

Ivan Pollack (alt file) E.C.
History

I n t e r o f f i c e M e m o r a n d u m

To: see "TO" DISTRIBUTION

Memo: 5318751613COR07
Date: Fri 15 Aug 1986 10:23 AM EDT
From: KEN OLSEN
Dept: ADMINISTRATION
Tel: 223-2301
Adr: MLO12-1/A50*

Subject: ADDENDUM TO PLANS, BUDGETS, STRATEGIES, PROCEDURES,

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I would like the engineering part of this presentation broken down into several parts.

The first is strategic engineering. This includes the CPU, networking, disks, etc., that are the main thrust of the Corporation.

The second part is engineering for special markets. This includes those engineering projects that are made for only a small part of the marketing groups. It should include image processing, MAP, broad band Ethernet, specialized OEM products, specialized manufacturing products, specialized laboratory products, etc. Each of the items should include the name of the market for which the work is done.

The third part should be a list of the projects done for manufacturing. With this should be the name of the manufacturing group and the return expected.

The fourth part is projects financed by software services.

The fifth part is projects financed by CSS.

The sixth part is projects done for our own engineering such as CAD systems.

KO:211

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EXECOM:
RON SMART
KEN SWANTON

JIM CUDMORE
IVAN POLLACK
BILL STRECKER

I n t e r o f f i c e M e m o r a n d u m

E.C.

To: EXECOM:

Memo: 5318657848COR03
Date: Thu 14 Aug 1986 12:10 PM EDT
From: KEN OLSEN
Dept: ADMINISTRATION
Tel: 223-2301
Adr: MLO12-1/A50*

Subject: PLANS, BUDGETS, STRATEGIES, PROCEDURES, PROCESS AND PROTOCOL

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Every group in the Company should have goals, projects, budgets, plans, measurements, staffing plans and financial plans.

No one should approve his own plans and his own strategies. Staff does not approve plans and strategies, nor do they make plans and strategies.

Plans, strategies and proposals are brought to the most senior committee and the most senior individual in that group for approval. This is arranged for, and the presentations are helped by, the staff. The staff does not make decisions. Only the top man and the top committee make the decisions.

No way does the staff of one group, or the senior committee, or the senior individual committee of one group make decisions for another group. When decisions are to be made they are brought to the next level of manager and committee.

For example: The Engineering staff does not decide whether or not an engineering project vital to a marketing group will be carried on. The request of the marketing group must go to the Executive Committee for approval. If the approval has been obtained, it is the task of Engineering to carry that project out. It is not up to Engineering, or the Engineering staff, to decide whether or not they feel a project should be done.

The Corporate strategy should be broken into several parts. The first is a generic group of projects, which include the desktop devices or workstations, PC's and terminals. Another part is the high-end computing, which includes TP and DP. Another is the mid-range, another is the low-end central processors, and another is disks, etc.

The next group is departmental markets, which include:

Laboratory, Factory, Office, and Engineering. These marketing groups may work for Jack Smith, but their proposals for special engineering should still go to the Executive Committee. The results of these areas should be useful in most organizations.

The third category of strategies is industry markets which may need specialized equipment, such as: banking, insurance, newspapers, etc. These normally can be expected to arouse little interest in the Engineering Department and therefore procedure

and process and listening to their needs, and what returns they promise for what investments, is exceedingly important.

KHO:ml
KO.207

Dictated 8/14/86 BUT NOT READ

History

~~Woods~~

July 29 - Woods

Ivan Pollack talk file

20 Aug 86 Woods

Ivan Pollack talk file

Interoffice Memorandum

To: KEN SWANTON

Memo: 5318050804COR00

Date: Fri 8 Aug 1986 10:13 AM EDT

From: KEN OLSEN

Dept: ADMINISTRATION

Tel: 223-2301

Adr: MLO12-1/A50*

cc: see "CC" DISTRIBUTION

Subject: BUSINESS PLANS AND CORPORATE STRATEGY

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I would like to have each of our business managers propose a business plan. Each manager should have the freedom of an entrepreneur to propose what they think makes sense for their business.

Last year we asked each business manager to propose new ideas to increase revenue. At that time, many people were very negative on the Company's prospects. Asking for new ideas helped get the company moving.

This year I want something more. In addition to new ideas, I would like each business manager to lay out their current plan and strategy, including the resources they are using and the return, and other commitments, which they are promising. Then for each new idea, the business manager should propose the additional resources needed and return promised.

Each of our business managers should lay out this plan, including each product business, geography, industry, etc.

I am sure that each business manager already has a plan, and I am sure the staff can think of a format that will make it easy to simply restate everyone's plan into one standard corporate format. It must be concise; two pages are probably all that is needed, one for the current plan and one for new ideas. This first page should list a brief P&L, about 8 lines, and then summarize the strategy.

I would like the staff to recommend how the plans should be asked for and reviewed. We will use part of our Woods meeting in the Little Brown House to discuss the staff's proposal. The staff members who should prepare the proposal and come to the Woods are: Ivan Pollack, Ron Smart, Jim Cudmore, George Chamberlain, Bill Strecker, Ken Senior, Dick Fishburn and whoever else is needed. If the staff can't agree then bring several alternatives.

With the right Executive Committee review and decision making, the collection of business plans will become the Corporate Strategy.

KHO:ld
KO:196

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History

Interface Memorandum

To: see "TO" DISTRIBUTION

Memo: 5317270096COR64
Date: Thu 31 Jul 1986 3:30 PM EDT
From: KEN OLSEN
Dept: ADMINISTRATION
Tel: 223-2301
Adr: MLO12-1/A50*

Subject: CORPORATE STRATEGY

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I would like to commandeer a part of our Woods meeting in the Little Brown House next week, and all of the September Woods meeting in Maine, to discuss corporate product strategy.

I would like a chart that vertically lists all the markets, parts of markets or pieces of companies that we are trying to service. Then I would like listed across the top all the standard things we are in central engineering that would in general solve most of the engineering for each of these applications. This includes CPU's, network components, memory components, disk components, communications components, etc.

Then I would like a last column which would list all the specialized things, not in the central engineering budget today, that are necessary to do a complete job in each of these horizontal lines.

If we are interested in carrying out the horizontal lines and designating someone responsible, we will have him lay out a business plan eventually for each one of these that will answer the simple questions of what is the investment necessary and what will the return be. He will not be limited by the staff's attitude of how much you can grow, what percentage of the market you should have or whether you should be self-financing or not; but they will have the freedom of an entrepreneur in proposing what they think makes a good business plan. The staff and Executive Committee then have the final say in deciding whether they have confidence in the plan, but there are in general no basic rules for the plan.

When we lay out this chart, one of the first things that disappears is image processing. Image processing is hot nowadays because many people want to digitize their archives and some naive people want to digitize their new documents because they don't understand how documents will be made in the company of the future.

The archiving we can take care of by sending them to Kodak, who will photo copy coffee spots, finger prints and smudges and recover all of this when it is important. But that is not the business we're in; it's not what we're offering to our customers. We're offering a modern efficient way of communicating, storing

and recovering information, and we'll leave finger prints, smudges and coffee spots to Kodak.

However, there are one or two places, like newspapers, that need a certain amount of imaging, and in these cases we will, as part of our plan, consider the cost of adding them to these specialized areas and they may make certain businesses great or completely impractical.

KHO:ld

KO:192

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Interoffice Memorandum

Hastory

Don Pottack Talks

To: see "TO" DISTRIBUTION

Memo: 5308766261COR47
Date: Wed 7 May 1986 2:31 PM EDT
From: KEN OLSEN
Dept: ADMINISTRATION
Tel: 223-2301
Adr: MLO10-2/A50*

cc: SAM FULLER
ROBERT GLORIOSO

Subject: BUDGET

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I thought yesterday's budget meeting was good. I felt the Executive Committee developed more feeling for the budget and the business than we have for many years.

The next issue I would like to review thoroughly is what businesses we want to be in and what we do to insure that we are successful. So far, the budget has been largely the results of what engineering groups want to do. Most have not been successful because they were not experienced or motivated to do thorough product marketing, and it has not been in the tradition of Digital to do thorough systems engineering.

Therefore, at next week's meeting, I would like to have outlined, in detail, those businesses we want to go into and what dollars, space and people would be necessary to do the systems job that would complete the products to satisfy the markets. This is more than just buying application software; it means doing the whole job and being confident that it will work.

Then, someone should outline what the thorough marketing job should be to accomplish what we want to accomplish and to balance the investment in engineering and manufacturing. Marketing should be broken down into at least three pieces: the documentation of the product, the tools necessary to sell the product (which we might call traditional marketing), and the sales support.

To look at this clearly, we are going to have to recast the figures. Traditionally, our engineering did not always include systems engineering, because we left much of that up to the OEM's, the Kodak's and the Dupont's, or it was done in the product lines. Now we are not giving the OEM discount and we are giving less discount to Kodak and Dupont. We don't have the traditional OEM expenses so we should separate some of these costs from the traditional engineering for comparison. Let's, for next week, outline all the marketing expenses in the corporation. I am very worried that they have not had the careful scrutiny that the Strecker Committee has. I am afraid we have many marketing types who are not organized with goals as clear as engineering's, and so are not as motivated or as

effective. I would like to recast the figures so that the marketing done within engineering is included in the marketing line of the P & L statement, and I would like that whole marketing line justified with the same thoroughness the Strecker Committee is doing in the Engineering line.

Let's try to do all of this by next week.

KHO:ld
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Interoffice Memorandum

OC - Hartong

Please ask Mary to send a copy of this to Ron Payne
2-10-87

To: GEORGE CHAMBERLAIN

Memo: 5336581256COR66

Date: Mon 9 Feb 1987 5:36 PM EST

From: KEN OLSEN

Dept: ADMINISTRATION

Tel: 223-2301

Adr: MLO12-1/A50*

cc: see "CC" DISTRIBUTION

Subject: COST OF BUYING OUT

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Many years ago, we were making the make/buy decision about machine shop products on the apparent cost, and ending up with the completely wrong decision.

As we sent more and more machine shop jobs outside, our in-house machine shop spent more and more on supporting those jobs, both in direct help, inspection, specifying the detail needed to do the job, and also correcting the designs so outside groups could do it. As a result, in time the overhead on our inside work grew larger and larger, and it appeared to be less and less competitive. If we drew the obvious conclusion of shutting down our machine shop because it was non-competitive, the outside suppliers would also have become completely non-competitive and would have collapsed.

People are arguing that we should buy more and more of our PC/terminal/monitor business outside, but I have not seen any careful analysis as to what it really costs. We are now in the middle of a buy-out with a Korean company for a PC. They are a tiny company, and indeed, their costs must be low. But we should review, as the work goes on, just what the total cost is, with all the design and other support we give them. We would also give them the job because they would be quicker. We must make sure we review the wisdom of that decision.

We used to send out machine shop jobs that were complete and easy to build, and left those ill defined jobs that were to develop, grow, and be designed while they were being built, for the inside shop. This also made the outside people look more efficient. We often compared the total of design time and build time for inside projects, with build time alone after design was complete with the outside group. It would be good to review the in-house results, and outside results, from this point of view.

KHO:hm

KO:644

Dictated on 02/09/87, BUT NOT READ

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install and design into a system that everyone can do it.

I propose we have only one Q-BUS package and that we sell simple variations for the factory, closet, and office. I suggest that we offer two CPU's, the J-11 and the Micro-VAX.

I also suggest that the J-11 be used for all small businesses, dealers, resellers, stores, and small COEM. For this market it is inconceivable that we'd offer two CPU's that do approximately the same thing. It is of the utmost necessity that we capture this market immediately and that we have software, today, on the J-11. We have to package it in a way that is easy to sell, easy to use and easy to install. We should not confuse the customer by suggesting that they can have Micro-VAX also.

We should package the Micro-VAX for general computing to cover the broad range for which it is suitable. With one simple package and the same serial line module, everyone should be able to understand it and sell it. The world will concentrate its software on the unit that they are convinced is going to be stable.

We should concentrate on immediately, and almost instantly, making a J-11 Q-BUS terminal server to gracefully tie in large numbers of terminals to ETHERNET, such as the Mill or Marlboro, and for all those customers that have like needs. This same unit should be packaged for factory use in a neat, simple, straightforward, easy-to-use J-11 or Micro-VAX computer in a NEMA box. It should catch the imagination of factory people, particularly if the serial lines were safe and easy to install and available in large numbers.

General computing (which should be covered by Micro-VAX and VENUS) should be laid out in an organized way so that we know what applications we can handle today, and so that we can systematically go after them.

Computer Special Systems should be integrated into the Corporate Engineering strategy. Part of the group might be assigned to the Factory Engineering Group and some might be given the job of doing those large systems which don't fall into the straightforward and simple area of general computing. All Product Line Engineering Groups and Engineering groups in New Hampshire should be laid out in the Engineering budget so that their commitment, scheduling, goals, and management is obviously integrated into the Corporate strategy. The Board is a stickler for straightforward organization charts. The organization chart showing all the Engineering groups should be straightforward and concise; presenting it to the Board will be a test of its simplicity.

We have to convince ourselves and then the Board, that we can make our products easy to market, sell, buy, install, learn, and use. It's obvious that we have to do this before the 1986 Budget and it's obvious that we should present our plans to the Board of Directors well before the end of this fiscal year.

KHO:mt
K04:S8.74

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STRATEGY COMMITTEE:

I n t e r o f f i c e M e m o r a n d u m

History

To: TIMG ALL:
TIMG CAMS & NAMS:
TIMG SUPPORTERS:
TSP ALL:

Memo: 5351183539COR21
Date: Sun 5 Jul 1987 6:47 PM EDT
From: CY GAYDOS
Dept: CORP ACCT INDUSTRY MGR
Tel: 321-5493/609-987-5493
Adr: PCO PRINCETON NJ 08540

Subject: FYI: Ken Olsen Speech at M.I.T.

-< Ken Olsen's MIT address this year >-

When I left MIT 30 years ago to start a business, I'm not sure I could pronounce the word entrepreneur. Today, entrepreneur is a hot word. It's a challenging word, a fascinating word.

I'll try to tell you in a few minutes all that I learned in 30 years about entrepreneurship.

We received a good education at MIT, a surprisingly pertinent education. I can even say I learned double entry bookkeeping from Samuelson's economics book. But there was one thing missing: we were never taught any theory of work, any philosophy of work, anything about job satisfaction or what to look for. Ed Schein, industrial psychologist at the Sloan School once said that work is the most important thing in a person's life. Yet the job was the one thing we very rarely talked about. I can't in 20 minutes answer that need, but entrepreneurship does give an interesting vehicle around which to think about one's job and one's goals in a job.

The place of entrepreneurship in our society is obvious. The traditional enterprises do not or will not, or are reluctant to try new ideas and new approaches, and to gamble, to risk, to pay the price for competition. It is the place of the entrepreneur to introduce new ideas, new products, and new approaches. Few entrepreneurs survive very long, either because of success or because of failure. But out of many approaches comes good as with evolution, improvements come with many attempts, better things arrive.

When I left MIT 30 years ago, I had attained just about everything I had dreamed of. I had an opportunity to do much more research, much more elegant research with much more resources than I had ever dreamed. At \$12,000 a year I was able to feed my family. I had everything that I wanted. But one thing was missing. Nobody cared. The industrial world didn't care, they said we were too academic. I'm afraid that's what we say about MIT today. We felt we had to prove something to the world and we wanted to try our dream out. We had a dream at that time which was demonstrated by MIT, and that was the place of interactive computing. Normal computing at the time was considered big, expensive, awesome, beyond ordinary people. Interactive computing was exciting and fun, and people could interact directly with the computer. We had demonstrated the usefulness of this at MIT. It was our dream to show the world what it could do.

We saw at MIT a trusting, generous attitude, and at the same time, a tremendously competitive intellectual atmosphere which was very productive and a great deal of fun. There was a team spirit which meant everyone knew the goals and everyone worked towards them. We had technical

ideas to demonstrate but also wanted to prove that this environment could work outside MIT.

When we decided to start a company we went to the American Research and Development Corporation which was just across the river. That was not the right time for starting a company. A recession had started. Electronic companies started during the Korean War were not doing well. They did invite us to make a proposal to their board of directors, but they gave us three pieces of advice.

First, they suggested that we don't use the word computer because Fortune Magazine said no one was making money at it, nor was about to. So we took the word computer out of our proposal. The lesson there of course is that you have to be adaptable and you have to sell your ideas.

Secondly they suggested that the promise of five per cent profit on sales was not high enough for someone to risk their capital on. We had studied in the Lexington Library that all good companies seemed to make five per cent profits so we promised 10 per cent. And we made 10 per cent most of the time. The lesson there, of course, is obvious: If you aim for the high number, you might not make it, but if you aim for a low number, you were surely not going to make a high goal.

We were told that we should promise fast results because most of the board was over 80. We promised to make a profit in one year. The lesson was that, like a home budget, a business budget without short term goals, encourages spending more money than is coming in.

They bought our plan, and they gave us \$70,000 in capital. The nice thing about \$70,000 is that you can watch every dollar. With that, they owned more than 70 per cent of the company, but with that, they gave us freedom, and they didn't interfere. They didn't interfere to straighten out things when things were going poorly, and they didn't interfere to exploit things when they were going well, and American Research definitely had a long term interest and wanted to produce something useful for society.

We never finished our business plan. We didn't have a big volume of spread sheets and dozens of colored graphs. We did have simple profit and loss statements and simple balance sheets, and when American Research could see that these financial plans were in our head and in our heart, that we made them, understood them, remembered them, and they were simple enough to be a model for us to run the company daily and weekly and monthly using them as the model. They committed to invest in us without waiting for a final beautifully bound proposal.

Today, when plans are done by computer or by staff, they have more detail than one can keep in his head. I sometimes fear that the elegant mathematics of a P&L and balance sheet loses its usefulness when people put too much detail into it.

When people leave us today to become entrepreneurs, I advise them to, when they say their prayers at night, pray about your P&L statement. If your P&L is not so simple you can remember every line, or if it's not yours and not in your heart, you don't know what you want and you don't know what your plans are. So far, few people have taken that advice.

We learned a lot in those early years. We moved into an old mill and paid 25 cents a square foot per year for space with watchman service

and heat. We did everything ourselves, from building the offices to moving the equipment. We did the photography in my basement, and printed our circuits with real silk on wooden frames and etched them in aquarium tanks we bought from the five and ten. We sometimes spilled the etch solution onto the furniture store below. I think we bought the same set of furniture several times. We had the opportunity to learn accounting, and all the steps in manufacturing, things which, in time, became very valuable because we became sensitive to people in many different jobs.

When we met with our accountants, we said we wanted big company accounting. In our very humble offices, with lawn furniture and a leftover rolltop desk, it took a little bit of convincing to let them know that we really wanted big company accounting. When they set up this system we discovered it cost us more to do the accounting than it did to do the manufacturing.

After we were in business 12 months, we indeed made a profit, not much, but a profit. We very proudly went down to show it to General Doriot, president of American Research. He looked it over and looked up and scowled and he said no one ever has succeeded this soon and survived. The challenge was obvious. He had watched many people start companies and success almost completely destroys entrepreneurial spirit. It stops one from taking risks; one delegates the P&L statement to staff or to a computer, and one loses the humility necessary to learn.

Traditions of science and of the church are that humility is necessary to learn, to explore, to search for truth, and knowledge. So much of science and religion today feel that any show of humility or lack of self-confidence makes it hard to get money, and without money, there is no religion and no science. However, it does seem to me that humility that comes with the spirit of learning, probing, experimenting, trying, doing, redoing, and redoing again, is the only way to keep improving most things, particularly in the world of elegant technology.

After a small number of years, we had to face the question of how to introduce entrepreneurship throughout the company. We were doing well. We had become a \$14 million company. No one wanted to make changes. We had become a company of people who were full of ideas of what other people should do, full of ideas of where we should spend money, what products we should do but with only one entrepreneur at the top.

We then broke the company up into a number of entrepreneurial product lines. Each one had a manager with complete responsibility for his segment of the business and everyone else served him. This went over like a lead balloon. Many quit; some of the board quit. Everybody thought they were demoted. You can't mathematically demote everyone. But the results were magnificent. Within a year we had doubled our profit without hiring anybody. For many years afterwards we grew 20, 30, 40 per cent a year and made very good profit. The reason is obvious. When people have complete responsibility for their part they do very well. When they make mistakes they correct them. And the effectiveness of people in charge feeling responsible, feeling creative, is truly impressive.

One of the warnings that we had was with entrepreneurial attitude when people were competing with the outside world and competing with those inside there would be a tendency to sacrifice ethics in order to succeed. I was somewhat surprised, I must admit, to find that, to an overwhelming degree, most people want to be ethical and work for an ethical company if the standards were clear and honesty and ethical activity were expected.

People are honest with the company when the company is honest with them, and people are honest with the suppliers and the customers when they realize that the company is not interested in any short-term goals and with any other activity that might take place.

When given the opportunity people are willing to sacrifice the short-term pressures, which the financial community puts on so strongly, in order to look for the long-term good of the company and for society.

Now no one told me about the long-term problems with entrepreneurship. And they're kind of obvious.

First, humility does not come easily with the successful entrepreneur. It is almost contrary to his nature. Without humility it is hard to learn new things and hard to grow with the job.

Secondly, with success and with growth, it is easy to let the planning, the P&L statement be done by staff. An entrepreneur without the P&L in his head and his heart has no power. The frustrations put on other non-teamwork activities.

Thirdly, an entrepreneur is that last person on earth to give entrepreneurship to someone else.

The challenge I face today is to have more than 100,000 people working together in one direction and still maintain the entrepreneurial spirit.

The challenge we as a society have is to do that in all our organizations. For a number of years now we in the western world have been in competition with communism. Our economic freedom versus their controlled economy. We won the contest hands down. No thinking person will argue for the communist approach. But yet we've won the contest and yet we're in disarray. Can you imagine someone arguing with Congress that they want to take risk, to tolerate duplication, to pay the price of competition, to allow people to try new ways? Can you imagine newspapers allowing this to go on without terrible criticism? When American business people get together it's quite common to snicker and laugh at the failure of communism -- their central planning, their absolute intolerance of duplication, or competition, their fear of risk-taking, their lack of motivation and no direct rewards devastate the communists. But back in the American company, within the company itself there is central planning, aversion to risk-taking, no duplication, no competition and rewards are not directly tied to risk-taking.

Many of us, as we read, like to think that Gorbachev would like to explore economic freedom for his country. We realize that he has limitations. He has to convince his staff first. We wish he had more freedom. The American business leader sometimes would like to try duplication and competition internally. But as you can guess he, too, has staff who are very well educated, taught all the analytical skills, know how to use computers, taught to be brilliant in the conclusion they come to, but are absolutely adverse to risk-taking, internal competition or any of the entrepreneurial activities that are so fruitful.

A few weeks ago I was sitting between a minister and a translator in the Great Hall in China and none of the conversation was done without going through the translator except when I asked one question. How is it that China has gotten so quickly from having a shortage of food to having a

surplus of food? And with that question the minister came back and said. "We have reforms." He knew how much a farmer got for a chicken, how much a farmer got for an egg and how many chickens he needed to make more than a minister made.

We have very little of that spirit in our country which claims economic freedom.

I think many of you have demonstrated that many people who don't want to run their own businesses will often jump at the chance to take responsibility for a segment of a business or a school if the goals are clear and they can take part in planning and are given the freedom to take risks.

I would like to say that running a business is not the important thing but making a commitment to do the whole job, making a commitment to improve things, to influence the world is. I'd also suggest that one of the most satisfying things is to pass on the others, to help others to be creative, to take responsibility, to be challenged in their jobs and to be successful in the thing which, if not the most important, is almost the most important.

Sometime, hopefully a long time from now, when I have to tell people that I'm leaving, they will say to me, "Ken, why don't you stay another year, it has been so much fun, so challenging working for you." My ambition is to leave when they are still saying that and I can be remembered as someone who challenged them, who influenced them to be creative and enjoy work and have fun for a long time.

I N T E R O F F I C E M E M O R A N D U M

TO: Dick Berube

DATE: 4 September 1986
FROM: Win Hindle
DEPT: Corp. Operations
TEL: 223-2338
LOC: MLO12-1/A53

SUBJ: HISTORY DOCUMENTS - PETER PETRE

Here is a collection of memos from my files.

I do not have copies, so please get them back to me as they are classics.

I believe Ken should okay any that you think we should show to Peter Petre.

Regards,

WH:sjb
Attachments

Win

Thanks for the look-see. Your entire package is returned herewith, after selective copying. I'll show Ken what I call for Petre before letting anything go.

Dil
9/4/86

Strategy Committee

! ! ! ! !
! d ! i ! g ! i ! t ! a ! l !
! ! ! ! !

I n t e r o f f i c e M e m o

TO: PETER F CONKLIN
BOB DAILEY
cc: JACK SMITH
STRATEGY COMMITTEE:

DATE: MON 30 APR 1984 4:03 PM EDT
FROM: KEN OLSEN
DEPT: ADMINISTRATION
EXT: 223-2301
LOC/MAIL STOP: ML10-2/A50

MESSAGE ID: 5235033941

SUBJECT: BOOSTER BUFFALOS AND BUSINESS MACHINE

When I was a kid, a not uncommon plot for boys adventure stories was based on the tradition the American military had for acceptance testing of a new aircraft. The test pilot would go as high as he could, then dive straight for the earth until he reached terminal velocity. If he could pull out of the dive without tearing off the wings of the airplane, it passed the test. This tradition, along with many others that developed in this somewhat insular nation, that had little need for contact with the rest of the world, led to the design of very strong airplanes. The Booster Buffalo is a classic example.

The Booster Buffalo was very big, very heavy, very slow, unmaneuverable, and had tiny guns. The Americans boasted that it was the most powerful airplane in the Orient.

The Americans invented the airplane and they felt it was the best. They spent a lot of time arguing between themselves, but they felt that there was no need to look at what the rest of the world was doing.

When World War II started, the Booster Buffalo was a suicide vehicle. The Japanese Zero had cannons with explosive shells and big machine guns. It was very maneuverable and it had more than twice the range; the Booster Buffalo did not have a chance.

To make a successful airplane, they needed the same things that are needed to make a successful computer system today. Some people argue that we need years of experience. Others say we need great discipline and to keep up with the latest technology; others say we need to watch the competition in detail, at all times. It is also said that we need a lot of freedom and fast decision making.

I sometimes think our biggest problem is the Booster Buffalo problem. We do not study the competition. We claim certain things cannot be done, and even after they have been demonstrated, we do not acknowledge it. We have experts that tell us how to cool our systems, how to keep them from breaking, and how to do this and that. The competition does all these things so much more easily, but we do not learn from them.

For our line of business computers, I would like a small number

of machines. One for the table, one to roll around the floor, one to go in a cabinet with big disks, and then a standard line of VAX's. I would like a consistent set of software that plays over all of them. I would like a very limited selection of software and hardware, so that the salesman and the customer can understand the message. I would like the discipline to say no to all the things we could add to the list of offerings, but that would be so extensive we could not sell them anyway.

Above all, I would like a manager or a group of managers to lead this set of projects that would take advantage of history, and be expert in the technology. They would also be expert in all the software, and know everything that every competitor is doing. We need these controls so we can measure what we do against them, so that everything we do is better than the competition.

KHO:blk

K03:S9.36

O.C. 

KEN OLSEN ON DIGITAL

Do you have a grand design for Digital, or do you make it up as you go along?

Both. We are both opportunists and schemers, perhaps more the former than the latter. In a business as complex as computers, as dynamic, you can't plan every detail ahead. We set out general plans, then adapt. This is our formula.

What resources limit the growth of Digital?

There are only short-term limits to the growth of Digital, no long-term ones. We often blame manufacturing for not making enough, or the sales department for not selling enough, when the truth is that the product lines were simply not bold enough in their planning.

Sometimes we impose limits on the growth of a product line, or even on the whole company, because of a lack of control, or a lack of confidence in our people's preparation for the future. Limitations such as this are temporary, and for a specific purpose.

Then you would not list growth among your own goals for Digital?

Growth itself is not a goal. Growth comes automatically as a result of doing the right things, from good planning and good execution. It is no disgrace for a product line to be in a market that does not grow; what is important is that the product line maintain a significant and influential position in the market. In other words, we want to choose carefully those markets that we want to be in, then do a really good job in those markets.

Do you have specific financial goals for Digital?

Yes, ambitious ones, in comparison with our current performance, but achievable when we look at the results of some of our competitors. Our goals for Digital are 22.0% return on equity, 20.5% pbt, and asset turns of 1.35. We are making plans that show systematic progress but we know it will take several years to achieve these goals.

Do you make all the really important decisions yourself for Digital?

I make very few of the decisions myself. It is not our style to tell our managers exactly what to do. Instead, we solicit ideas and formal proposals, which we either accept or reject. When we accept a proposal, the proposer takes with him the responsibility for his own decisions. By making this responsibility clear, we eliminate many of the possible excuses for failure.

We should not spend all our time in figuring out who should make the decision, but rather we should work hard to decide how the decision should be made. If it is clear how the decision is to be made, often the who is not relevant, and the decision is made automatically. This way, we eliminate the politics and the emotion from the process.

What is your formula for picking the top people?

There is no formula. The system tends to pick the people.... they just come to the top. Because we never have enough good managers, we like to think that few good managers fail to get recognized at Digital. Of course it helps to be bright, and to work hard.

Is there one essential characteristic that you value?

Yes, honesty. I think that we have set a pattern of honesty that is generally followed by the whole industry. We should all act in such a way that we can be proud of what we have done, no matter who finds out afterwards. This principle applies beyond the obvious things like stealing or cheating; it means maintaining honest relationships and keeping our commitments with our vendors, our customers, and with each other.

How would you like Digital to be viewed from the outside?

First, I would like to be known as a quality company. Quality products, quality service, quality people. When I say quality, I don't mean expensive, I mean a degree of excellence. Secondly, we want our customers to know that we care about them, that we listen to them and respond with genuine interest. Finally, we would like to think that what we do makes a useful contribution to society. These are all important things to keep in mind, and should guide our decisions on what we do as a company and how we do it.

What is your secret for motivating people to work so hard?

There are no secrets. Most of our people seem to motivate themselves. Our problem is not so much to motivate our people, but to avoid demotivating them. There is no single source of this enthusiasm; it ranges from pride of accomplishment to the challenge of the competition.

Why is Digital organized along so many product lines?

Years ago, we got in trouble as a company because we were making all our profit in one part of the business, and spending it in another part of the business. We created product lines so that we could tell who was responsible for what. At the time, many people said it wouldn't work, but it has worked for us.

How do you decide which product lines will grow?

We grow those product lines that are most nearly self-financing. We use a formula that includes both profit and the amount of assets employed. In other words, we invest in those product lines who can manage their inventory and receivables as well as return a good profit.

Our experience says that good results are mostly a function of good managers; that is, when we move Product Line Managers around, the percent profit tends to follow them. The best results are often a matter of good discipline. So, with discipline comes the freedom to grow; with no discipline there comes no freedom.

Why do you disdain growth by acquisition?

We are not categorically opposed to growth through acquisition, it's just that the right things rarely come along for us. Truth is, we have acquired two important porcesses: a disk plating facility and a core memory manufacturing capability. We are always looking for new business opportunities that are consistent with our own business plan.

clg

O.C.

* d i g i t a l *

TO: OPERATIONS COMMITTEE:

DATE: FRI 29 AUG 1980 3:30 PM EDT
FROM: KEN OLSEN
DEPT: ADMINISTRATION
EXT: 223-2301
LOC/MAIL STOP: ML10-2/A50

SUBJECT: MAKING A JIGSAW PUZZLE

There are two ways of making a jigsaw puzzle. One is to look at the parts and anytime two seem to go together, put them together and assume that the more pieces get put together, the easier the rest of them will come together; and whenever any contribution can be made by joining two things, it is one step in the completion of the whole part, and everything after that will be a step easier.

The second way is to insist on people looking at the puzzle and never ever under any circumstances make a move until you see where a piece fits together. This has great academic appeal. It sounds so businesslike to say it would be wrong to make a move until you see the whole path to the end. Someone like this could spend years planning every move before he makes one. It's not easy, because there are so many pieces. But if you had the right intimidating critic ridicule one for not doing the whole thing at one time, you could get people absolutely stomped and embarrassed if they ever wanted to do it a step at a time.

An engineering project is often the same way. It has gotten to be where the worst possible crime is to build hardware without having the software planned and done and the marketing plans completed. It's okay in that environment to take approximately forever with a project, maybe even never getting it done. But the worst crime is to get the hardware done and say, "I haven't figured out the software."

Now, history doesn't support this elegant sounding approach. People have made a beautiful piece of hardware, caught the imagination of software people, and everybody's written software for it, and they have been a great financial success. Also, elegant, brilliant pieces of hardware have caught the imagination of the marketers, and, if not marketers, at least the customers, and they've sold great.

On the other hand, projects that have to do all the negotiation and talking before anything positive is done on the hardware discourage putting hardware together, and the result is absolutely devastating design because all inspiration is gone, and the projects usually take two or three times longer than the market is interested in buying the product. In fact sometimes it is cheaper to make several complete models of a project than it is to schedule and plan them. However, with this social pressure, no one minds talking about it for years, negotiating and arguing; but they would be absolutely ostracized from the technical community if they built two or three models to

O.C.

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I N T E R O F F I C E M E M O

TO: Operations Committee

Date: 3 September 1980
From: Ken Olsen
Dept: Administration
MS: ML10-2/A50 Ext: 2301

SUBJ: Red Tape

I thought it was interesting at the Operations Committee meeting yesterday to see that when we discussed red tape everyone agreed that it is pretty stifling and discouraging, but the implication was that it was all generated from the outside and that nobody in the room was responsible.

I thought it was particularly interesting to see the reaction to combining 20 projects into one and getting it done in nine months instead of three or four years. There were no complaints about 20 projects taking three or four years. In fact, that is the safest way at Digital. But the idea of generating a product in nine months and making only one or two instead of thirty--we received dire warnings that the product may be too good and we may sell too many, as if this was one of the major crimes, and dire warnings that we cannot do this unless we develop all of the software first.

Att
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12.35



*"Your Majesty, according to our study the shoe was lost for want of a nail,
the horse was lost for want of a shoe, and the rider was lost for want of a horse,
but the kingdom was lost because of overregulation."*

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O.C.

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TO: OPERATIONS COMMITTEE:

DATE: WED 15 APR 1981 10:51 EST
FROM: KEN OLSEN
DEPT: ADMINISTRATION
EXT: 223-2301
LOC/MAIL STOP: ML10-2/A50

SUBJECT: SAYINGS OF CHAIRMAN KEN

JAPANESE INVESTMENTS IN THE LONG TERM

When scientists want to encourage investments in science, they try to prove that countries are rich when they invest in the science. It turns out that one can probably come to the opposite conclusion which is that only rich countries can invest in the science, and that richness is hard to trace from science.

One can also argue that only rich companies can invest in long term payout investments. The Japanese say that they are successful because they don't worry about the short term, but invest only in the long term. This is what successful people do. Poor people can't do this; they have to invest only in the short term or they will starve.

However, it is the nature of rich companies and government operations to invest in the future. It's a natural tendency when you're not scared and hungry. If you invest in the future, you can postpone the day of measurement. You can keep working on future products and keep things in the general sense, and you never have to produce because you are investing in the future, and cannot be measured immediately.

When we started the Company, one of the stated goals was to take advantage of the gap in the then-present companies. They were all investing in five and ten year technology, but the products they were then building were last year's technology. We said we based the company on taking advantage of current technology which would put us ahead of everyone else, and we would invest little in that dreamy long term technology that people work on when they think there is no limit to funds, and they don't feel hungry.

KHO/er
K01:S3.66

O.C.

C O N F I D E N T I A L

MAY 29 1981

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I N T E R O F F I C E M E M O

TO: OPERATIONS COMMITTEE

Date: 29 May 1981
From: Ken Olsen
Dept: Administration
MS: ML10-2/A50 Ext: 2301

SUBJ: DEFINITION OF AUTHORITY

I was dismayed at the reluctance of people in Europe to propose better methods of doing things. They seem outright terrified of the Operations Committee and the Product Line Managers. They are afraid if they propose any changes or any deviation from the way things are done they will be punished. They are afraid that if anything goes against what Product Line Managers desire, the Product Line Managers will not give them the growth the following years. They also have many people come over and act as if they are in complete authority to tell the people what to do. One Operations Committee member said that if one of the groups did something, he would personally veto it. Now, it is obvious that Operations Committee members don't have authority to veto anything.

At one of the Operations Committee meetings, I would like to discuss the authority that Operations Committee members, Product Line Managers, or other people have as they visit Europe or other parts of the world. I think we should start with the Operations Committee, define exactly what our authority is, and then later on define the authority of other people.

KHO:m1
K01:S4.55

John Huddle

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C O N F I D E N T I A L

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I N T E R O F F I C E M E M O

TO: Ed Schein
CC: Operations Committee

Date: 23 October 1981
From: Ken Olsen
Dept: Administration
MS: ML10-2/A50 Ext: 2301

SUBJ: OD AT DIGITAL

When I was 30 and only had an interest in being a good engineer scientist, I was asked to run a Sunday School at a large Boston church. This responsibility sent me to the Lexington library, where I took out every book on business to study how to be a manager. The first thing that I read was that any good manager has to pick between people. When he picks between people, one gets hurt and one wins. The manager who does not make these decisions is a poor manager.

That was 30 some years ago, and things have changed a lot since then. Now, with OD, we have learned that no one is right and no one is wrong; that education makes no difference, and that experience makes no difference; everyone is the same. When problems and conflicts come up, they are to be worked out by process. We don't have to train or teach anyone. We just work out personality conflicts.

When we send people off to school to learn to be managers, unfortunately the professors follow the usual academic tradition of expounding their clever theories which are critical and cynical comments of traditional management. One thing they don't realize is that we, and probably a few others, are not overwhelmed with traditional management, but we are very much lacking it. We send people out to learn a little of it, and instead we overwhelm them with criticism about traditional management. This, along with OD, means we never get it done. We never learn how.

When I hire consultants, inside and outside, with a hope that we can teach people to manage, they all want to solve my problems and the Operations Committee's problems. I feel like a General who wants to teach his army to shoot and how to be soldiers, and all the people he has who should do the teaching want to straighten him out. They collect all of the problems of every soldier and tell the General you have got to change. These consultants should stop and think a little bit; almost every one of the problems has to do with the people the

23 October 1981

General would like to have taught, and he can't generate all of those problems, and he can't solve all of those problems without teaching his officer in non-com ranks how to manage. We, at Digital, also have gone so far as to believe, and almost do by policy, that we can hire people for jobs for which they have no experience or training, and we do not have to teach them. We seem to have the belief that anybody is as good as anybody else, and if you look over the managers we have picked over the last number of years, none of them have any inclination or training or experience in the area, just that they have been part of the club for a long time.

Now, I know it's not fair to blame all of this on OD, but please help me get some help that is not OD oriented.

KHO/er
K01:S6.108

~~Jan. Woods~~
~~DEC 28 1981~~ OC

C O M P A N Y C O N F I D E N T I A L

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I N T E R O F F I C E M E M O

TO: Operations Committee

Date: 28 December 1981
From: Ken Olsen
Dept: Administration
MS: ML10-2/A50 Ext: 2301

SUBJ: Lawyers, OSHA, and Matrix Management

When we first formed product lines, the idea was to assign responsibilities to everyone, and a means of measuring their responsibilities. The results were fantastic. Probably no one has ever done such a thorough job of being on goals and measuring them.

However, as time developed, Product Lines became largely lawyers and OSHA-type red tape people, and most of the rest of the company joined in.

We understand that we have twenty times more lawyers than Japan, and that they produce nothing useful and they sap our economic resources. We all smile at OSHA because there were thousands of people making and enforcing rules in areas which they had no knowledge, and in many cases which contributed little but cost much.

Digital now has many, many lawyers and OSHA-type bureaucrats. It is believed that our success is due to matrix management where everybody is boss, no one is measured, and no one succeeds and no one fails.

As we have seen in government, bureaucracy grows on bureaucracy. I'd like to make some major changes to eliminate bureaucracy and get back to the point where we can measure people, and thus generate leaders and managers. I hate to have people from the outside come in and smile at our management capability. I believe this is because we are never measured as individuals or as teams, and I think our future is dependent on developing managers.

At our January Woods meeting, I'd like to spend some time in discussing the possibility of eliminating product lines one at a time, and thus making a major change in the way of organization. First of all, I would like to seriously discuss eliminating the Word Processing product line, and having the sales department order directly from manufacturing.

Doing this slowly and one at a time, I think we will eliminate much of the red tape, OSHA-type rules, and financial and legal, allocating, re-allocating, and allocating again, of expenses.

Operations Committee
28 December 1981
Page 2

After we get that started, we should then go after the infinite number of committees we have and assign responsibilities for decision-making to individuals, and then measure them by the results.

KHO/ep
K01:S8.25

* d i g i t a l *

O.C. *[Handwritten signature]*

TO: OPERATIONS COMMITTEE:

DATE: THU 4 FEB 1982 11:00 AM EST
FROM: KEN OLSEN
DEPT: ADMINISTRATION
EXT: 223-2301
LOC/MAIL STOP: ML10-2/A50

cc: RON SMART

SUBJECT: THE NEW DIGITAL

Here are the ideas that I have been expounding for the last few months about the new company that I want us to have, to be able to compete in the 80's. At a future Operations Committee meeting, I'd like to have people improve and add to the following, so that we can have a simple statement of our goals.

First I'd like Engineering to engineer, Marketing to market, Selling to sell, and Manufacturing to manufacture.

Each group is responsible to do their job and is going to be measured by how well they do the job. No one will be allowed the excuse that somebody else told me what I should or shouldn't do.

Groups will not be overloaded with staff in order to carry out the burden of telling everybody else what to do.

With clear, simple responsibilities, we expect free, easy communication between groups.

Each Engineering group will be responsible to have the best and the most competitive products needed at every interval of time. Planning - it will not be a goal in itself, but it will be a means toward having products at each period of time.

Marketing will be responsible to understand the products, to understand the needs of the customers, and to communicate the solutions that we have to those customers.

Sales has the obligation to pick those products which are marketed well, and sell them to the customer, and to send orders directly to Manufacturing.

Manufacturing has the responsibility to take orders from the Sales Department, and manufacture the products at the appropriate time.

In time, we would develop measurements, but measurements will not be a goal in themselves and they will not be an excuse for doing things which are not for the good of the company. We do everything for the good of the company, and measurements are a tool to accomplish this, not an end in themselves.

Every group and every person will have goals and will be measured regularly on those goals.

Every member of the Operations Committee will be expected to

follow and obey the decisions made by the Operations Committee,
and once in awhile when there are edicts put out by the
President, they are expected to be followed also.

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* d i g i t a l *

save indefinitely
KOP April Woods
O.C.
State of the Co. Special

TO: OPERATIONS COMMITTEE:

DATE: FRI 19 MAR 1982 12:08 PM EST

cc: RON SMART

FROM: KEN OLSEN

DEPT: ADMINISTRATION

EXT: 223-2301

LOC/MAIL STOP: ML10-2/A50

SUBJECT: DEFINITION OF GENERAL MANAGER

At the WOODS Meeting in April, I would like to continue to discuss the definition and measurements of marketing in Digital and I would like to start a discussion on, What is a General Manager?

I would like to concentrate on the quality of his work and judgement in general areas. For example: What is his history and what is the quality of his judgement in areas such as: leases, space, working with maintenance people, lawyers, accountants, and auditors, hiring, firing, and disciplining people, producing on time, presenting ideas to employees, managers, Board of Directors, Operations Committee, and customers?

Does he have the sensitivity and wisdom to communicate ordinary and very difficult subjects and decisions to his people and his customers? Are his suppliers, his employees, his customers, and his sales channels completely confident of his integrity, his fairness, and his wisdom? Is he generous in the allocation of responsibility and credit? Is he interested in the good of the Company or only in those things on which he is measured?

Do we have confidence that he would go off and start new things, whether they be product, product lines, or offices or sales channels or foreign subsidiaries? Do we have confidence in his ability to talk with financial analysts, bankers, or, to negotiate with lawyers and real estate people? Is everyone an adversary or is he patient with the weaknesses of others, or even his own lack of understanding of others?

Does he keep up with what is going on in the business world? Does he know if there is a surplus or shortage of MBAs today and does he know enough to predict what the situation will be a year from now? Does he watch the world enough to have an opinion on whether there will be a surplus or a shortage of engineers when the capital market dries up?

Is he dependent only on the word of experts? Is everything the result of surveys or questions asked of other departments? Does he find out what is really going on, or does he quote an expert?

Does he measure himself in the way that he would measure if he were head of a company, whether it be big or small? When you are head of a company you are not asked, "Did you make dumb decisions because an expert told you?" They don't ask, "Did you get your pricing information from a telephone call to Manufacturing?"

Or, "Did you start a new product because a young, and inexperienced engineer promised a price or a delivery?" In business, you are judged by whether you succeed and only whether you obtained the right information, not whether you got it from experts or not.

This rambling set of ideas is very much like the rambling, detailed, memos I criticize others for. There should be a simple statement that would include all these things and be part of the definition of a General Manager. Let's see if we can't work this out at the WOODS Meeting.

KHO:m1
K01:S10.28

* d i g i t a l *

Organization *Ken Olsen* *Daryl Woods* O.C.

TO: OPERATIONS COMMITTEE:

DATE: MON 28 JUN 1982 10:47 AM EDT
FROM: KEN OLSEN
DEPT: ADMINISTRATION
EXT: 223-2301
LOC/MAIL STOP: ML10-2/A50

cc: RON SMART

SUBJECT: DIGITAL'S NEXT PRESIDENT

I've probably overloaded the schedule for the July WOODS meeting, but if we have time I would like to spend time thinking about the characteristics of a new president at Digital and of an Operations Committee member.

I am not planning to resign for many years, (and when the time comes I will probably have to be kicked out), but it would be wise to outline now what characteristics we would suggest the Board of Directors look for when it is time for a new president. Let's suppose that the Board has asked for this list of characteristics and let's put them down on paper. It might be a good idea to present them to the Board.

How important is experience in all or many parts of the Corporation? How important is a constantly present mental and financial model of the Corporation so that if any question comes up he can give an approximation of its influence on a product's result or the Corporation's results? How important is it that he not only can lead the small group he has worked with in competition with the rest of the Company, but that he be able to be an inspiration to everyone?

Should he be chosen by sheer genius, drive, and competitiveness, or should he, as a primary characteristic, be without selfishness and one who has a history of putting the Corporation first and himself second? Should we pick someone who through history has always looked at every decision to see how it affects him personally and his future, or should he be one who demonstrates a primary interest in the good of the Company?

When it comes to selecting members of the Operations Committee, should we pick those who have the characteristics we would also look for in a president? Are members of the Operations Committee chosen to defend their own personal interest and future in the Company, or are they members to primarily consider the interest of the Corporation in the long term? Is the Operations Committee a vehicle for someone to defend his personal interest or the interest of those groups immediately under him?

KHO:m1
K01:S11.95

O.C

~~DEC 23 1981~~

COMPANY CONFIDENTIAL

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INTEROFFICE MEMO

TO: OPERATIONS COMMITTEE

Date: 22 December 1981
From: Ken Olsen
Dept: Administration
MS: ML10-2/A50 Ext: 2301

SUBJ: HERESY AT DIGITAL

Heresy has taken over the fundamental beliefs at Digital. We now believe, and we tell magazines and even write in our house organs, that the secret of our apparent success is matrix management. In matrix management everybody is boss and everyone has many bosses. We also believe that if we measure someone, he has to make all the decisions. He doesn't have to manage, he just has to make all the decisions, because it is unfair to measure him unless he decides everything. Of course this leaves no time for management. We have strayed a long way from the original theories upon which we based our organization.

A few of the tenets of our belief were:

1. Everyone does and no one tells others what to do.
2. He who proposes does.
3. Everyone has a defined job which he can identify and on which he will be measured in short intervals.
4. Short-term goals which we can see and measure the results.
5. Every manager will break down the jobs under him into pieces and assign them to individuals who will be measured.
6. An engineer will start and finish a job and will not break it down. (Between research, development and engineering and then another engineering group and finally engineering for manufacturing and then someone who writes the manuals and then someone who makes the thing work.)
7. An engineer can do his own writing.
8. Marketers market.
9. Managers manage.
10. Engineers engineer.

COMPANY CONFIDENTIAL

11. We will keep a lean staff and give everybody several jobs.
12. We will trust and gamble on young, potentially powerful people.

The product line organization has been very successful. With it we have been able to do many more activities than companies who have one central planning or are directly run by one set of managers. The success came about because each of the groups set goals and were measured by them.

We have evolved from this original way of doing things by getting the product line managers, not to be measured, but to make all decisions and then to police all those decisions around the world. We have called this matrix management. The original goals were quite different. We gave the product line manager those resources he needed to manage the product line. He didn't make all the decisions and that was not the major goal of the product line. The result is that we have collected many, many people in the product line who really don't do anything, they police others. We now have many, many people who are not growing professionally in either technical skills or management skills and we are drastically overstaffed.

The strange thing is that we now propagate the idea that the reason for our success is this enormous overstaffing, all this enormous red tape and controls and getting involved in everybody elses management. The original goal was to make things simple and the people who were going to be measured could make the decisions or proposals without vast amounts of red tape and people and organization.

There is a lot to learn about our original product line breakdown. We assigned a multitude of jobs to individuals and measured them and we were able to accomplish things that the president could not accomplish by himself. This concept has application in many parts of the Company.

For example: We are often terrified by the Japanese skill in packaging things for shipment. You often open their products and they are magnificently packaged. You just have the feeling of quality and elegance. Then you open up a Digital package and there is blue pastic with foam inside that looks like dried up vomit.

This does not mean that we are not skilled, it is just that we have picked up the new, modern, Digital approach to management. The boss does everything and when he runs out of energy, it doesn't get done. We spend enough money in packaging. We spend enough money in engineering of packaging, but we don't assign tasks. If we would just tell our packaging people, "Your goal is to have cheaper, but more elegant packaging than the Japanese,"

COMPANY CONFIDENTIAL

we probably would get it. But when the managers do not want to do what I did to Digital when we were a 14 million dollar company, we will have so many, many things fall through the cracks because our managers do not have the energy or span of interest to do everything themselves.

KHO:m1

K01:S8.17

d i g i t a l

O.C. *Ken Olsen*
I n t e r o f f i c e M e m o

TO: OPERATIONS COMMITTEE:

cc: RON SMART

DATE: TUE 11 JAN 1983 11:12 AM EST
FROM: KEN OLSEN
DEPT: ADMINISTRATION
EXT: 223-2301
LOC/MAIL STOP: ML10-2/A50

MESSAGE ID: 5187569517

SUBJECT: SUCCESS

Last week I visited a customer who is one of the most successful people in his field. We were all proud to have him as a customer and our computers have played a key part in his success. It is always inspiring to visit with him because of the innovations he and his organization have introduced in the last thirty years.

However, there is a sad note to it all. In a quiet moment of reflection he said, "Those young people who introduced the new, radical-like, iconoclastic ideas and methods a number of years ago are often those who now are in positions of power and influence and are valiantly defending the icons they put into position when they were young."

Is this inherent in the history of an organization that has some success, and is it compounded in the public when the press heaps glory upon the organization, as they have at Digital?

What is the answer? Do we change everyone's job every four to six years and make them start off at a lower level at a different job so they have to learn something new, which they should do very quickly if they truly are good? //

KHO:m1
K02:S4.16

~~MAR 29 1983~~

O.C.

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I N T E R O F F I C E M E M O

TO: Operations Committee
cc: Ron Smart

Date: 29 March 1983
From: Ken Olsen
Dept: Administration
MS: ML10-2/A50 Ext: 2301

SUBJ: BUREAUCRACY AT DIGITAL

Bureaucracy develops in government, and in a company, when people are rewarded for not taking responsibility but for passing judgment on others and for being policemen and for listing reasons why things cannot or should not be done.

We lament the bureaucracy in government but each one of us should count the number of people in our organization who do not have clear responsibility that can be and will be measured regularly for getting something done. We have a tendency, like with the government, to take our best people and have them pass judgment on others and we reward them because they never get into trouble. Some of our groups have the largest percentage of people who do not have tasks to accomplish.

Here are two stories about bureaucracy in the U. S. Navy and what the results have been.

In the last six months or a year, I have been saying I want to make a new method of filtering for noise isolation and FCC reasons are lines going from the computer to drive the terminals. You would think that in a normal organization, the responsibility is clear, a number of people would have jumped in when the boss shows that much interest to prove that they can accomplish something this important; instead, the bureaucracies rally around to prove that Digital knows no other way than what we have been doing for many years, and no other way should be tried or proposed or scheduled and that the way we have been doing it must be right or we would not have been doing it.

Of course IBM does it the simple way. Their product costs a lot less, is a lot easier to hook up, a lot easier to connect options to, and they seem to pass all tests quite well.

Our bureaucrats have claimed that if you want to develop a new way of doing something, it takes massive funding and a massive project to do something that IBM undoubtedly did at trivial cost in their project which started as a lark, and was into big production in only thirteen months. Ours are so expensive because it takes so long because we have this enormous bureaucracy to support and satisfy and filled with the greatest people we think so highly of but who have not done any engineering or real marketing or real contributions for many years.

KHO:ep
K02:S6.101

You've written about the torpedo problem at the beginning of World War II [AMERICAN HERITAGE, December 1980]. Could you talk a little about that?

It was an utter fiasco. The Germans had a similar problem, which they solved in about six weeks. Donitz [Admiral Karl Donitz, chief of the German U-boat command] is supposed to have said he wouldn't send another submarine out till they got it fixed, and he wanted the hide of the guy who was responsible for the mistake so that he personally could nail it to the nearest tree. But when our submariners kept sending information back that our torpedoes weren't working, the bureaucrats in Washington refused to believe it. They said it was the operators' fault, that we weren't shooting them right.

Yet we knew torpedoes were passing under targets and not going off. Even when we disobeyed orders and set them shallow, they passed under. And sometimes the torpedoes would go off, but the ship wouldn't even be damaged. We couldn't understand it. It turned out that the torpedoes didn't run at any set depth. They wobbled up and down. If one happened to be on the up part of the cycle, it often exploded prematurely—a possibility any designer should have had the sense to consider. The earth's field in the far Pacific is much stronger than at Newport, Rhode Island, where the

weapon was tested, and therefore the inductive magnetic effect was stronger. Strangely enough, late in 1941 when I went through submarine school, we had a very secret session to show us how the exploder worked. They passed an iron rod over it, and the mechanism clicked. They said it would go off under the keel. I remember asking, "Why will it go off just under the keel? What's to prevent it from going off before it gets there?" They said, "Oh, no, no, no. Don't be stupid! It goes off when it senses the field

If our submarines had been as effective as the Germans', the Japanese would never have landed, and we wouldn't have lost the Philippines.

beginning to diminish." I was only an ensign and said no more. It was not fashionable to question one's superiors. But it's now obvious that it was a good question; too bad nobody in the torpedo design business had thought of it.

Well, anyway, we had the exploder fiasco, the depth-running fiasco, and the circular-run fiasco. Since there were two separate, unassociated things wrong with the exploder, altogether there were four things wrong with the torpedoes—and all four of them were design errors. Out of the twenty-eight or so submarine losses of ours that we could not correlate with any action report from the Japanese, I can make a pretty good argument, statistically at least, that one-quarter of them may have been sunk by our own torpedoes.

If our submarines had been as effective as the Germans', the Japanese would never have landed in the Philippines and we wouldn't have lost the islands. We sank one ship, I think, in that

entire campaign. The Germans would have sunk every one.

Can you think of any other case where technical failures prevented the Navy from doing its best?

I'll tell you one. The *Monitor* should have sunk the *Merrimack*. And the reason it didn't was because they were forced to fire their guns with half-weight powder charges.

The big Dahlgren guns had not been tested fully?

Well, they had been tested but they just hadn't got the report out. And all this stems, you know, from the famous explosion of the "Peacemaker" gun on the *Princeton* back in 1844. As a result of that, the Navy ordered that no guns were to be fired with more than half-weight powder charges until further orders. Eighteen years later those orders were still in effect. When the *Monitor* was about to fight the *Merrimack*, the exec of the *Monitor*, a young fellow named Greene, went to the skipper and asked permission to use full powder charges. Lt. John L. Worden, the skipper of the *Monitor* said, "Nothing doing! The orders are that we use half-weight powder charges until we get further instructions, and that's the way it will be!" So they fired half-weight powder charges, and their shot banged off the side of the *Merrimack*. If they had used full-weight powder charges, the *Monitor's* solid shot would have penetrated.

O.C.

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I n t e r o f f i c e M e m o

TO: *WIN HINDLE
ED KRAMER
JACK SHIELDS
JACK SMITH

DATE: TUE 13 SEP 1983 3:04 PM EDT
FROM: KEN OLSEN
DEPT: ADMINISTRATION
EXT: 223-2301
LOC/MAIL STOP: ML10-2/A50

MESSAGE ID: 5212077470

SUBJECT: SAYINGS OF CHAIRMAN KEN

GEORGE CUSTER

George Custer graduated at the bottom of his class at West Point, but at that time the Civil War had started and he immediately made a name for himself and became a national hero. He was in the cavalry and would rush headlong into battle, often very successfully, and was soon made the youngest General at age 23. After the war he was returned to the rank of Captain and sent out West, where his boldness and recklessness increased his reputation and he was made Colonel.

He was sent to Montana, under General Terry, to put down an Indian uprising. Terry sent him ahead to explore and discover where the Indians were and told him not to engage in battle, but to wait three days until Terry showed up with the main body of men.

Custer came upon the Indian village and decided to attack immediately. He only had 250 men, but he divided them into three groups and started a three-pronged attack. There were 5,000 braves in the village and Custer was slaughtered.

There is still some controversy as to whether or not Custer's orders were clear. Maybe the decision to attack was left to his discretion, but if that was the case, it was perhaps an even more serious judgement to pass on to Custer. If the attack was at his discretion, he was supposed to use discretion and not attack, at first inclination, 5,000 braves with only 250 men.

Boldness, carelessness with the lives of others, and competitiveness sometimes out-bluffs the enemy, sometimes take him by surprise, and sometimes win battles with fewer losses. But, if allowed to continue, will always end in catastrophe.

KHO:ml
K02:S12.41

O.C.

d i g i t a l

I n t e r o f f i c e M e m o

TO: *WIN HINDLE
ED KRAMER
JACK SHIELDS
JACK SMITH

DATE: FRI 4 NOV 1983 3:37 PM EST
FROM: KEN OLSEN
DEPT: ADMINISTRATION
EXT: 223-2301
LOC/MAIL STOP: ML10-2/A50

MESSAGE ID: 5217272854

SUBJECT: MANAGEMENT BY INTIMIDATION, ETC.

THE FULL SUBJECT TITLE IS:

MANAGEMENT BY INTIMIDATION, OR, GETTING YOUR WAY BY HIDING INFORMATION.

*****CONFIDENTIAL*****

Many things happened in the new Digital that were not part of the plan. I don't know how they sneaked in, and we lost many things that we weren't supposed to lose.

One of the things that I wanted to develop, that we had lost though the years, was the plans, requests, knowledge and information from the lowest levels of the groups doing the work. In Europe we wanted to maintain the budget requests for all subsidiaries and not just the desires of Headquarters. In this country, we wanted to have the requests and desires of each of the Districts and not just the desires of the Areas, and when Product Line plans are made we should have, at all times, the actual wisdom, desires and plans of each of the pieces.

A tradition has developed where a person at the highest level, who is presenting the plans, insists on unanimity of all people under him. In laying out the plans for PC for this year, people felt they were intimidated into agreeing with the plans, and that their actual desires and wisdom were not presented with the plans.

When an engineering plan is proposed, it is quite common to say, "Well, we didn't bring the other parties involved to this presentation, but they agree." And, when you go back and ask them, they feel that they were intimidated into agreeing, or, you may find that sometimes they were never asked.

Heavy-handed planning and heavy-handed presentations, without the inputs from the people directly involved, who often have the wisdom, and, somewhat misleading statements that are made about what their desires are, cannot be tolerated. We have found this to be true with some of the problems that we have run into.

It is honest and legitimate for a manager to say, "Each of the people in this project have these different views, and I am insisting on my own." This is honest, and often he will be right.

It is absolutely wrong to imply or say that everybody agrees with his plan when they don't.

It is devastating to senior management and they never will trust, again, a manager who does not present all the data when he is selling an idea.

KHO:m1

K03:S2.77

O.C.

d r i g i t a l

I n t e r o f f i c e M e m o

TO: ROBERTA BERNSTEIN

DATE: MON 12 DEC 1983 4:44 PM EST

cc: see "CC" DISTRIBUTION

FROM: KEN OLSEN

DEPT: ADMINISTRATION

EXT: 223-2301

LOC/MAIL STOP: ML10-2/A50

MESSAGE ID: 5221019467

SUBJECT: HOW NOT TO MANAGE ENGINEERING

*****CONFIDENTIAL*****

Engineering a product in our field involves a lot of work and an enormous amount of emotional involvement. The products are complex, the technology is changing, and the competition is fierce. To be successful, an engineer has to be involved almost twenty-four hours a day, every day of the week. The products in the field are so exciting that there are many people that want that involvement and they are devastated if they have a boss who doesn't care.

To encourage that involvement, to make that involvement satisfying, and to make that involvement fun, an engineer needs a boss and a boss above him, and probably above him, who are also involved.

If the boss isn't there, sometimes, at six p.m. to help, (or get in the way), if the boss never calls him on Saturday night when he has an idea, or if the boss never stops in on Saturday morning, the job becomes frustrating.

If the boss isn't there to solve problems, if the boss isn't there to carry proposals through to get answers, to get resources, and sometimes to simply say, "No," the job becomes distressing.

Any manager with an unlisted telephone number is usually not a manager at all.

Wives often wish their husbands had eight to five jobs, but they would much rather that their husbands have bosses that continue the enthusiasm, the fun, and the spark, so that when their husbands are home they are enthusiastic, even though tired. They hate to have their husband home more hours if they are frustrated.

We can't spend managerships like money. We can't arrange things to make the organization chart look neat. We can't say, "Oh, so and so, manage this also." If we don't have enough managers to be enthusiastically involved in projects, let's not have the projects at all. We can't give managerships as promotions to people who have been successful project leaders, unless they want to manage and lead.

The lines of responsibility have to be clear. The organization chart has to be logical and simple. The span of control and the number of layers of management have to be optimized. The accounting has to be useful and simple. The techniques of management have to be defined and outlined, but above all managers have to be involved.

We might do well in drawing our organization chart in a way that we shade those boxes in which the manager is not emotionally involved. This way we can immediately keep our eyes open for trouble in those areas which we assign a group to a manager because we have nothing else to do with or, or because he deserves the status, but has no particular involvement or doesn't care about the project. We could then always know how much of our engineering is not being managed with involvement and we can immediately see which areas to watch out for.

There are some engineering groups that don't want to get emotionally involved. They never want a change in the products they have been making for years, and they love to have a manager who is not involved. For groups like that, we maybe ought to cross-check their box in the organization chart to indicate they have no plans to keep up or get ahead of the market.

KHO:m1
KO3:S4.27

"CC" DISTRIBUTION:

AL BERTOCCHI
*WIN HINDLE
WARD MACKENZIE

SAM FULLER
JEFF KALB
JACK SHIELDS

BILL HANSON
ED KRAMER
JACK SMITH

O.C. *[Signature]*

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I n t e r o f f i c e M e m o

TO: *WIN HINDLE
JACK SHIELDS
JOHN SIMS
JACK SMITH

DATE: MON 19 NOV 1984 2:06 PM EST
FROM: KEN OLSEN
DEPT: ADMINISTRATION
EXT: 223-2301
LOC/MAIL STOP: ML10-2/A50

MESSAGE ID: 5255307075

SUBJECT: DIGITAL CULTURE

CONFIDENTIAL -- DO NOT COPY OR DISTRIBUTE

Mike Mulqueen stopped by to see me last Friday and said he was worried that we are losing our Digital culture. He wants me to visit Ireland to assure them that we are not losing it.

Sometime, let's discuss just what this means and be sure that if we lose it we get it back.

Too often people thought or claimed that being interested and gentle and nice to people meant that these people should always maintain their position in the organization. It never dawned on them that what it really means is that their big interest should be not their position, but the good of the people under them.

Too often we have not promoted and maintained managers because of qualities and skills that maintain enthusiasm, growth, development, happiness, productivity, and satisfaction among their people. We promoted them because they had been around for a long time, and because at one time they did some very good work. We didn't measure them on the qualities I mentioned above, which we need in our DEC culture. We should measure them on all the things the word "leadership" means. We should measure them on all the things that we would like to see in DEC culture.

Part of DEC's culture and DEC's enthusiasm has always been a belief that we are best; that we work the hardest, we work the leanest, we have the best products, and the best service, and the best quality. We lost a lot of this in Engineering in the last number of years, particularly in the low-end, as the low-end was abandoned by Engineering management. We also lost a lot in those parts of the Company that depend on mechanical design, physics and science; the drive for quality was abandoned. When we protected the management in Tewksbury when the morale was atrocious and the productivity was nil, we lost much of the DEC culture.

We have to remove managers who are not leaders. We have to remove managers where the morale, productivity and growth is poor and when the development and hiring of people is poor. Quality does not come just from the top. Quality comes from having the best

managers at every level, if we want to maintain DEC's culture,
quality and enthusiasm.

KHO:m1

K04:S4.55

DICTATED BUT NOT READ

JUL 15 1985

K. H. OLSEN

7/15/85

TO: WIN HINDLE

FROM: KEN

You may want to pass this on to your
staffs.

Ken

DIGITAL EQUIPMENT CORPORATION

O.C. *WA*

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I n t e r o f f i c e M e m o

TO: STRATEGY COMMITTEE:

DATE: FRI 1 FEB 1985 12:44 PM EST
FROM: KEN OLSEN
DEPT: ADMINISTRATION
EXT: 223-2301
LOC/MAIL STOP: ML10-2/A50

MESSAGE ID: 5262789395

SUBJECT: SAYINGS OF CHAIRMAN KEN

CONFIDENTIAL - DO NOT DISTRIBUTE OR COPY

MILITARY MANAGEMENT AND PROJECT MANAGEMENT

There are two kinds of management: military management and project management.

Military management has many layers of management. Once you are in the officer corps, you are protected and saved forever, unless you do something very, very serious, or unless there is a war and you have to produce. The officers are very busy generating and taking care of red tape, generating and going out to meetings, inventing and carry our the process. Nothing creative is allowed by those who know what is going on.

With project management there is a project leader with a team, sometimes borrowed for the life of the project, some working in their primary location with their primary boss, but part of the time, and some working directly with, and primarily for, the team leader.

The drive of a project is making an overwhelmingly high quality project that will be conspicuously a winner. They feel the responsibility that all the rules, standards, regulations, marketing needs, and whims of the President are satisfied with no effort at all.

In project management, there are no leaders because they have rights, because they have seniority, or because they are protected. They are only there to do their part in getting the project done.

I would like to change our Engineering so that we reward and hold in esteem project leaders and not people in the officer corps like a military organization. When someone is too tired to be a project leader he should be demoted to a staff member. Project leaders should not be stifled by managers of managers, sub-managers, sub-sub-managers, officers, committees, and thousands of people who can say no.

To show that project management is the highest of all classes in a technical company, I would like to run two projects.

I would like to build a Q-bus machine with a new approach to serial lines, and a new approach to cabling Ethernet that will be so cheap and so modular that it will be competitive for a 4 board machine, or a 14 board machine.

I would like to recruit, or draft temporarily from their present jobs, some part time, and some full time members of this team such as Don Vonada, Ralph Dormitzer and Jim Walls.

While the military management is studying and taking part in committees ad infinitum, I would like to build a system and see how it matches against the results of the committees.

I would like to break all the rules and regulations that Manufacturing and Engineering have imposed. I would like to break the most rigid rules that we have. For example; I would like to make the management modular so that parts can be assigned to different people and not all have to be done by one person. This way, it can be done more quickly, and it can be improved during the life of the project, without rebuilding one big board each time. I would like a power supply that has a separate regulator for 12 volts and 5 volts. The cost of this would be small compared to the trouble caused by saving money and using one regulator (I have been trying to do this for 4 years).

I would like to make time-to-market the most important thing.

I would like the product to solve the needs for many groups and not just one. I would like to have such obvious quality that it will win hands down when compared to any other proposal.

The second project I would like to do is to make a very fast computer. I would like it set up as a separate team driving hard to leapfrog all the other machines that we are talking about.

K04:S6.90
(DICTATED 1/30/85 BUT NOT READ)

O.C. *[Handwritten initials]*

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I n t e r o f f i c e M e m o

TO: see "TO" DISTRIBUTION

DATE: MON 15 JUL 1985 2:47 PM EDT
FROM: KEN OLSEN
DEPT: ADMINISTRATION
EXT: 223-2301
LOC/MAIL STOP: ML10-2/A50

MESSAGE ID: 5279128182

SUBJECT: DIVISIONS, NON-DIVISIONS, ENTREPRENEUSHIP, AND STAFFS

CONFIDENTIAL - DO NOT DISTRIBUTE OR COPY

It is a popular idea in business today to encourage entrepreneurial groups that have enough freedom, and enough commitment to create and develop business units that will not be limited by the overhead of a large organization. Most of the papers are written by people who have no idea what's going on, and who have had no experience in this area. Most of the time, they draw general conclusions from one example, which is, of course, quite unscientific. Even that example is too short-lived to prove any conclusions.

A few years ago, many of our Product Line vice presidents wanted the Product Lines to become divisions. They felt that in being divisions they'd have the authority to do what they wanted to do, wouldn't have to answer to anyone, and, therefore, they couldn't help but be a success.

This is contrary to what the text books say. The text books say you should only divisionalize when your business becomes stagnant, and there is no potential for growth because divisionalization invariably stops all future growth. This seems to be, indeed, a conflict between the history of divisionalization, and the dreams people have about what will come about from divisionalization.

I think the answer to many of the problems, and many of the theories is dependent on the position of staff. An entrepreneur is successful when he has the drive to work hard on all the details necessary to be a success, and when he has that overpowering feeling of responsibility to become a success even though some of his planning may not have been perfect. At the same time the entrepreneur is often somewhat lazy, or would rather spend his time doing other things, and, unfortunately, he often gets carried away with the power of the position, rather than the responsibility of the position. When staff is there to help the entrepreneur, these weaknesses can be catastrophic. If

the staff does the planning, and if the staff makes the important decisions, the entrepreneur loses the learning experience which comes about from planning. He never has the commitment that happens if he did the planning, and he probably doesn't even understand his business.

Normally, with a competent, helpful, hardworking staff they make all the product decisions, decide how much should be spent on each of the activities of a entrepreneurial group, and they do all of the budgeting and the accounting. The entrepreneur becomes frustrated because he doesn't have the true control which comes about from doing the planning, and he does not have the feeling of responsibility for all the key decisions which are made by product staff, and budgeting staff.

The budgeting and product staff, of course, are very conscientious and hard working, but their goal is to have a neat looking set of products, or numbers, and they don't feel the responsibility for the results.

Entrepreneurial units will only work when they feel they have the freedom to make their plans, including the product plans, and including the decisions of where they will spend the money. If they have these feelings after these plans are accepted, they then have the responsibility to make them work.

KHO:mt
K04:SECT11.15
DICTATED 7/15/85 BUT NOT READ

"TO" DISTRIBUTION:

WIN HINDLE
JACK SHIELDS
JACK SMITH

JIM OSTERHOFF
JOHN SIMS

IVAN POLLACK
RON SMART

History

MAY 21 1982

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+ DIGITAL +
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INTEROFFICE MEMORANDUM

TO: Operations Committee
cc: Bob Lane

DATE: 20 May 1982
FROM: Henry Crouse
DEPT: External Resources
EXT: 223-2610
LOC/MAIL STOP: ML1-5/B98

SUBJECT: EDGCOMB STEEL, 1957

We have had a long standing, excellent relationship with Edgcomb Steel. One of the folks in Purchasing was given the attached report dated October 31, 1957. Hope you enjoy reading it.

Henry

/m
attachment

DUPLICATE

Acct. No. 21920 "A" Account "House" Account Date 10/31/57
(13) new "B" Account General File 2/21/58

EDGCOMB STEEL OF NEW ENGLAND, INC. Sales '57-607 - 50 119 -

BASIC REPORT — Print All Information

Company Digital Equipment Co
Address none - like us they insist they are going to be bigger than the town City Meynard State Mass
Other Plants or Shipping Address none
Parent Company, etc. none
Type of Manufacture Mfr of digital building blocks

Principal Contact: Harlan Anderson Position partner Mailing List
Other Key Personnel _____ Position _____ List _____
Other Key Personnel _____ Position _____ List _____
Other Key Personnel _____ Position _____ List _____

RECEIVED
NOV 8 1957
EDGCOMB STEEL OF N. E. INC.
NASHUA, N. H.
10/5/58
HR

SHOW COMPLETE INFORMATION

Manufacturers of: Brand new outfit formed by
How long business established: a couple of ex M.D. Project
Number of employees: Sinclair men to make digital
Type of machinery used: building blocks. For the benefit
Competition: of any neophyte who is so stupid as not to know
Credit information: what a "d.b.d." is, it is a gizmo about 6" long
packaged in a piece of 1 3/4 x 4 1/2 sect 606375
tubing full of printed circuits, transistors &

(OVER FOR ADDITIONAL REMARKS) (ORIGINAL & DUPLICATE REQUIRED)

No. of calls for next three months 4-5 Salesman R.W. Clark

resistors used for testing computers. It sells for \$150.00 apiece although probably will usually sell in a battery of 6-8 units. I.B.M., Sperry Rand, R.C.A. & other computer mfrs. are only customers.

Only have 5-6 employees now but will probably hit 12-20 in two months when reach full production. Then will use 3-400# /mo of the tubing plus an as yet undetermined amount of $\frac{1}{16}$ & $\frac{1}{8}$ 25 or 35 $\frac{1}{2}$ hd sheet, probably cut to size, for the containers of a battery of units.

The kind of outfit we like. Concerned only that the material be top quality, scratch free, etc to the point that they will pay premium if becomes necessary for quality.

A natural for us

* d i g i t a l *

History ~~FILE~~ ~~Assignment~~

TO: OPERATIONS COMMITTEE:

DATE: TUE 6 JUL 1982 3:08 PM EDT
FROM: DICK BERUBE
DEPT: PUBLIC RELATIONS
EXT: 223-3046
LOC/MAIL STOP: PK3-2/M18

MESSAGE ID: 5168674303

SUBJECT: NEWS RELEASE RE STAN OLSEN'S RESIGNATION

The following release was mailed to the computer press today.

For Further Information:

Richard O. Berube
(617) 493-3046

FOR IMMEDIATE RELEASE

STANLEY C. OLSEN RESIGNS

AS VICE PRESIDENT OF DIGITAL

MAYNARD, MA -- 6 JULY 82 -- Digital Equipment Corporation announced today that Stanley C. Olsen has resigned as Vice President-Group Manager.

Mr. Olsen, 54, brother of Digital President Kenneth H. Olsen and a co-founder of the company with him in 1957, had been on leave of absence since July 1981.

In announcing his resignation, Stan Olsen said: "My years with Digital have been very rewarding and I am proud to have played a part in the building of such an outstanding organization. However, after 25 years of devoting most of my time and energies to the affairs of the company, I am now in a position to pursue a variety of personal interests for which I have not previously had much time. I leave Digital confident in knowing that the company has developed a strong team of professional managers who can help lead the company into the future."

Digital President Ken Olsen said of his brother: "We are grateful to Stan for his hard work and good ideas, which have contributed significantly to Digital's spirit as well as its business progress over the years."

£ £ £

CORP-217

digital

Win Sindle
COMPANY CONFIDENTIAL
INTEROFFICE MEMORANDUM

TO: Ken Olsen
DATE: April 3, 1973
CC: Operations Committee
FROM: Andy Knowles
DEPT: Small Computer Products
SUBJ: MY VIEW of OUR CURRENT POSITION, OEM WISE

Some Perspectives on One of My Businesses:

- Perhaps the naming of the OEM group has the effect of muddying the water since we confuse many issues by not viewing the businesses we are in properly.
- We are not in the OEM Components business. We are not set up to market, sell or service against Teletype, Diablo, Pertec, Conrac, Ampex, Cambridge Memories, TI, ISS, Memorex, etc, etc. Also - our products are not price competitive as components individually. This is true of our core memory, disks, tape drives, terminals and cassettes.
- We are in the OEM business when our customer wants a computer, hooks peripherals (ours or components OEMs) to it, wants it to play together (diagnostics and operating systems), wants us (software, sales, service). Our organization and expense levels in marketing, selling, engineering (hardware and software), field service, etc., are geared accordingly. It is one thing to want to compete hard in the components arena, but don't forget we have, over 16 years, developed the PDP-6, 7, 9, 10, 15, 11/45 which would lead one to believe we want to be in the computer systems business.
- The only way I can see to do both is to set up a components division under two simple, but strict, ground rules:

digital

INTEROFFICE MEMORANDUM

Allen Headle

DATE: August 22, 1972

SUBJECT: VENDOR COMMITMENTS

TO: Henry Crouse

FROM: Ken Olsen

DEPARTMENT: Administration

I am sure it is difficult for you to monitor all of the people who make commitments with outside vendors, but as we get bigger it becomes even more important that you do this.

Most of the people who are making these commitments do not have experience with Digital and do not understand our attitudes and policy with respect to vendors. I find that sometimes they have very strong feelings as to how things should be done, but very little inclination to find out what the Company attitudes are. I am sure it is not easy for you to step in and take a hand in these activities and so I would like to give you a "contract" that will give you the excuse for monitoring our vendor contacts.

First, I would like to ask you to come to the Operations Committee every six months and briefly present a list of those parts of the Company that are making commitments to outside vendors and suppliers and tell us what you think our relationships are in each of these areas.

Secondly, every time we have a complaint from a vendor I would like to have you use this as an excuse for checking into other relationships in that area.

Enclosed is a complaint letter from one vendor which will give you a chance to get started.

/d

Cc: Pete Kaufmann

Operations Committee

Win Hindle

TO: Operations Committee

DATE: January 26, 1972

FROM: Ken Olsen

DEPT: Administration

SUBJ: APPROVAL OF SOFTWARE AND HARDWARE PROPOSALS

From now on, all software and all hardware must be approved by the Operations Committee before it is started and, secondly, it must be approved before it is released for sale.

Dave Stone will make a comment on all software proposals before they come to the Operations Committee. They will probably go through the Operations Committee very quickly with his approval. If he doesn't approve, we probably will ask for more explanation.

Apparently Dave Ahl offered some software in the Sales Newsletter which wasn't even scheduled.

Cc: Larry Portner
Dave Stone

/d

Win Hindle

digital

INTEROFFICE MEMORANDUM

DATE: January 18, 1968

SUBJECT: RESPONSIBILITIES OF AN ENGINEERING MANAGER

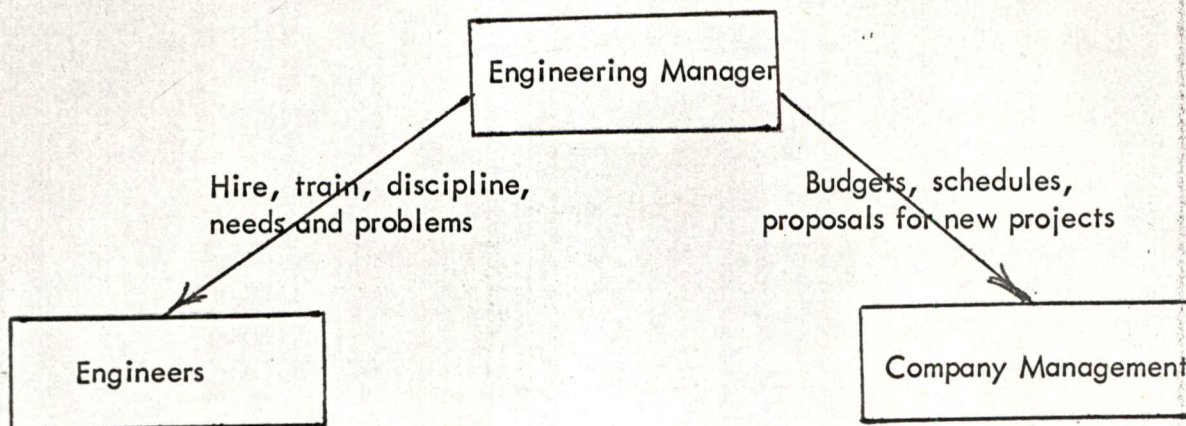
TO: Engineering Committee Members

FROM: Ken Olsen

I would like to see the Engineering Committee develop a simple statement of the responsibilities of an engineering manager. I would like to do this for two reasons; first, it should be spelled out so that when people take the engineering manager responsibility they will have an idea of what is being assumed, and secondly, thinking this question out is, in itself, educational for those involved. I would suggest you invite several engineers who are not members of the Committee to take part in this discussion.

The joke in business is, "Everyone wants to be a manager, but no one wants to manage." "Manager" is not an honorary title; taking the title means taking a number of responsibilities, and we should be sure we have some common understanding of what they are.

Here are a few thoughts to get you started. To fill in the details of what this means, it might be good to over-simplify the Company as being three boxes - 1) those working on the project, 2) the engineering manager, and 3) the management of the Company. The engineering manager is not the only formal means of communication between engineers and between management.



We have many services in the Company that help in these activities, but it seems to me that the engineering manager is responsible for making sure they are done. No one else can hire, no one else can train, and no one else will discipline. When it comes to problems and needs, the manager is the one to make sure they are taken care of. This includes needs for appreciation, needs for enthusiasm, and inspiration. Morale and confidence are, without a doubt, the responsibility of a manager and should not be left to be taken care of by some mysterious person elsewhere in the organization. The manager is the Company to all those people below him.

January 18, 1968

As we develop these ideas, I want to be sure that we don't imply that a man's usefulness to society or the Company increases as he takes on more and more manager responsibilities. Some of us get farther and enjoy management more than straight technical work; however, a man who continues to develop technically and is very good, will probably be more valuable, and get paid more, than the same man moving into administrative tasks. I receive hundreds of resumes from administrators with a lot of good experience; to all of them I have someone politely write a negative reply. I would, however, fly half way around the world to hire a 50 year old engineer who has been engineering for 30 years and developing all those 30 years. Those who would like to graduate from engineering into administrative tasks should go through the exercise of writing their resume as if they are 50 years old and out looking for a job; one case where they were developing their technical skills for years, and another case where they were doing administrative work for all those years.

Ken Olsen

ecc

History



INTEROFFICE MEMORANDUM

DATE December 26th, 1961

SUBJECT Growth of DEC

TO Harlan Anderson
Stan Olsen
Dick Mills
Maynard Sandler

FROM Kenneth H. Olsen

It has been the goal of the officers of DEC to grow only as the company absorbs capable people and as those people acquire the goals and motivations of the company. This discussion is a mathematical presentation of some of the factors of growth and is not, in itself, a goal. The first curve we plotted the growth of the personnel from the start of the company to the present, and then, made an estimate for the future. It seems that the next year we could safely take on another hundred people and the same for the year after. After that we propose that a growth of 20% each year is a reasonable growth rate until the company gets significantly larger. From our experience we feel that we should produce about a million dollars worth of equipment for each 60 employees and from this single formula we plotted the sales curve. This current year will not follow this formula because the sales will be approximately seven million with an average of 300 people. We plotted this point off the curve because we consider it a wild point and don't propose to keep that pace up.

We estimate that it is most efficient to have about 250 square feet per man. This is significantly higher than most factories, but our rent is low. From this simple ratio the third curve was drawn.

We have two other simple rules of thumb; gross profit = .6 sales. Net profit (before taxes) = .2 sales. We originally planned on gross profit being equal to half of sales, but, because of conservative price setting it has come close to .6 and we have gotten to like that number.

We like to make at least 20% profit before taxes in order to finance reasonable growth, but, perhaps we should calculate this as a percentage of gross profit rather than sales because it is probably wise to adjust growth in proportion to that money spent on new products and sales costs.

The cash necessary for growth can be readily estimated from our previous experience. We keep inventories on hand for approximately nine months and so the value of inventory is equal to the annual sales divided by 4.

The average delay and Accounts Receivable is about 2 months and so that value is equal to sales divided by 6.

Capital equipment and leasehold improvements run about 1/24th of sales and cash runs about the same.

Adding these up we get the assets equal to 1/2 of the annual sales. If no dividends are issued, there is no borrowing, and no stock is sold, then the growth is limited to about twice the percentage of profit after taxes. It was just by coincidence we had decided to settle down at a growth of 20% per year and estimated the profit after taxes at 10% per year. These numbers are a little conservative because the Accounts Payable and the reserve for taxes add something to our assets.

Using these simple rules we have found that we can figure what interest rate we can afford to borrow money. For each dollar of assets we can make 40 cents before taxes. For each dollar we increase our Accounts Payable by giving up the 2% discount and it costs us 33 cents per year. This is so close to the 40 cents we can earn on the dollar that it is obvious this is not a way to build up the assets.

It is interesting that leasing equipment does not significantly increase the assets because so much of it is in inventories in Accounts Receivable. If we wanted to grow faster, we could factor our Accounts Receivable. Growth would then be three times the profit after taxes, instead of the two we calculated earlier.

Kenneth H. Olsen

Resume of Kenneth H. Olsen

Kenneth H. Olsen is 31 years old and has a BS and MS from M.I.T. in electrical engineering. For twelve months he attended the U.S. Navy radar school and had somewhat less than a year's experience in the fleet. Before that he studied machine shop practice and worked in a tool shop.

In the seven years since he received his BS degree from M.I.T., he has worked at M.I.T. Lincoln Laboratory and its predecessor, the M.I.T. Digital Computer Laboratory. His MS thesis, which was done at the Computer Laboratory, played a key part in the first demonstration of a magnetic core memory. The circuits and techniques he developed during this time are now commonly used in most large digital computers.

In 1952, he was given full responsibility for designing and building the Lincoln Memory Test Computer. With a group of eight engineers and ten technicians, this 3,500 vacuum tube computer was completed in eleven months. The computer is now in use 24 hours per day and is still the fastest computer that we know of.

For 13 months he was in residence at IBM as the M.I.T. representative and the Air Force quality control engineer during the manufacture of the first SAGE computer. Here he

had the opportunity to observe the production and organizational techniques of a large well-run company.

At the beginning of 1955, he organized a group to develop and build computers, using the then new Philco surface barrier transistors. In just over two years, they developed a complete set of circuits and packaging techniques with which they have completed one computer and have well underway a computer which for some time will be the world's most capable computer.

September 1, 1957

At the present time Mr. Olsen is President of Digital Equipment Corporation, Maynard, Massachusetts. D.E.C. is a new electronic company manufacturing computer test equipment.

April 14, 1958

DEC
**INTEROFFICE
MEMORANDUM**

Memorandum M-1035

DATE March 4, 1959

SUBJECT Locking of Front Door

TO All Staff Members
and Technicians

FROM Kenneth H. Olsen

It shall now be company policy to have the main door to the plant locked after 5:30 each night and all day Saturdays when there is not someone working immediately and continuously in the office area. This is an obvious security measure, and we hope everyone will be conscientious in following it. There is a doorbell at the door now, which will allow us to let people in.

K. H. Olsen

digital
INTEROFFICE
MEMORANDUM

Memorandum M-1038

DATE March 26, 1959

SUBJECT COMPANY STATIONERY

TO All Staff Members
and Secretaries

FROM Kenneth H. Olsen

The use of the Company letterhead for correspondence implies that the Company is backing up such correspondence. Therefore it is important that Digital Equipment stationery be used only for authorized Company business.

Since the start of the Company, it has been the policy to file a carbon copy of every letter that goes out on Company stationery in the letter file. As the company gets larger, it is more and more important that this policy be strictly adhered to, even though other files may contain other copies.

In this connection, it should also be noted that the Pitney-Bowes postage meter is also for use only on Company business.

*Superseded
by M-1161
per K. Olsen
8/28/63*



INTEROFFICE MEMORANDUM

DATE August 27, 1962

SUBJECT List of Jobs To Do

TO Winston Hindle

FROM Kenneth H. Olsen

My job in the company can pretty well be defined as doing everything that we can't get somebody else to do. Your job then can be defined as doing those jobs which I think I'm doing and not doing or those jobs which I have never quite gotten around to do. Most of these will develop as we have conversations and as you observe what is going on here. Here are a few notes on some loopholes in our organization which I am particularly conscious of. When we were small it was very important that we worked with a great amount of freedom but now that we are getting larger and our organization is more complex we have to spell out many of our policies and do much more detail scheduling and planning.

We have, many times, sat down to develop a consistent pricing formula and technique. This is still not down in a reasonably concise form and we still make mistakes in pricing. Developing this will mean visiting many people in the company which probably makes a very good first project. Dick Best is the one to see first because he is usually involved in almost all the pricing.

There are different types of products which pricing has done quite differently. There is a special one-of-a-kind type system and there is the standard product which we'll plan to make many times. Then there is also the special services which we perform and sometimes do not expect to make money on them but merely consider it a service to the customer.

Part of this should also spell out the techniques by which we make standard bids. These bids may be for the most part collections of our standard product but the techniques or methods by which they are made and the records which are kept afterwards should be spelled out. We all have ideas on how this should be done but we do not have it standardized. Part of this will be a standardized quotation form.

Jay Forrester feels that I should spend a good part of my time looking out for the customer's point of view and making sure that we treat them well. I try to do this but never quite do it as well as it should be so I would like to have your help in doing the same. One project which would help you get started in this and develop a feeling for our problems as related to customers has been suggested by Jay Forrester. This should really come under Stan Olsen's category but he's in Europe for two weeks and he'd be all too happy to have some help. We have very few returns on our modules. This is because the customer can usually fix them faster himself and also because the failure rate is relatively low. However it is a chore for the customer to get the standard parts locally and Jay proposes that we develop a repair-parts kit which we give away to each of our significant customers. I haven't thought about this possibility enough to know what the problems are but basically it sounds like a good idea. We can give away a negligible amount of money and develop a lot of good will, or so it seems.

The main project which I would like to have you pursue is the one which I have been poking at for a long period of time and have been making very little headway. That's the overall planning of the company. This should start off with the planning of new products and new projects and end up with a concise, readily understood, overall prediction for the company. We have had problems in the last year of underestimating our needs for cash. This has basically been because of poor planning in our engineering projects and result in late delivery. We are now doing things on a large enough scale that we cannot afford to be sloppy in our predictions. We have to be careful in doing this because we don't want to be so tied up in red tape that we lose the freedom and creativity which has been so successful in our engineering so far.

We should work toward developing a statement of company goals and company policies. We obviously have goals and policies but we tend to get quite confused when we try to make a statement of these. This is partly because they often sound very corny when they are put down on paper, but also because they are rather complicated and probably multi-dimensional. As you come fresh into the company you might be in a position to help formulate these.

Jay Forrester is very disappointed that we haven't stated these things and spelled out all our policies in detail. I'm sure he's right but we're a little afraid to work too energetically towards Jay's goals because we're afraid he will introduce ideas and policies which are not that of the company and that he would tend to define the adaptability and freedom which we find so important to the company now.

This statement of goals and also the statement of policies might be done in very simple form and then we could have a file of cases where we have made certain decisions and done things certain ways. This might be a file of all the strange cases which most of the company history is made up of. We once gave a donation to the local hotrodders club because of a misunderstanding within the organization. If there was a statement mentioning this and saying that we won't do it again it would be helpful, even though it may never come up again. We, just in the last week, lowered a bid to two computer customers because we had confused them significantly by giving a very low estimate on part of the job. In the end we told them that the new price was the price that it would be from now on, but because we misled them initially in a very low estimate we would approximately split the difference between the estimate and the final price. After we make a statement of this in the miscellaneous file of policies we can then get reactions from people as to how it worked out. Next time we can know better, so we should do this thing.

Kenneth H. Olsen