: PDP-8 BUDGET CHANGES

TO: Bill Long

FROM: Ken Olsen

cc: Nick Mazzarese
Brewster Kopp
Ed Savage

A short time ago, we approved an increase in your PDP-8 budget. As of today, Ed Savage has not received any changes (hopefully, no changes in expenses).

We have changed the policy on budget revisions. No budget changes will be considered or approved until Ed Savage has written a note to the Operations Committee saying he is satisfied and has all the necessary budget figures.

Ken

ecc

Kenneth Olsen
Memos Sent, July, 1969

TO:	FROM:	RE:	DATE:
Bob Collings	Ken	CRT Printer	7/1/69
Henry Crouse	Ken	Milk purchasing	7/1/69
Ted Johnson	Ken	Plans for Timeshared-8	7/1/69
All Field Sales Offices "Sales Newsletter "	Ken	Increase in Price of PDP-8/I and PDP-12	7/1/69
Joe St. amour	Ken	16-bit words in 12-bit small disk ?	7/3/69
Ted Johnson	Ken	Quoting Delivery Dates	7/3/69
Gordon Bell	Ken	Things for you to do	7/3/69
Dave Cotton	Ken	batch-processing	7/7/69
Gordon Bell	Ken	Competition with the IBM 1130	7/7/69
John Cohen	Ken	IBM Competition	7/7/69
Ted Johnson and Ron Smart	Ken	Competition with the IBM 1130	7/7/69
Larry Portner	Ken	IBM Competition	7/7/69
Steve Bowers	Elsa	Secretary Style Guide	7/7/69
Bill Long	Ken	Schedule for incorporating the Monodisk into the PDP-8	7/7/69
Dick Clayton	Ken	Schedule for incorportating the Monodisk into the PDP-12	7/7/69
Roy Gould	Ken	Goals for new proposed trade show system	7/7/69

TO:	FROM:	RE:	DATE:
Gabe d'Annunzio	Ken	Biomedical Capabilities Brochure	7/7/69
Brewster Kopp	Ken	Price of OUr New Plant Per Square Foot Per Year	7/11/69
Gabe d'Annunzio	Ken	Use of DEC vs. DIGITAL	7/15/69
Pierre Jaillet	Ken	Lagabax information requested	7/18/69
J.C.Peterschmitt	Ken	Lagabax information requested	7/18/69
Joe St. Amour	Ken		7/18/69
Nick Mazzarese	Ken	MC Ferson Instrument Corporation	7/18/69
Steve Sobel	Ken	Review and Definition of Your Job	7/21/69
Joe St. Amour	Ken	Big Disk	7/21/69
George Geralds	Ken	Printed Circuit Layout	7/21/69
Bob Lane	Ken	TU79's for MIT	7/25/69
Dick Clayton	Ken	PDP-12 Budget Changes	7/28/69
Bill Long	Ken	PDP-8 Budget Changes	7/28/69

digital INTEROFFICE MEMORANDUM

DATE: August 4, 1969

SUBJECT: APPLIED DEVICES CORPORATION

TO: Win Hindle

FROM: Ken Olsen

cc: Bob Savell
Dave Cotton

I had breakfast last Thursday, July 31st, with Dr. Kozmetsky, Dean of the University of Texas, College of Business Administration, Austin, Texas. He is an exceedingly creative and influential man. Even though some of his ideas may be a little way out, he has, apparently, influenced many people. There are 5,000 people in the College of Business Administration; therefore, it is probably one of the largest.

They have 10% interest in a company in College Point, New York, called Applied Devices Corporation. They would like Applied Devices to get a PDP-10 to be used in a research organization, called University Research. The idea is that University Research will do a little research off campus for organizations which schools do not want to do research for. They would like to get a PDP-10, but don't want to pay rent for it for three months. They feel that if they can skip rent payments for three months, they can then be in the black in the first year.

I told them that when Applied Devices approaches us, our people would know what the problem is and be able to give comment.

They would also like a free, or discount, PDP-8/L for the School.

Ken

ecc

digital INTEROFFICE MEMORANDUM

DATE: August 8, 1969

SUBJECT: COMPUTER LAB TRADE SHOW PARTICIPATION

TO: Bob Pouliot

FROM: Elsa Carlson

As you requested, I asked Ken what was discussed at the Operations Committee concerning your proposal, "Computer Lab Trade Show Participation."

He said he thinks it was approved, but can't remember any of the details.

Since Stan took the minutes at that meeting and your proposal was not mentioned in them, I suggest you ask him if he can remember the particulars.

Ko - RS08 disk
problem

digital INTEROFFICE MEMORANDUM

DATE: August 11, 1969

SUBJECT:

TO: Joe St. Amour

FROM: Ken Olsen

My intuition says that our flushing the big disk with large amounts of air is not preventing the polymerization, but, instead, is simply cooling the disk.

I would guess that the process is not polymerization (the combining of single molecules into identical, but larger ones), but is the simple process of hydrogenization of hydrocarbons. This is carried out under pressure and high temperature. Under the low-flying head, we have high pressure and, unfortunately, high temperature. It does not occur in the small disk because the head flies at a higher altitude.

If my simple-minded idea is true, then our closed-circuit ventilating system will not work. We need a large enough volume of air to cool the unit, which would be difficult to do in a closed system.

One way we could make a closed system (it's probably a little bit extreme, considering the hurry we're in), would be to use a small air-compressor that would first compress the air to raise its temperature so the heat exchanger can cool it, and then, when the pressure is released, the air would be quite cool.

While the air is compressed and heated, we could run it over a platinum catalyst (which we can get from a Coleman catalytic heater).

We then put it through a dryer and an absolute filter (and charcoal, too).

The other common reaction between a platinum-like material and a hydrocarbon is oxidation. This is how the Coleman heater works, and it is not unreasonable to think this might also be the reaction within the disk.

The conclusion I would come to is that, first of all, we should be sure that heat is not the big culprit, and that, regardless of what we do, we can keep the disk cool. Secondly, let's try an inert atmosphere, such as nitrogen. If the chemical reaction is either oxidation or hydrogenization, we could then put a little oxygen or hydrogen in the nitrogen, but for now, simply running an experiment with nitrogen would be very interesting. By the way, it is interesting that nickel is also one of the commonly-used catalytic agents, so if we get rid of the platinum-family coating, we may still have the problem with nickel.

Groups V. B. and VI. B. of the periodic table are poisonous to the hydrogenating catalysts, but we might be able to plate some of them. These include phosphorus, arsenic, antimony, bismuth, sulphur, selenium, and tellurium. Bismuth is used in the new waxy-white lipstick, so it can't be too poisonous.

In hydrogenizing plants, sulphur is the poison which usually contaminates the platinum. They get rid of this by oxidizing it with hydrogen peroxide.

We might try poisoning the disk with sulphur. One way to do this might be to get a very thin layer of sulphur on the rodium after its last cleaning step, and coating it with sulphur dissolved in carbon disulphide.

Carbon disulphide is very poisonous and exceedingly volatile.

Bismuth oxidizes, so a very thin film may disappear. Antimony is normally relatively stable, but when it is plated on platinum, it explodes with friction. Sulphur should also be kept away, I would think, because antimony sulphuride is what they use in primers.

Phosphorus, selenium, and arsenic already have a bad press, and we probably shouldn't tarnish our reputation by using them.

Tellurium, I think, is used to partially-poison platinum catalysts used in the conversion of heavy oils to light oils. This is just the opposite of my hunch of what is going on here, where I think we're converting very light oils to very heavy oils. There might be nothing useful in all these babblings because probably only a fool would put sulphur into a metal device; however, if it is hydrogenization that is going on, there are undoubtedly many volumes written and consultants in the petroleum-processing industry who are very expert in this. The oils we're getting probably came from that industry somewhere, and we're just making a new substance ouf of them (it might even be the substance they were when people pumped them out of the ground).

Ken Olsen

ecc

cc Op. Comm.
Regl Mgrs

For your information Ted

digital INTEROFFICE MEMORANDUM

DATE: 18th August, 1969.

SUBJECT: EDP Backlog Reports

TO: Product Line Managers
cc: Ted Johnson

FROM: Ron Smart

I understand there has been a question about the backlog reports correctly indicating overdue deliveries. I think the misunderstanding has arisen because you have been using the Summary Backlog, OR-26-4, for investigating late deliveries. This report is not intended for that purpose, but is intended to indicate how much will ship in a particular month. It shows only one delivery date, and this is the latest scheduled delivery date. This of course is exactly right for the purpose for which this report was produced, namely how much is expected to ship in a particular month.

The report you should be using for overdue backlog is the Backlog Late Report, OR-26-16, or the Overdue Backlog Report, OR-26-19. The first of these shows everything overdue relative to its original delivery date, and the second one everything overdue relative to its latest scheduled delivery date. These reports are a little more bulky as they detail the options in each order. This however is thought to be useful in determining what kinds of options are late. Both of these reports show the original scheduled date, the changed date, and in most cases, the reason for the change. We are having a special burst in Computer Order Processing to try to make these changed dates and reasons keep up with the changing delivery situation. If you observe any problems with the reporting of these dates, please communicate with your assigned schedule co-ordinator or Don Berman to have this backlog data corrected.

We have now got these delivery dates sufficiently into shape such that Order Processing and Production are using backlog reports for their mutual communications on delivery commitments by delivery date. I am very anxious that everyone will contribute towards making the EDP records correct in this respect, so that we are all working from the same document. Incidentally, the manufacturing month is also being updated by Order Processing, and the backlog printed by manufacturing month as a basis of agreement between Production and Order Processing about what equipment will start in any particular month. In this way Production will be agreeing to the start date and the delivery date for each item in the backlog.

jr

digital INTEROFFICE MEMORANDUM

DATE: August 18, 1969

SUBJECT: FUTURE OF THE PDP-10

TO: Bob Savell

cc: Win Hindle

FROM: Ken Olsen

For the last two years, the PDP-10 has enjoyed significant technical competitive advantages; however, we may lose these in the near future. The Operations Committee would like you to come to our meeting on Tuesday morning, September 2nd, to review your successes and failures, and to hear your detailed plans to compensate for this by developing superior management and superior marketing in the future.

I hear that the PDP-10 has to offer programming and hardware which is beyond the state of the art in order to be competitive, but we're never able to deliver them. For example, it seems to me that for a year and a half people have been saying that Burroughs cannot deliver, but we have to keep selling. My question is, is the nature of this product such that we have to offer things that can't be built?

I would like to see you chart out all the peripherals you have worked on in the PDP-10 group for the last two years, and identify the ones we have offered and taken orders for, and how we have done on delivery.

Ken

ecc

digital INTEROFFICE MEMORANDUM

DATE: August 19, 1969

SUBJECT: AMERICAN ELECTRIC POWER COMPANY

TO: Ron Noonan

FROM: Ken Olsen

I called Donald Cook, President of American Electric Power Company, this afternoon. They have seven operating power companies from Virginia to Michigan, but do all their design and construction engineering in New York. They would like to hear what we have to offer now and in the future. (They presently use IBM computers.)

Mr. Cook would like to introduce us to the head of each of their engineering groups, but will be out of the country from August 29th to September 22nd. The meeting, therefore, would have to be before or after his trip. I asked Elsa to call his secretary tomorrow to say that we couldn't arrange a trip now because of vacations, but would call him again after September 22nd to arrange a visit. I think you and I should go together.

Ken

ecc

Ken visited
RW 10-29

digital INTEROFFICE MEMORANDUM

DATE: August 20, 1969

SUBJECT:

TO: Joe St. Amour

FROM: Elsa Carlson

I give up! Ken asked me a few weeks ago to verify this information and pass it on to you, but I can't find the correct spelling anywhere. Maybe it will sound familiar to you if I write it the way he pronounced it. He thought he read about it in an "Electronics" magazine.

"I would like to know about DuPont's chromium oxide tape and about PKD Electronics (of Japan) with their new gama thericoxide tape. The question is, will these allow much higher density recording on any new tape systems we develop?"

Elsa

digital INTEROFFICE MEMORANDUM

DATE: August 26, 1969

SUBJECT: AC POWER FOR THE PDP-11 AND OTHER DEC COMPUTERS

TO: Loren Prentice

FROM: Ken Olsen

cc: Dick Best
Roger Cady
Roger Dow
Jerry Butler
Bob Savell
Fred Wilhelm

SUMMARY: We should have a consistent method for handling AC in our computers and peripherals. This should be started with the PDP-11 and the new peripherals that will be coming with it.

We now have a hodgepodge of ways for controlling and distributing AC among our systems, and we also have exceedingly messy ways of wiring them. Here are some notes on control systems, and, secondly, some specific ideas on the PDP-11 power supply.

We should have one socket for 110 volts and another for 220 volts. The present PDP-11 power supply, and a few others, put out 220 volts on a 110-volt socket, which is exceedingly dangerous. We allow this to happen because it makes it simple to use one power supply that will work on both 110 and 220 volts.

I suggest we make a special box that has all the AC sockets, circuit breakers, filters, etc. for a power supply, and that we have one for 110 volts and one for 220 volts. When we want to change voltages, we just put the other kind of box in. These are not as convenient, but is the only solution I can think of to have the right kind of sockets. It also makes labeling a lot clearer.

We also have to decide how we are going to turn power on for the peripherals. For the PDP-8/L, we have a large capacity switch which not only turns power on for the PDP-8/L, but a number of peripherals, also. It might be better to have a relay in each peripheral, and the computer switch either put out a 110-volt signal to actuate the relays in each peripheral or put out a 15-volt DC signal to actuate the relays. The 15-volt DC would make the relay slowly turn off, which is very necessary.

If we had a relay in the computer power supply, it would mean that we'd switch very little current, and would get rid of any transients that seem to bother us.

I don't want to slow down release of the PDP-11 power supply, but here are some ideas I would like incorporated later on. I would like to see two separate panels, one for 110 and one for 220 volts. These could be completely enclosed, which would mean the rest of the power supply wouldn't have to be covered for safety's sake.

I would like to see the power transformer with pigtails on it instead of a terminal strip. These pigtails could have tab connectors on the secondary, and the primary could come to a 6-pin amp connector. This connector could then plug right into the new, special box. I think the transformer without terminal strips would cost less, take less space, and be much neater in wiring.

I would like to see this soldered instead of putting it together with tabs. The AC is a very simple device, but with all the tabs, is very messy. One compromise would be to have tabs on all the components, but, instead of jumpering several tabs, put the female contact in each component, run a wire through it, and solder it in place so that, in effect, one has a very neat harness (like the back end of a Tektronix scope cart) made in place.

The PDP-11 power supply now has fuses in it, but it seems to me that, for just a few pennies more, we could use circuit breakers.

A separate box for the PDP-11 power supply could have the necessary AC sockets, a 4-pin socket for the fan, a 6-pin socket for the transformer primary, and 2 pins of a 3-pin socket for the panel switch.

Ken Olsen

ecc

digital INTEROFFICE MEMORANDUM

DATE: August 27, 1969

SUBJECT: DEPARTMENTAL COVERAGE DURING VACATIONS

TO: Operations Committee FROM: Ken Olsen

Last winter, I was exceedingly irritated after spending a week of frustration during which a Vice-President and all his senior people were on vacation at the same time. I thought my irritation was made clear, and that everyone now understood we should have each product line and all departments covered by a senior man at all times, and also, everyone in the Company who has to work with that department should be told who will be in charge.

The same thing happened again this week in the PDP-8 group while Nick Mazzarese is away, and I want to make it very clear that I don't want people to take vacations unless their department is completely and sufficiently covered.

I feel vacations are important to individuals, but when people take on the responsibility of many employees' livelihood and the significant responsibility of stockholders' investment in the Company, their personal plans cannot be put first over their Corporate responsibilities. (I had reserved and paid rent on a cottage in Maine and had my family prepared to go on vacation during this period, but my responsibilities kept me here.)

Ken

ecc

digital INTEROFFICE MEMORANDUM

DATE: August 27, 1969

SUBJECT: SEPTEMBER 2ND OPERATIONS COMMITTEE MEETING

TO: Operations Committee FROM: Ken Olsen

I probably won't be at the Operations Committee meeting next Tuesday morning, so I've asked Brewster to act as Chairman.

The Monthly Management Report will be the only item on the agenda, and I would like you to review each product line and each department, and review their predicted expenses and shipments. I want to encourage people to be completely prepared for this meeting.

Ken

ecc

digital INTEROFFICE MEMORANDUM

DATE: August 28, 1969

SUBJECT: SEPTEMBER 2ND OPERATIONS COMMITTEE MEETING

TO: Operations Committee

FROM: Ken Olsen

Please bring to the Operations Committee meeting on Tuesday, in addition to your budgeted shipments, your orders for equipment for the last period of time. Pete Kaufmann feels that we are ordering much more equipment than budgeted to be shipped. There might be good reasons for this, but we'd like to know what is planned for.

Ken

ecc

digital INTEROFFICE MEMORANDUM

DATE: August 28, 1969

SUBJECT: SEPTEMBER 8TH OPERATIONS COMMITTEE MEETING

TO: Operations Committee

FROM: Ken Olsen

For our September 8th Operations Committee meeting, I have asked Brewster Kopp to present a discussion of his personnel plans and the list which he has developed of the problems in his area.

We have all been very free in adding to this list, so I think it only fair to him that we review his list of priorities and agree on which ones should be taken care of first.

Ken

ecc

digital INTEROFFICE MEMORANDUM

DATE: August 29, 1969

SUBJECT: DREXEL INSTITUTE OF TECHNOLOGY

TO: Dick Clayton

cc: Jack Shields

FROM: Ken Olsen

Dr. Ruben of Drexel Institute in Philadelphia called me on Thursday morning, August 28th. He said they've had many problems with their LINC-8 over the last two years, and that, although they paid for service, they have never had a truly knowledgeable serviceman there, and they've never really had their equipment brought up to a well-operating level.

They now have an order in for a PDP-12. They would like to sell their LINC-8, and want very much to have us fix it up so they can sell it with a clear conscience.

I passed this information on to Jack Shields, but you might want to follow up to make sure Dr. Ruben is happy.

Ken

ecc

Dr. Ruben called Ken on 9/9 and said he had made a mistake; that they are satisfied with our people and computer. cc

digital INTEROFFICE MEMORANDUM

DATE: August 29, 1969

SUBJECT: SEPTEMBER 8TH OPERATIONS COMMITTEE MEETING

TO: Jack Shields

FROM: Ken Olsen

cc: Ted Johnson

Sometime ago, I asked for reports that would indicate the status of our equipment as it is installed. Will you come to the Operations Committee meeting on September 8th to discuss how your reporting system works and how we should read them to get the necessary information to eliminate such problems in the future.

Ken

ecc

digital INTEROFFICE MEMORANDUM

DATE: August 29, 1969

SUBJECT: **INCONSISTENCIES IN DELIVERY QUOTATIONS**
(Agenda item for September 8th Operations Committee meeting)

TO: Ted Johnson FROM: Ken Olsen

cc: Ron Smart

Sometime ago, I wrote you a note explaining the results I wanted from Order Processing so we can identify where mistakes were made and tell how many goof-ups we're making.

For the September 8th Operations Committee meeting, I would like you to tell how the monthly reporting system works, and explain to the Committee how they should read the reports to get this information.

It would also be a good idea to present your plans for staffing this operation, and then justify it by history and what quantity of business you expect in the future.

Ken

ecc

digital INTEROFFICE MEMORANDUM

DATE: August 29, 1969

SUBJECT: BOB COLLINGS' TRIP TO EUROPE

CONFIDENTIAL

TO: Nick Mazzarese FROM: Ken Olsen

I understand that Bob Collings made a three-week trip to Europe which he combined with vacation. I would like to hear if you feel it was wise for him to take such a long vacation away from a group which has had so many management problems, and if he left his group in good control while he was gone.

Also, I'd like to know if this was a trip which you initiated or thought was really important, or was it made by Bob so he could have an expense-paid vacation trip to Europe with his wife.

I would like to see the expense vouchers for this trip after he gives them to you for approval.

There is a tax ruling, and I believe a Company ruling, as to how much of the traveling expenses a company will pay when there is an extended trip for both private and company reasons. The tax ruling used to be that one had to prorate travel expenses for trips over so many days, and I believe our Company rule is the same.

I told Pete Kaufmann that, for his trip to Europe, which was half business and half personal, that he should charge the Company for a proportion of the amount of traveling expenses. When I went to Puerto Rico for about five days, of which two were spent on Company business, I didn't charge the Company for any of it so it would look extra clean for the tax people.

For common honesty, and for federal income tax reasons, we should make it very clear what the relationship is when we combine business and personal travel.

Ken

ecc

Kenneth H. Olsen
Memos Sent, August, 1969

TO:	FROM:	RE:	DATE:
Win Hindle	Ken	applied devices Corp.	8/4/69
Bob Pouliot	Elsa Carlson	computer lab trade show participation	8/8/69
Joe St. Amour	Ken		8/11/69
Product Line Managers	Ron Smart	EDP backlog reports	8/18/69
Bob Savell	Ken	future of the PDP-10	8/18/69
Joe St. Amour	Elsa Carlson		8/20/69
Loren Prentice	Ken	ac power for the PDP-11 & other DEC computers	8/26/69
Operations Committee	Ken	dept. coverage during vacations	8/27/69
Operations Committee	Ken	Sept. 2nd operations committee meeting	8/27/69
Operations Committee	Ken	" " "	8/28/69
Operations Committee	Ken	Sept. 8th operations committee meeting	8/28/69
Dick Clayton	Ken	Drexel institute of Tech.	8/29/69
Ted Johnson	Ken	inconsistencies in delivery quotations	8/29/69
Nick Mazzarese	Ken	Bob Collings' trip to Europe	8/29/69
Ron Noonan	Ken	American Electric Power Co.	8/19/69

digital INTEROFFICE MEMORANDUM

DATE: September 2, 1969

SUBJECT: APPEARANCE OF DIGITAL BUILDING

TO: Stan Olsen
Al Hanson

FROM: Ken Olsen

The outside of our building looks very poor. I realize a good part of this is the dug-up roads, but the rest of it is just the general way we are keeping the grounds. I'm afraid that we have a completely different attitude because we rent instead of own the building. This is, of course, foolishness. We have to take the same pride in the building as if it were ours.

Will you lay out your thoughts for me about paving the drives, fixing up the lawn in front of the building, keeping the litter picked up, and anything else we can do to straighten up the area.

There are also certain areas in the plant that seem particularly poorly maintained. Some of these are stairways that don't get used very often, and certain production areas. I'd like to hear your thoughts on getting these in order, also.

Ken

ecc

digital INTEROFFICE MEMORANDUM

DATE: September 2, 1969

SUBJECT: STANFORD RESEARCH INSTITUTE

TO: Bob McInnis

FROM: Ken Olsen

cc: Stan Olsen
John Jones
Dave Cotton
Brad Vachon
Don Berman

Late Friday afternoon, August 29th, I received a telephone call from Dave Brown and Dan Raffael of the Stanford Research Institute.

They had visited here during the SJCC, and Evelyn Dow told them they could have a PDP-10/15 interprocessor buffer to go with the PDP-15 which they ordered for delivery in December of 1969. They want to use this to tie the PDP-15 to their PDP-10.

Last week, with no previous hint, our salesman stopped by and told them that Special Systems had lost the piece of paper from Evelyn Dow and that they're not working on their buffer.

They are exceedingly upset because their whole research program was dependent on this tie. Without it, they have no use for the PDP-15.

Will you please follow up on this and let me know what conclusion you come to.

Ken

ecc

digital INTEROFFICE MEMORANDUM

DATE: September 3, 1969

SUBJECT: SURVEYS ON MINI-COMPUTERS

TO: Sales Newsletter
Operations Committee
Product Line Managers

FROM: Ken Olsen

We have received invitations from a number of consulting companies to jointly finance studies of mini-computers and/or applications for them. We just throw them away because they are aimed at people who are either failing in that business or considering going into competition with us.

Because of the large number of surveys being started, we can be sure that each of our managers and sales offices will be contacted by many researchers. The righteous innocense with which these researchers do the questioning is very disarming until you have been approached by a number of them. They act as if it is completely inconceivable that one wouldn't take part in a survey for the good of science and mankind, and they even have the technique of embarrassing people down to a science. The cost to us in time spent answering questions of this type from consulting companies would probably cost more in dollars than people pay for the surveys, and secondly, we must remember that they are doing this research for competitors and potential competitors.

Normally, we offer to help people if they will give us a copy of their report or at least a list of their clients. These consulting firms are never willing to do this, of course. This time, I would suggest that you don't even take part in the conversation long enough to ask these questions because they are likely to trick you into agreeing to an interview.

Ken

ecc

digital INTEROFFICE MEMORANDUM

DATE: September 4, 1969

SUBJECT: DRAFTING STANDARDS

TO: Win Hindle
Pete Kaufmann
Nick Mazzarese
Stan Olsen

FROM: Ken Olsen

We have developed the tradition at Digital that an important part of one's creative expression in doing engineering is deciding on his own drafting standards. The Engineering Committee has been frustrated in trying to influence people's creative instincts in one general direction.

It seems to me that we should encourage people's creativity in more constructive directions. I would like to form a committee to settle, at least for now, what the Company standards are for drafting block schematics.

I would like each of the four Vice-Presidents who are involved in drafting to pick one of their most senior engineering managers to be on this committee, with Joe St. Amour acting as chairman.

If this committee cannot immediately come to a unanimous agreement on the standards, I would like a majority and minority report presented to the Operations Committee for decision.

If there is some engineer in the Company whose artistic instincts rebel against standardization, we will very gladly hear arguments as to why he should make drawings differently from the rest.

I hope that what comes out of this is the feeling that true creativity is expressed in the item he created, not in the paper or size of the symbols in the drawing.

Ken

ecc

Dave Chertkow
Engg Mgr.
Fred Wiechelman
Jerry Butler
Dick Best

digital INTEROFFICE MEMORANDUM

DATE: September 5, 1969

SUBJECT: NEREM 69

TO: John Jones
Nick Mazzarese
Dick Clayton

FROM: Ken Olsen

NEREM has offered to have us put on a demonstration of our small computers. We should have either the PDP-8, 12, or 15 -- or, if possible, all three. Attached is the letter from them and a page from the program. Will you decide what we should do and make the arrangements.

Ken

ecc

cc: Mark Nigberg

NEREM 69

the IEEE Northeast Electronics Research and Engineering Meeting

A JOINT ACTIVITY OF NEW ENGLAND SECTIONS OF THE INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS

Please address reply to:
Nerem Business Office, 31 Channing Street, Newton, Mass. 02158

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NEREM BUSINESS OFFICE
31 CHANNING STREET
NEWTON, MASS. 02158
Telephone (617) 527-6944

August 26, 1969

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

Dear Mr. Olsen:

The Boston Section IEEE, the IEEE Boston Chapter Computer Group, and NEREM-69 are jointly sponsoring an all-day seminar on small computers to be held on November 4, 1969 - the day before the NEREM Conference. The program will be as follows:

I. Overview and History - 9:00 - 10:00 am
II. Functional Engineering Characteristics - 10:00 - 12:30 pm
III. Luncheon - 12:30 pm - 2:00 pm
IV. Afternoon Workshop - 2:00 - 5:00 pm
V. Evening Panel Discussion - 8:00 - 10:00 pm

A copy of the advance announcement is enclosed.

Our plan is to provide tutorial demonstrations to small groups on an informal basis. We expect 200 to 300 attendees at the seminar and will schedule the lecture-demonstrations on a rotational basis. (Our goal: 1/2 hour per demonstration, and fifteen people per group.)

We seek a strictly educational, technical and non-commercial atmosphere. To this end, we prefer to have an engineer as lecturer and would like to include his name on the program. The demonstration should include a functional description and operation of the device via typical demonstration programs or routines. Audience participation should be strongly encouraged.

Should you be interested in joining us as a workshop participant, please contact:

Dr. A. James Lincoln
Sperry Rand Research Center
100 North Road
Sudbury, Mass. 01776
Tel: (617) 369-4000

Sincerely,

Alex Vanderburgh, Jr.

Alexander Vanderburgh, Jr.
Seminar Chairman

AV:smw
Enc.



CLEVELAND AMORY TO ENTERTAIN AT NEREM BANQUET

The author of three best-selling classics of American Society, "The Proper Bostonians," "The Last Resorts" and "Who Killed Society?", Mr. Amory is perhaps equally well-known as the magazine writer who enjoys one of the country's widest ciruclations. In addition to his frequent free lance articles, Mr. Amory writes each issue for the largest selling magazine of all, TV Guide, as well as conducting a once-a-month column in Saturday Review.

One of the country's top lecturers, Mr. Amory is also well known as a television personality, appears regularly on "The Joey Bishop Show," "The Merv Griffin Show" and "The Dick Cavett Show", and is one of the guest commentators on CBS' new show, "Sixty Minutes." For many years, his humorous "spots" on "The Today Show" were eagerly looked forward to by millions of viewers, and for three years his radio satires, three times a week, brightened the early mornings of countless of New York's WPAT listeners. In late 1968, he signed on with Group W to conduct these unique "good newses" on a national scale for Westinghouse Radio. In early 1969 he began a series of syndicated television interviews with international personalities for the Triangle Syndicate.

IEEE–NEREM SEMINAR ON PERSONAL DESKTOP COMPUTERS

What can personally operated computers do for the practicing technologist?

TUESDAY, NOV. 4TH, 9:00 AM-10:00 P.M.

INTRODUCTION by Seminar Chairman Alex Vanderburgh of Key Data.

HISTORICAL EVOLUTION OF MINI-COMPUTERS AND DESKTOP COMPUTERS — David Shanskey of Adar Assoc., Chairman.

Speakers:

Ken Olsen, Digital Equipment Corp.
Roy Reach, Mathatron
Ramon Lonso, Adar Assoc.

15 MINUTE COFFEE BREAK

FUNCTIONAL ENGINEERING CHARACTERISTICS — Norman S. Zimbel of Arthur D. Little Inc., Chairman.

PROGRAMMABLE CALCULATORS —
Adrian Staffers, Wang Laboratories

SMALL ELECTRONIC COMPUTERS —
Speaker to be announced

TIME SHARED TERMINALS —
Lou Clapp, Dialdata

QUESTION AND ANSWER PERIOD

1:00-2:00 PM, LUNCH PROVIDED FOR WITHIN THE REGISTRATION FEE.

* EARLY NEREM Registrants will be allowed to attend the evening session ONLY.

AFTERNOON WORKSHOP — James A. Lincoln of Sperry Rand Rsch. Ctr., Chairman.

This workshop will be a technically oriented "hands on" live demonstration of actual equipment run by technical personnel from various manufacturers with audience participation strongly encouraged.

EVENING PANEL DISCUSSION — Walter Norris of Bell Telephone Laboratories, Chairman*

Participants: B. Oliver - Hewlett Packard
J. Wicklund - Harry Diamond Labs
N. Chang - Wang Laboratories
E. Piol - Olivetti-Underwood

Moderator: R. W. Hamming, who will summarize and conclude the day's program.

REGISTRATION

	IEEE Members	Non-Members
BEFORE OCT. 29TH	$40	$55
AFTER OCT. 29TH	$55	$70

Make checks payable to Boston Section IEEE, 31 Channing Street, Newton, Mass. 02158

NAME _____

ADDRESS _____

_____

Lunch and NEREM Registration are included in the registration fee.

KO - BOD meeting
organization

digital INTEROFFICE MEMORANDUM

DATE: September 8, 1969

SUBJECT: BOARD OF DIRECTORS' MEETINGS

TO: Brewster Kopp

FROM: Ken Olsen

cc: Ed Schwartz

I would like to have you take responsibility for our Board of Directors' meetings. Most of the items discussed are either financial or legal in nature, and, therefore, I would like to have you prepare the agenda, send out any written material on items which should be prepared ahead of time, and make the presentation during the Board meeting. For more general items, either I or the appropriate Vice-President will present them.

First, I would like to ask you to lay out a schedule of Board meeting dates for next year. We try to have seven, and they should be timed so there is approximately equal space between them and come at times when specific legal matters have to be taken up. We should have a notebook (with a page for every month of the year) in which we keep, year after year, notes as to what should be carried on at the Board meeting each month. This will help us in picking the Board meeting dates, and also remind us of those things which should come up periodically.

I am exceedingly embarrassed that we are calling two special meetings within a few weeks of each other for very small, technical points. We should never let this happen again; it is demanding on the Directors' time, and, of course, expensive for us to have to pay their fees.

I would also like you to supervise and approve the minutes. We keep very brief ones, and it might even be a good idea for you to talk with Dorothy Rowe to determine what the policy has been. We used to send a report to the Directors prior to our meetings so they would be able to participate in the discussion on financial results of the Company. It would be a good idea, now that we have an in-house Clerk, to write the agenda up ahead of time and mail it out to the Directors a few days before the meeting.

Those Board members who do not attend, particularly Arnaud de Vitry, might like to have a special letter telling what went on at the meetings. We have to be very careful with these, however, because the letter might develop legal significance even though it was dictated in an informal way.

Will you consider whether or not we should increase the number of authorized shares of stock at the next Annual Meeting. We have used up all those shares which allow a stock split, and it would be convenient during this Annual Meeting (or the next) to authorize more shares so we can make a split without first going to the stockholders.

At each Board meeting, I would like to have a general discussion, or review, on some area of the Company. We could have a Vice-President or Product Line Manager attend to educate the Board on what he has been doing, and, at the same time, give the man a chance to brag and get his thoughts organized. It might be good if you force me to lay out a schedule of these things well in advance, and then be sure I am organized before we send the agenda out to the Board.

Although I would like to have you present most of the legal and financial matters to the Board, do be sure that I am filled in on them before the meeting so I can carry on the discussion.

Ken Olsen

ecc

digital INTEROFFICE MEMORANDUM

DATE: September 15, 1969

SUBJECT: NOTES FROM BOARD OF DIRECTORS' MEETING ON SEPTEMBER 12

TO: Brewster Kopp

FROM: Ken Olsen

cc: Ed Schwartz

Here are a few random notes from last Friday's Board of Directors' meeting.

1. Each time we print a list of our Directors, we should check with Arnaud de Vitry to see what title and organization he wants us to use.

2. Should we get insurance for credit card loss? Vern Alden says The Boston Company has had very unhappy experiences.

3. For security reasons, should we have the Directors destroy their own copies of minutes after each meeting?

4. Should we be more careful with copies of our budgets we distribute to the Board?

5. The Board would like to have a discussion of our accounting principles at one of our meetings. You might want to document what these are and then mail them to the Board for discussion at our meeting right after the Annual Stockholders' Meeting.

6. The Board would also like to know what is in inventory, and Pete Kaufmann might give a general description of this. Bill Congleton brought this up because one of our stockholders told him we had capitalized software.

Ken

ecc

digital INTEROFFICE MEMORANDUM

DATE: September 15, 1969

SUBJECT: SEPTEMBER 29TH OPERATIONS COMMITTEE MEETING

TO: Stan Olsen

FROM: Ken Olsen

At the Operations Committee on September 29th, I would like Al Devault to present his plans for the machine tool industry. For a long time, I was critical of Nick for not staffing it and covering it thoroughly.

Ken

ecc

Read to Al Devault
9-15 kc

digital INTEROFFICE MEMORANDUM

DATE: September 15, 1969

SUBJECT: STEPS IN LEOMINSTER LAND

TO: Al Hanson
Ed Schwartz
Pete Kaufmann

FROM: Ken Olsen

Please make a list of all steps necessary to build on our Leominster land.

When can we be sure we are going to have a road, water, and sewer?

What happens if Tucker just dawdles for a couple of years? If they don't buy the land, does this mean the road never gets put through?

Ken

ecc

digital INTEROFFICE MEMORANDUM

DATE: September 15, 1969

SUBJECT: TWO-STORY BUILDING FOR LEOMINSTER

TO: Al Hanson

FROM: Ken Olsen

cc: Pete Kaufmann
Barry Stone

I think we should very actively start thinking about the design of a two-story building. There are several questions I would like to start discussions on immediately.

Probably the most important question is, what do we need in the way of elevators and stairways?

I have no feeling for what the insurance company would desire in the way of fire walls and emergency exits on a two-story building.

When we air-condition a two-story building, does this mean there will be large ducts from ceiling to floor on the second story?

Is it practical to have two sets of loading docks; one for each story to avoid internal materials handling?

What does it cost to cantilever the second story with the first? It seems to me that the steel beams don't increase the size, and only the outside columns will bear somewhat more weight. The building I have been toying with would be 660' x 400' in the second story, with the first story set in 10' to 15' from that. The front and back (the long dimensions) would be cantilevered out. The short dimensions would have the overhangs supported by columns.

I think this size building, cantilevered or not, fits nicely into the Leominster land.

Ken

ecc

digital INTEROFFICE MEMORANDUM

DATE: September 18, 1969

SUBJECT: FLAGS FOR NEW BUILDINGS

TO: Al Hanson

FROM: Ken Olsen

I think we should use large aluminum flagpoles in front of our new buildings, with large American flags.

Ken

ecc

digital INTEROFFICE MEMORANDUM

DATE: September 22, 1969

SUBJECT: PUBLICITY FOR OUR WORK WITH FREEDOM INDUSTRIES

TO: Pete Kaufmann FROM: Ken Olsen

Now that our 18-month contract with Freedom Industries is coming to an end, maybe it's time we got publicity for it.

In "Forbes" magazine, there was a boxed-in article on Xerox's activists role, and all they really did was help one black industry (in the same way we helped Freedom Industries) and run a Job-Core training camp for the U. S. Government. They closed down the Job-Core training camp when the Government stopped giving them money. These two activities have made them activists.

Now that we have finished our job with Freedom Industries, or at least the first step of it, it might be good if we, and they, got some publicity out of it. I don't think it would do any harm to brag now that we were the ones who started them and really got them going. We might get a section in the Sunday newspapers, and maybe even get written up in a magazine and be given a boxed-in area.

If you think this is a good idea, please contact Gabe or Mark.

Ken

ecc

digital INTEROFFICE MEMORANDUM

DATE: September 26, 1969

SUBJECT: PROFESSIONAL PHOTOGRAPHERS

TO: Gabe d'Annunzio

FROM: Ken Olsen

cc: Nick Mazzarese
Bill Edmonds

We've been trying to figure out why outside photographers have been used so often for the past year. Some people feel this adds up to a lot of money.

We like to try more extensive use of our own facilities. We'd like to ask that with each purchase order for outside photographers' services, a one or two sentence justification be included. Good reasons are: our shops don't have the time, they are too expensive, or we don't have the equipment.

We'd like to discourage reasons like, "we think the pictures are better when taken outside." This, of course, in some circumstances will always be true, but we'd like to give the inside shops a chance and then we go back to review the pictures we tried inside and the same pictures taken outside.

I want to be sure you realize I'm not saying that you have to always use our inside facilities. It would be my guess that at times we will get better work outside and at times less expensively. Above all, I don't want a drop in quality in our pictures to be blamed on an edict from me that we can only use the inside group.

Ken

bn

digital INTEROFFICE MEMORANDUM

DATE: September 26, 1969

SUBJECT: OCTOBER 8TH ARD BOARD MEETING

TO: Peter Kaufmann
Al Hanson

FROM: Ken Olsen

On October 8th, the American Research and Development Corporation has their Board meeting and I've invited the Board members to come out and have lunch here and a tour, probably starting at 1:30. Will you be sure the place is clean and neat for presentation.

Elsa, will arrange to have lunch for them outside my office.

Ken

bn

digital INTEROFFICE MEMORANDUM

DATE: September 29, 1969

SUBJECT: PROPOSED BUILDING IN WESTMINSTER

TO: Al Hanson
Pete Kaufmann

FROM: Ken Olsen

cc: Brewster Kopp
Stan Olsen
Ed Schwartz

We want to make a decision this week on building a plant in Westminster. There are several questions, however, for which we should first have good answers.

1. What roads should be made to the building?
2. Where will the rainwater drain to?
3. Where will we build the leaching fields?
4. Where will the city water come from?
5. Where will we build a pond for fire prevention?

The rotary which Pete things is great, I think is terrible. It is a corkscrew approach, and is very long because of the winding back and forth of the road. It would be intolerable during rush hours.

If the approach were simplified, it would actually be closer to bring a simple road all the way over behind the power line than to go the old way up to the farmhouse.

We should buy, if we don't get it automatically, some land where the power line comes to Overlook Road. With this land, we can bring our driveway from the rotary to the plant and out Overlook Road.

From the map, there is a little brook that leaves the flat area and crosses Overlook Road just above where it forms a fork with North Road. This then joins a brook which starts at Tophet swamp and runs into Round Meadow Pond. We should find out if Round Meadow Pond is a town water supply. If it is, we may be in trouble.

The place to build a fire-prevention pond is probably at the head of this brook. We might dig a large pond to save all the rainwater and any overflow that runs down this brook. I doubt we can get rid of any chemical affluent in this location.

A large sandpit in the southeastern corner of the lot is probably the best place to lay out a leaching field. This is probably 10 or 20 feet lower than the plant.

We would now be a lot closer to the center of town, and it might be cheaper to bring in a new water pipe. It would run up Bacon Street, Overlook Road, and then into the plant. I would guess that Meetinghouse Pond is a town reservoir because there are no houses around it on the map. The towns mentioned for bringing us the water might be limited by the fact that they cannot sell bonds at this time.

If we move this location, Beach Hill Road should probably be paved (this is the road that goes through the pig farm). I believe there is a dirt road running along the bottom of the hill where the pig farm is that would tie Overlook Road to the pig farm. This would make another good access to the area.

There is a small town, and we should probably find out whether we will be welcome or not. The total budget for the town was about one million dollars; $63,000 spent by the highway department, $14,000 by the water department, $13,400 by the total health department, the budget for fire and police was $50,000, and the veterans' graves officer spent $358. There may not be any politics in this town, but maybe a better-organized town, like Fitchburg or Leominster, might be better able to absorb our building.

Maybe we should discuss with some experts just what it would mean to the town to move in an operation like ours.

Ken Olsen

ecc

Kenneth H. Olsen
Memos Sent, September, 1969

FROM:	RE:		DATE:
Bob McInnis	Ken	Stanford Research Inst.	9/2/69
Sales Newsletter	Ken	surveys on mini-computers	9/3/69
Win Hindle	Ken	drafting standards	9/4/69
Brewster Kopp	Ken	board of director's meetings	9/8/69
Brewster Kopp	Ken	notes from brd. of director's meeting on 9/12	9/15/69
Al Hanson	Ken	flags for new buildings	9/18/69
Stan Olsen	Ken	Sept. 29th operations committee meeting	9/15/69
Al Hanson	Ken	steps in Leominster land	9/15/69
Al Hanson	Ken	two-story building for Leominster	9/15/69
Pete Kaufmann	Ken	publicity for our work with freedom industries	9/22/69
Al Hanson	Ken	proposed building in Westminster	9/29/69
Pete Kaufmann	Ken	Oct. 8th ARD brd mtg	9/26/69
Gabe d'Annunzio	Ken	professional photographers	9/26/69
John Jones	Ken	Nerem 69	9/5/69
Stan Olsen	Ken	appearance of Digital Bldg.	9/2/69