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Just under fifty years ago, Eitel-McCullough, Inc. held an all-management meeting to address problems in its operations and plans to correct them. It was a time of stress, with production lagging behind demand, the need to operate in four locations, recent defections of personnel to other firms, and inadequate profitability. Personnel were brought in from all points, including a train excursion from the Salt Lake City plant, to the Villa Chartier Hotel in San Mateo.

The presentations recorded here give strong insight into the "corporate culture" of the company and the competitive pressures in the power-tube industry.

The original copy is in Eimac archives that form a holding of History San Jose. We are most appreciative of the opportunity to use this resource.

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EITEL-McCULLOUGH, INC.

MID-YEAR REVIEW MEETING

July 16, 1959

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INTRODUCTION

Gould Hunter

Fellow Eimacers - - -

I imagine ninety percent of you are sitting there wondering what this is all about. Many of you are also telling yourselves that this is a mighty unusual affair and not at all like Eimac.

If I had to deal with the first question in ten words I would say: This meeting is all about the growth of Eimac. Unhappily for you, I am not limited to ten words. I would next add that this meeting is about the rewards and challenges resulting from Eimac's growth.

No, is this meeting really such an unusual affair? The surroundings may be a little unfamiliar but that's about all. Consider who we all are. We are key Eimacers. We all have a tremendous common interest. We all rise and fall with the fortunes of Eimac. There are about 125 of us here. A little less than 25 years ago all of Eimac consisted of Bill and Jack and a handful of close associates. I am quite sure that all of those original Eimacers got together in one room almost every day to talk about their problems and what they were jointly trying to accomplish. Those little gatherings were fundamentally exactly like this meeting. The thing that is different today is the fact there are not 6 or 10 or 20 Eimacers but 2,200. Those of you who were at the San Bruno - San Carlos annual picnic on Sunday don't have to hear it from me to understand the extent of our growth. This mere fact of size is the thing that makes this meeting different and that also makes it necessary to hold it. You may have observed that along with increase in numbers, there goes an increased specialization. Specialists have a particularly tough time relating their personal roles to the whole scheme of things. It is not easy to get 2,200 different individuals to share a complete understanding of the plans, objectives, and problems of Eimac. Yet all of them are the same kind of individual

human beings as the original 10 or 20 Eimacers. They have the same need and desire to understand what is going on, where the company is trying to go, and how they as individuals fit into its plans. It is the task of everyone in this room to satisfy their natural demand to know these things. This is your job. So, one of our principal purposes here today is to help you fill this need for some 2,000 other Eimacers. You cannot do this with any confidence unless we arm all of you with the same facts. Having tried to do this, we then ask that you make a deliberate effort to pass the word around. We plan to furnish each of you in a few days with copies of the texts used by the principal speakers here so that you can be sure of passing the word along with accuracy.

Another purpose of this meeting is to get all of us a little better acquainted with one another. It is a further price of being large that it is physically impossible for even the number of people in this room to have really frequent personal contact. The worst of this is that the lack of personal acquaintance makes it possible to believe the most fantastic things about one another when rumor tells us that some event or other, whether it be good or bad, was the doing of that strange and wonderful "other fellow" in San Carlos or Salt Lake. We have been the distance growing between San Bruno and San Carlos in the past year. The strange and the unfamiliar is for some reason usually regarded as automatically evil. Unfamiliarity breeds contempt. It seems worth a try to get all of us together in the hope that such a meeting can do a little something towards getting better acquainted among ourselves. We are particularly glad to be able to include so many Salt Lake Eimacers along with their counterparts from San Carlos and San Bruno.

The program we have for you may not

furnish any sensational surprises. The various Division Directors will talk about the recent past of Eimac and about our future. Here and there we may attempt to clear up doubts and confusion about the company's plans and policies. At the end of the program we have left time to answer any questions you care to ask. More than anything else the speakers want you to share their strong conviction of confidence and optimism. On the whole, Eimac is now going stronger than ever before.

About a year and a half ago, Bill and Jack and other top managers formulated a series of Basic Objectives for Eimac. The task of thinking out these objectives involved a good deal of healthy self-appraisal. The company had then come a long way since 1934. It had had some good breaks at times and a few bad ones. It had gotten where it was by dint of hard work, a wise choice of its field of operations, and some very sound business judgments. But it was generally agreed that our field of endeavor offered tremendous opportunities to do even better. It was realized that we would have to make an aggressive effort to meet these opportunities at least half way. The principal outcome of this thinking was a simple basic decision: Eimac must grow bigger. This meant hard work. It meant taking risks. It meant accepting the problems and changes that go with growth. It meant discomfort for those who might prefer the easier task of coasting or standing still. All the other Basic Objectives -- and I hope they are familiar to everyone present - are built around this single idea of an expanding, thriving, busy

Eimac producing more goods, more consistent profits, and more jobs for more people.

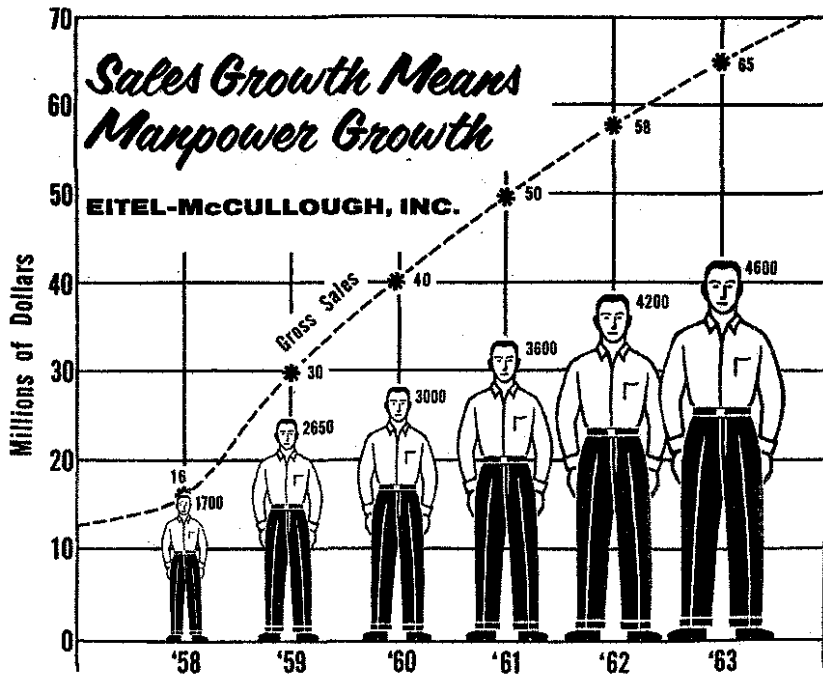
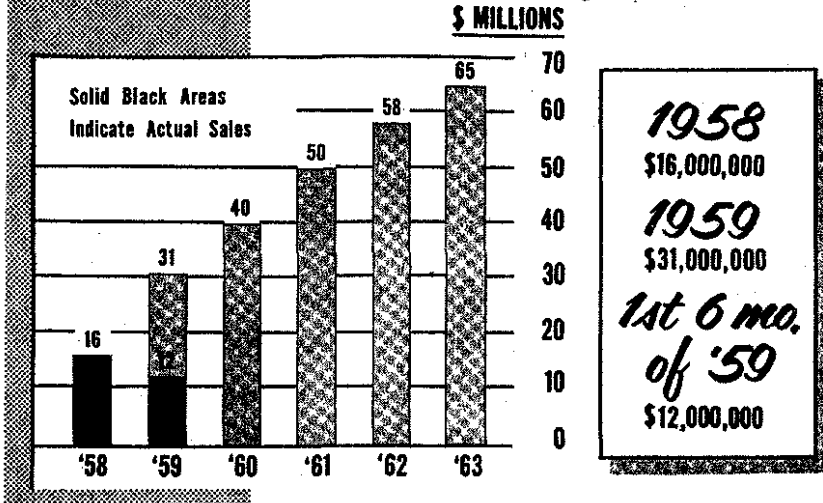
How have we done since then? Nineteen fifty-eight was a troubled, turbulent year distorted by a depression, by major physical dislocations within the company, and by the very readjustments of size, organization and methods that were made necessary by the decision to grow according to plan. Despite all this, we ended the year with many signs that our feet were firmly planted on a new road.

Other speakers will discuss in detail the events of the first half of 1959. It has been a very successful six months. All of you can take pride in it. Our total revenue for this period is 70 percent greater than for the first half a year ago. Our profits when the books are closed will show better than 60 cents per share, compared to a loss of 2 cents per share in the first six months of 1958. The number of people gaining support from Eimac jobs rose from 1,688 at January 1 to 2,151 at June 30. We have exceeded some of our original objectives and have now revised our plans upward for the balance of this year and for 1960.

As to the immediate future, most of you know, either from our sales forecast or our budgets or at least from the grapevine, that the latest plans call for an even faster growth in the second half. For instance, the total revenue planned for the fourth quarter of this year is \$10,500,000. That is an operating rate of \$42,000,000 per year. This will take some doing. We all face many challenges. Where there are challenges there must be opportunity for the ambitious and reward for the successful.

EITEL-McCULLOUGH, INC.

*Overall Sales Outlook
in Millions of Dollars*



MID-YEAR REVIEW

O. H. Brown
Director of Marketing

As you know, business amounted to 16 million dollars in sales. These sales were actual billings for tubes shipped out the door and work performed for customers. This 16 million in sales had not been enough to meet the demand; not enough, even, to keep abreast of the fast growth of the electronic industry. In '58 it moved ahead faster than we were capable of doing. As a result we closed out '58 with a sizeable number of our customers displeased with our behind-time deliveries and seriously questioning the quality of our products.

We were so far behind the delivery eight-ball that we had to renegotiate practically all of our government contracts and actually "buy" more time by paying dollars to our customer. In one instance, to meet contracted delivery schedules, we had to buy tubes from Amperex, an arch competitor. Mind you, we had invented the tube to begin with.

But things change and, here, for the better. The basic event leading to our im-

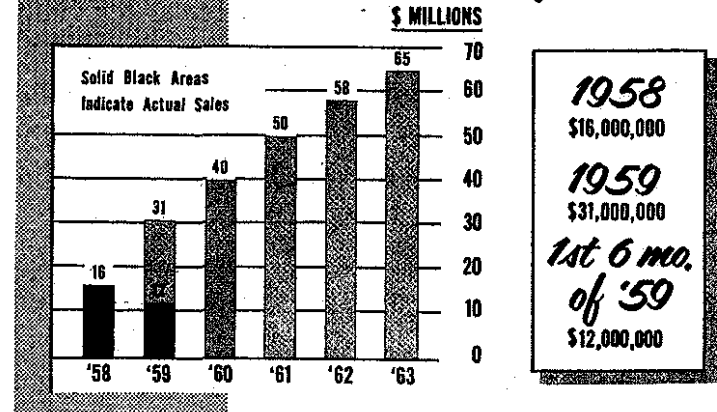
proving position happened back in early '58 when we put the Company's basic objectives into writing and, on a company-wide, coordinated basis, had to plan in order to fulfill objectives such as #4, calling for steady, orderly growth; - and #5, requiring a market-oriented philosophy as a basis for planning - and #2, calling for Company integrity and constant concern for the good name of Eimac.

In late '58, the Company really started to function, new facilities started to roll, and better control and techniques paid off in higher yields and more tubes out the door. Costs went down, and our competitive position improved. We started '59 with a backlog of 11-1/2 million dollars. Our Market Forecast told us it could be a bang-up year, and the production rates then being achieved by Manufacturing's remarkable production acceleration gave us all a degree of confidence we hadn't known for quite a while.

Here is what '59 looks like to date - and here is what it and future years hold in store:

EITEL-McCULLOUGH, INC.

*Overall Sales Outlook
in Millions of Dollars*



1958 is shown for reference.

The actual sales for the first six months of 1959 are shown: 12 million dollars - and see how it stacks up as against 1958! I know your eyes are away beyond me, looking at the 40 million shown for 1960 and on up to the 65 million for 1963. But stay with the present for awhile - and realize that orders we have and that we know will materialize will require a 95% growth in this present year, even now half gone.

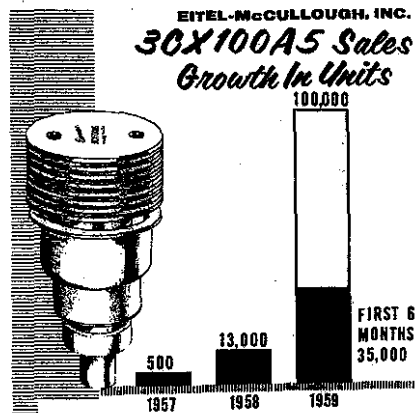
The figures shown come from Myron Pogue and his Market Research activity. These are brand new and are our estimate of the business available to us. We are proposing to the Office of the President and all Divisions that these replace our present four-year forecast as a tool to be used by all parts of the Company for planning their programs. They are Eimac Confidential. We are showing them today because of their current interest and close tie with our topic.

What goes into making such an expanded volume? Well, it's primarily customer acceptance of Eimac leadership - it's know-how as expressed in products incorporating new and better techniques and materials. Or products of a better design for the kind of application or system of the customer's. You can be sure, in a sales volume of the magnitude we're talking about, that there are unique products involved, items using engineering ideas and production technologies that people like Machlett, Varian, or RCA, - or Philips in Holland - or Siemens in Germany, do not possess. Here is where our creative people can take a bow.

For an example of what superior skills can do for us, let's consider the 2C39. There is a tube of the most competitive type. The glass tube had long been with us, and we've had to compete with Machlett on a dog-eat-dog basis. The price had been driven down and down, and we had no sure and profitable share of the market. Our ceramic development came along and,

as an example of what new technique can accomplish in placing a competitor at a disadvantage, the 3CX100A5 is a fine example.

Let's look at the 3CX100 sales curve:



These are tubes on which we have had no direct competition to date - and whose sales have come to about 3/4 of a million dollars so far this year - with the competitors on the outside looking in. Sure, Machlett will be making their version soon. So will G. E. But we have had the initiative - and the time bought by pioneering engineering and design leadership. If we use opportunities such as this, our Manufacturing group is given the time to tool and master good production techniques. Techniques that lead to efficiency and low-cost tubes before our competitors have a prototype. This is how to dominate an industry!

Of course, there is more to the 2C39 family than the 3CX100A5. And you can't invent a new one for each sale.

The old products, too, have to be sold, for we are not going to abandon large-volume products to our competition. The 2C39A, for instance can amount to well over 60,000 units a year if can make the tube at low enough cost. Machlett is tough and produce a good tube at a very good price. For instance, the Signal Corps sent out a request to quote on a quantity ranging up to 106,000 2C39As. Our Cost people in the Finance Division gave us the

history of our past costs. Fran and Bob Herdman thought we might be able to do even better, and so we in Marketing bid \$11.19, less than ever before, because Eimac needed the order. When the bids were opened at Philadelphia, Machlett's quote was found to be \$10.95. And you can't tell me Machlett makes a cheesy product. Nor can you make believe Machlett loses money on 2C39As.

I could have picked tubes other than the 2C39A for my illustration of how we can be undersold. For instance, there's the 8020.

The example does emphasize the importance of cost reduction, for you don't build 30 million in sales on lost orders.

Let's go back a bit. You saw that sales figure for '59, and the increasing amounts for later years.

In Eimac's situation of the recent past and present, we in Marketing have had to ask, in the main, one thing of Eimac - to produce, - to make lots and lots of tubes real fast. And here we take off our hats to Engineering and to Manufacturing, to you boys in Salt Lake with all those beautiful glass tubes rolling out the door, and to San Bruno for, for instance, the X626 and more and more 3X2500s. And to San Carlos for the 4Xs, 2Cs and 3CX100A5s. You saved our necks.

But we in Marketing always have more to ask than just for quantity. We must ask for quality, too. Quantity and quality. Historically, Eimac has stood for quality. That is what put us in business to begin with. Quality is so important that I even know the number of the Company Objective calling it forth. It's Objective #20.

But now that we have the volume, let's have the quality. The quality to better Machlett in the 2C39A, the quality to retain the outstanding leadership in amplifier klystrons and the 3CX100A5 - and to regain it for our 4X250B. The quality to better Penta in the 4-125A and the other glass tetrodes. And the quality in our 3X2500s to better the only 3000 or so

hours of average life in broadcast stations, where triple or quadruple of that is expected.

If we don't produce the tubes of required quality, I assure you our competitors will.

Marketing asks for quantity with quality. We also ask for cost reduction. We must get more and better for less. This is progress - and the way to keep the competition pushing uphill. Underselling us is the only way the copycats of the industry stay in business. But if you go see these outfits as I have done, you don't see the facilities nor people with the fine know-how you find here. We always out-invent them. Now let's out-think them cost-wise. I told you of Machlett and the 2C39 order they took. This hurt all of Eimac. And lower costs - better techniques and materials - are the problem of all of Eimac. It's as basic as survival.

Competition in selling is not confined to price and delivery alone. Competition extends into the field of specifications and application. Take the X590 for instance. Here, we had a well entrenched competitor who had taken the lead in creating and meeting specifications. And we've since had to meet and better, spec for spec, what had become a requirement of the customer.

But telling of this battle, and the cooperative surge of effort and accomplishment that resulted, belongs to Fred.

I'd like to introduce Fred Speaks, Assistant Director of the Marketing Division in charge of our marketing and promotional efforts.

One of Fred's main functions is to provide the inspiration and leadership that results in the teamwork so often required to land the big ones. The X590 order is one of the very big ones, and the fact that we have it in the house is due to the extraordinary job done by Fred and several other Eimacers whom he will name.

Fred is telling the 590 story by request and I think you'll find it to be a corker. Fred Speaks.

MID-YEAR REVIEW

Fred A. Speaks

Ass't. Director, Marketing

It is a distinct pleasure to get together like this to discuss our Marketing program, to review our results to date and to take a brief look at what the future might hold for we here at Eimac. In accordance with a classical type article recently brought to my attention by a fellow Eimacer - John McCullough - I should be able to dwell here an hour or so discussing Marketing philosophy in the grand sense. This I will not do because the subject has little to do with orders received or the status of our several programs.

Very simply, most of our successful Marketing programs are the result of a planned campaign that might be described as the "hard sell" approach. Without this approach we will soon lose control of our own Eimac destiny and be forced to exist on the dregs of the market - that is, be forced to design, develop and, produce those products that are least desirable from both a technical and a profit-making point of view. It is the responsibility of your Marketing Division to sell those products and programs considered desirable by all of us and thus permit Eimac to do its own planning and run its own house. That completes my treatise on Marketing philosophy.

During the past six months we have received purchase orders from our customers for about 2 and 1/2 million dollars worth of tubes to be manufactured in Salt Lake - not counting the Microwave Lab's products; we have received orders for about six million dollars in San Carlos products, and about seven million dollars in San Bruno products. This does not count contracts or orders for research and development programs.

These orders represent Eimac's efforts in two rather distinctly different types of Marketing programs. The first are our so-called "bread and butter" items. Here we must maintain a continuing sales program not too different from that for a consumer type item. Our field representatives under

Bob Plummer's guidance spearhead this campaign in the areas of commercial companies. We are now placing into effect a new distributor policy so as to hit harder on the commercial sales. Mel Whiteman in Bob Plummer's group heads this program. Warren Hoffman has a group of 24 foreign representatives providing us with world-wide sales of our products. Hap Bailey with his three recently added government representatives is responsible for our government sales. This comprises the heart of our direct selling effort on catalog items. Hank Brown has recited the history of the growth of one of these products - the 3CX100A5. That example shows the operation of this sales effort plus the vital cooperation provided by other Eimacers in all Divisions of the Company.

This must be a cooperative effort. We must have a quality product produced in volume so as to meet our delivery requirements. We must keep our prices competitive. We must provide engineering services and data to our customers for the application of our products. We must maintain our business practices on the same high level associated with the name Eimac for many years - we keep our promises - we are not "sharpies," nor do we want our marketing representatives to be correctly described as the suede—shoe crowd. Given these conditions, I firmly believe that we will meet and have the opportunity to exceed the sales growth objectives outlined in our Company policies. We will be assured of the vital repeat business on our "bread and butter" items. This describes one type of our Marketing program.

The second kind of program is more spectacular and is the sort of activity previously referred to by Hank Brown in his closing remarks. It also requires close cooperation between all Divisions of the Company to be successful. This type of program is the one that, when successful,

yields the large single orders for our products to be used in a system. To describe the workings of such a program I would like to trace the history of the 3KM50,000PA or X590 klystron amplifier assembly. Perhaps in doing this you will be able to see where some past effort on your part has contributed to our present position with this tube type.

The history of the X590 goes back some time. This tube covers the standard military communications band of 225 to 400 mcs. In about 1951 the Air Force, through RADC, awarded a development contract to Radio Receptor Company to build a transmitter using RCA's UHF tetrode and producing 10 KW output over the tuning range. Both companies failed to produce. A second dismal failure occurred using the same tube but with a different equipment manufacturer. This was in 1953, and two million Air Force R & D dollars had been spent. At about this time Don Preist met Dick Montgomery from Boeing at a technical conference and was asked whether or not we could produce a klystron to tune from 225 to 400 mcs.

By mid-1954, the Lab had decided this could be done and we bid on our first job - a complete transmitter for Naval Research Laboratories. Radio Engineering Labs in New York built the transmitter as a subcontractor to Eimac and we developed the tube. This first unit was installed in a trailer and delivered to NRL in Washington, D. C. and was used in the then highly classified first moon-bounce communications experiments. That experimental program has now resulted in separate orders for our klystron tubes to be used in the recently completed Navy moon-bounce communications system.

During this time we received a contract from Boeing for a prototype transmitter. Levinthal built this unit as our subcontractor and it has been used successfully for two years in providing missile guidance at Cape Canaveral, Florida.

In the early part of 1956, during a visit

to RADC, I learned that RCA was about to be awarded a multi-million dollar contract for the development and delivery of 12 ten-kilowatt transmitters using their own tube. We were able to get this procurement reduced to a single transmitter by offering to deliver one of our own experimental models for a fixed price of \$70,000.00. We were then each (that is, both Eimac and RCA) awarded a contract for the delivery of a transmitter. We were about 4 months delinquent on our delivery and RCA was 13 months delinquent, but they did manage to deliver a working unit capable of 10 KW output. Our unit produced 20 KW CW output. RADC was the important marketing site because their units were for the vast SAGE ground-to-air data-link guidance system; whereas the NRL and Boeing systems represented relatively small future business.

In early 1958 IT&T was awarded a contract by Boeing for the production of 114 transmitters using our X590 tube. This order was the direct outcome of our successful prototype delivery to Boeing.

In late 1958 we were aware in Marketing that the first large-scale procurement of 225 to 400 mcs transmitters for the SAGE system was about to be issued by the Rome Air Force Procurement Center. We also learned that this procurement was to be for about 50 dual units, with two operating sockets per unit. This kind of business meant open war between our klystron and RCA's tetrode. The battle lines were drawn tighter by the fact that this quantity represents about 1/6th of the total potential business. In mid-December, 1958, George Badger in R & E Marketing discussed the status of this procurement with Hugh Borning of Boeing, Seattle, by phone. It was immediately clear that we were in serious trouble on the SAGE program and that we were about to be out-marketed by RCA. It was clear that a joint marketing effort between Eimac and IT&T was required to combat the RCA campaign. Further, if we could get Boeing to participate in this pro-

gram as an independent user of the klystron unit, our position with the Air Force would be greatly improved. Within a matter of hours the Eimac marketing campaign was on the road in force.

Hap Bailey, by direct contact and using Bob Siff, his new Dayton Air Force representative, was finding out for us who in the Air Force was dedicated to the RCA approach, even though it was technically inferior to the klystron approach, and why.

George Badger, Bob Plummer and Rush Drake, our Seattle representative, visited Boeing on December 30, 1958 and secured their agreement to have a Boeing representative accompany us on a visit to critical Air Force installations. This meant that Boeing was giving their full endorsement to our product and, in addition, was willing to publicly state this to anyone interested.

RCA's sales campaign against the klystron approach was built around the following points, and these points were carefully noted and published in an RCA technical report:

1. The klystron was inherently more noisy than the tetrode.
2. The klystron was a worse offender than their tetrode in the matter of producing third-order intermodulation products when an interfering signal was able to get into the output circuit.
3. The klystron amplifier was a commercial unit produced by Eimac; whereas the tetrode transmitter was developed under an Air Force contract, was fully JANized, and had passed all of the Air Force environmental tests.

It is interesting to note on this point that, while our unit was kept busy in the field flying missiles, RCA was able to politic their unit through the environmental testing program.

With the assistance of the R & E Division, in the form of theoretical notes compiled by Don Preist, Marketing was able to assemble sufficient technical information to show that RCA was probably wrong on

points 1 and 2; that is, spurious noise output and intermodulation products. We publicly stated to the Air Force people that these errors probably existed and that we were conducting our own measurements program to determine the correct situation in comparing the two tube types. This statement gave us time between IT&T and Eimac to mount such a measurements program.

On the matter of other RCA claims and the Air Force position in choosing between the klystron and the tetrode, we were able to get a better picture of the situation by obtaining, through Bob Siff in Dayton, information as to the existence of a letter from the Air Force SAGE Headquarters at 220 Church Street to the Commander of RADC. This letter was dated 10 October 1958 and subject was the procurement of 10-kW amplifiers for the SAGE Time Division Data Link and Bomarc Guidance Systems. Reading certain excerpts of this letter will clearly show you the marketing problem facing Eimac at that time. Point number 1 stated that procurement and production of 10 KW amplifiers should be accelerated. Point number 2 stated that initial delivery of production units to sites must be made no later than February, 1960. Point number 3 is as follows, and this is verbatim:

It is the understanding of this office that Headquarters USAF has issued a procurement authorization for the purchase of 54 production units of the tetrode type 10 KW amplifier as developed by RCA on Contract AF 7359 and that the procurement action has not been performed pending results of comparison tests between the OA-715 type and the commercial klystron type built by Federal Corporation. It was stated at an earlier meeting of USAF Ground / Air Data Link Coordinating Committee meeting that electrically the tetrode and klystron types were equal but that the initial cost of the klystron type would be less than that

of the tetrode. However, the tetrode type has been manufactured to meet JAN specifications and the commercial type has not.

Point number 4 is as follows:

This office has been advised that specs for klystrons will not be ready until 1 November 1958, also that a dual-bidding procurement is proposed. It is felt that such a type of procurement will cause a further delay in placing a contract when it is considered that at least 12 months lead time will be required before production units can be produced and shipped. And in order to meet delivery date, paragraph 2 above, contract must be placed one year earlier at least. Add to this the administrative lead time for dual procurement and it is readily seen that the required delivery date, February, 1960, cannot be met.

Point number 5:

"This agency requests that the most expeditious procurement of the equipment involved be effected; a very urgent need for this equipment should be considered as a more controlling factor than any estimated potential savings of first cost in the klystron type. Delayed procurement will very seriously effect [sic] the entire Air Defense Program and could increase installation tests, etc., costs."

End of this letter.

The purpose of the above letter was obviously to force the Rome Air Force procurement people to cancel the bid requirement for the klystron and issue a sole-source procurement to RCA. We, of course, did not agree with this approach.

A Marketing team was formed, including Hap Bailey from Government Marketing, George Badger from R & E Marketing, and myself. We visited all of the important Air Force installations and persons connected with this procurement, either

technically or administratively, and told the story of the klystron versus the tetrode in much fairer terms than had ever been presented by our competition. On most of this trip, we were accompanied by a Boeing representative, who furnished testimony as to their results with the X590 tube. One area in which we scored over RCA was that our unit was capable of 20 kilowatts CW output; whereas, the RCA tube was barely capable of 10 kilowatts. Due to our pressure on this score and the desire in certain Air Force quarters, final equipment specifications came out requiring bids on both 10- and 20-kilowatt units.

A serious point confronting us was the fact that the RCA unit had been through the environmental tests program at Rome Air Development Center and was therefore considered to be JANized; whereas, the Eimac and Federal unit had not been through such a testing program. In order to meet this serious objection, both Eimac and Federal had to agree to JANize their equipment in a short period of time, should we be successful in obtaining the award. This promise was made as part of our proposal to Federal and was passed on to the Air Force.

During the latter part of January, 1959, IT&T conducted spurious-noise measurements on the klystron tube and proved the klystron to be superior to the tetrode in this respect. This knocked point number 1 out of RCA's sales campaign.

In the early part of February, 1959, Art Goldfinger from the R & E Division accompanied me on a visit to the South Truro Experimental SAGE Site using a Federal X590 transmitter. There we conducted a measurements program to determine performance of the klystron tube with regard to the production of third-order intermodulation products in the presence of an interfering signal in the output tank or transmission line. As a result of this measurements program we were able to again show that the klystron tube is superior to the tetrode in this respect and, ad-

ditionally, is less sensitive to tuning than the tetrode. This second technical point scored seriously against the RCA proposal and affords an excellent example of a situation where the Eimac technical personnel, whether from the R & E Division or from the Manufacturing Division, can significantly aid in an Eimac marketing program.

The procurement out of the Rome Air Force Center turned out to be for 56 dual units. Each unit required two operating tubes and two sets of hardware, plus two standby tubes mounted in complete sets of hardware as spares. From our point of view this meant a total of 224 klystron tubes, plus 224 sets of hardware. In February, 1959, we furnished our technical and cost proposal for this equipment to Federal and they, in turn, bid the entire job to Rome. The IT&T proposal was judged to be superior technically to the RCA proposal and, to further enhance our joint approach, IT&T was low bidder on the system. As a result of this joint effort and bidding process, IT&T was awarded the contract for 56 dual-unit transmitters. We have now received purchase orders from IT&T for 224 3KM50,000PA klystron tubes and 224 sets of H-126 hardware.

Now we are at a time in the program where we must take action to meet our earlier promises and commitments. In fact, these promises and commitments are embodied in the specifications attached to the IT&T purchase orders. During the course of a review meeting held this past week with members of Manufacturing, R & E and Marketing Divisions and subsequent conversations with IT&T and Air Force representatives, it is clear that we are now very close to having JANized the 3KM50,000PA and the H-126 hardware assembly. In the course of doing this we have improved both the quality of our products and certain Eimac procedures that will permit us to more easily do repeat business on hardware spare parts. The IT&T purchase orders on this program

amount to a total of \$3,292,000 to date. This does not count the excellent possibility of our getting the order for 112 water loads and 224 tube-handling cranes. Also, not counted is a pending order for 1,300 2-450A rectifier tubes to be made at Salt Lake. I think you can all see the potential benefits of these large systems-type orders.

To get these orders we must keep abreast of the technical state-of-the-art. We must also maintain a record of keeping our promises, particularly delivery promises.

The Marketing Division agrees that delivery schedules must be set with more care than that classic cartoon showing the Sales Manager sailing a dart over his shoulder at the calendar. However, once these schedules are agreed upon here at Eimac, they must be regarded as holy and we must all take follow-up action to see that they are met. We cannot take the attitude that the customer will continue to buy from us because he can't get the products any place else.

During the past year we have also been successful in several other large program-marketing campaigns.

One of these is the NATO Communications System in Europe. This is the largest tropo communications system constructed to date, and it uses only Eimac klystrons. The tubes used are our 3K3000LQ, 4KM50,000LQ and 4KM50,000LA. Purchase orders received to date total about \$1,300,000.00 and another \$350,000.00 is still to come. This NATO job was won for Eimac in the face of heavy competition from RCA and Varian, plus some European manufacturers. We can be justly proud that Eimac has an excellent reputation in Europe.

The European UHF television systems represent a good market for our klystrons. The competition is Varian in Palo Alto. Recently a group of Germans involved in the decision-making on this program visited both Varian and Eimac to see our products in operation. Thanks to a great effort by Dick Lazzarini, Hal Yokela and

George Badger, Eimac was able to demonstrate their product. Varian failed to demonstrate and showed miserably in the comparison. I believe that the outcome of this performance will be our receipt of the orders for these tubes amounting to about \$1,000,000.00 over the next couple of years.

More recently we have been involved in a donnybrook with Varian over tubes for the AN/FRC-39(V) program. This is a tremendous program for Eimac because this will be the Air Force standard tropo communications equipment. REL has now received the contracts for this equipment and will use only Eimac klystrons. Types included are our 4KM3000LR, 4KM50,000LQ, and a new 50- to 75-KW version of the LQ. Total potential Eimac tube business is estimated at \$3,700,000.00 over the next two years.

We have also been successful in negotiating systems contracts for other tube types, including reflex klystrons and negative-grid tubes. One of the indirect but significant benefits from these systems procurements are the large quantities of our products other than klystrons that are often employed in the systems. This includes water loads, rectifier tubes, 3KM50,000PA tube extractors, and often driver tubes of the 3CX100A5 or 4X150A types. All in all, systems sales represent good business and I hope this discussion gives you all a better view of the workings

of these programs.

For the future, our outlook is bright. The completion of R & D on certain products, such as the X626, now permits the Marketing Division to aggressively campaign for new business. The X757 klystron used in the FPS-30 is rapidly reaching this same state. Our potential markets for other new products, such as traveling-wave tubes, reflex tubes, and negative-grid tubes only awaits the availability of a successful product.

An added guide for Marketing as well as other Divisions is our Five-Year Market Forecast. This is now being compiled by Myron Pogue in Market Research and will be issued prior to vacations. This forecast will be broken down into product families so that we can easily spot the upward or downward trends in these individual families. A serious and consistent downward trend will signal the requirement for new products in order to maintain overall volume and company growth. We believe this type of forecast will be a very useful tool in all of our operations and planning.

An important part of our Marketing team is our Advertising and Public Relations Department. To outline our advertising and public-relations program, I would like to introduce Berk Baker - our Manager of Advertising and Public Relations. Thank you very much for your patience and attention.

MID-YEAR REVIEW

Berkley Baker

Advertising & Public Relations Department

It is a real pleasure to have this opportunity to tell you today about our advertising, sales promotion and public relations activities, not only because I like to discuss these activities, especially with a captive audience, but from notes I've received and conversations I've had with many of you I believe you are interested. And, of course, it indicates that these activities are acting to have added emphasis within the organization.

Also, it can be said that, in a sense, every one of us in this room is part of our advertising and public relations program. Each of us is in a management role and as such carry additional responsibility and have the opportunity to represent and boost Eimac to the public - whether that public be in the industry, community, or in the official Eimac family of the other employees not here today. If it is outside the company we may not know whether any one contact is the first the person we meet has had with our company. From that standpoint the policies, integrity and image of the company is reflected through us. That certainly is public relations through personal relations and a good thing for us to keep in mind. In addition, many of you have been contacted by members of the ad department to give us a hand in particular projects. It might be Lee Herbert or Bob Dilts, to see if we are in a secure patent position before publicizing a product; or with Bob Herdman, Wade Langley or Frank Corr to determine if production is such that we can plan on advertising a product; or with Don Preist, Ted Taylor or Rowland Haegele to find out what's coming up. It might be for trade-show display as the one we had at the IRE Show in New York this past March. That was the klystron-amplifier tuning demonstration, where we actually put a klystron on the air and let our cus-

tomers and competitors see that it was impossible to blow up. Dick Lazzarini and his group with special assistance from Joe Agius got that one going for us. And it is that effort that makes our displays just a little bit better. And, of course, we've all had the important responsibility of guiding tours. This activity will increase and we'll continue to ask your help.

Our primary function, however, is establishing and executing programs that enable Eimac to sell to a mass market. Fortunately, Eimac from its first months has believed in appealing to a mass market, and this, of course, means using the techniques of advertising. The first advertisement appeared in the November 1934 issue of *QST*, slanted toward the amateur-radio market. (See Illustration A.) (This photo montage is not readily reproducible, but shows the front covers of then-current issues of *CQ*, *Electronic News*, *Electrical Design News*, the *IRE Grid*, *Electronic Design*, *Wireless World*, *Electronic Industries*, *Electronics*, *QST*, *Canadian Electronic Engineering*, and the *RSGB Journal*. - Ed) Today, we continue our advertising in *QST* and the amateur radio market, but in addition we use eight publications in the amateur and engineering field in the United States, three in Canada and eight others throughout the world. The total circulation of these publications is over 300,000 monthly.

Future advertising plans call for increased advertising efforts to excel in our advertising just as we excel with our product. Our advertising will adopt features that will help us to dominate some of the publications in which we appear. It will also, in the face of expanding product lines, pay particular attention to individual product families so that none are neglected in our sales effort. An example of this individual product-line attention was our latest advertisement featuring internal-anode

tetrodes, those bread-and-butter tubes manufactured in Salt Lake City. (See Illustration B.) (This photo montage is not readily reproducible, but shows ads with titles like "Eimac Klystron Powers Venus Contact - 100-Times Farther Than Previous Record", "Eimac Pioneered Internal-Anode Tetrodes - Performance Leaders for Over A Decade," or "Rugged Pulse Klystron Designed by Eimac for Sperry." - Ed.)

In the fourth quarter of this year, these programs will gain momentum along with some new format and presentation approaches that will be new in electronics-

industry advertising.

Although we proudly acclaim ourselves as the world's largest manufacturer of transmitting tubes, our competition comes from some of the big names in American industry - companies such as RCA, General Electric and Westinghouse, for example. These corporations benefit by their advertising and sales programs in other products in the radio-electronics and other industrial and commercial fields. Our sales-promotional effort must do added duty in selling and establishing the product and corporation.

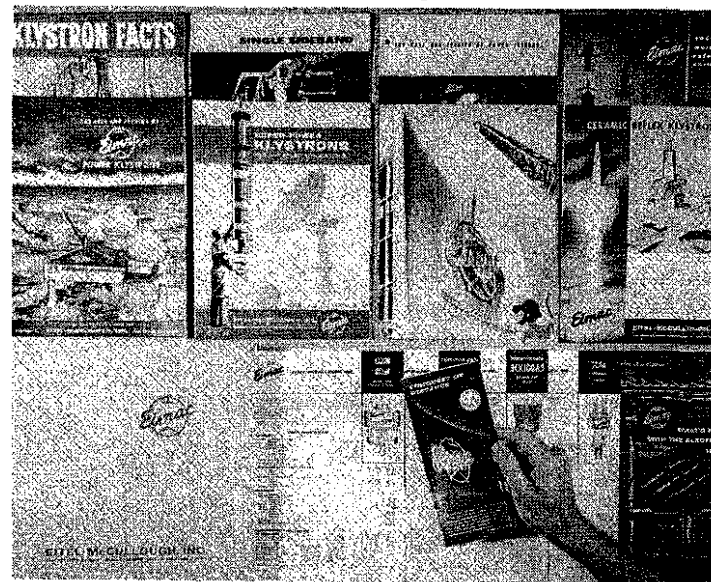


Illustration C - promotional material

Space advertising is just one facet of our promotion program. (See Illustration C.) We use direct mail to distribute Eimac data sheets, catalogs and sales-promotional material. Our mailing list of engineers holding an Eimac hard-cover catalog totals about 6200. We are now in the process of preparing a promotional mailing list which will total comprising 15,000 people in the industry interested in electron tubes. At the present time the department handles about 200 inquiries for information weekly.

Trade shows and conventions are another important Eimac promotional venture.

(See Illustration D.) In 1959 we will participate in eight such shows, ranging from amateur conventions to the National IRE show which attracted some 60,000 this year. Our displays will be viewed by some 150,000 people in our industry. These displays are accompanied by Marketing personnel who have an opportunity to make direct customer and potential-customer contact. Next month, in San Francisco, the country's second largest electronic show and convention, WESCON, will be held. Eimac, being in the host area, has added responsibilities and opportunities.

For instance, the vacation period this year was moved up a week to allow our plants to be in operation the week before WESCON so that many of our customers and prospects could visit our facilities while



Illustration D - Eimac klystron exhibit at IRE Show

installations and private industry. This year we have been invited by the Department of Commerce to exhibit at a special electronic-industry patent display in Washington, D. C., October 19 - November 13, and then four more weeks at Franklin Institute in Pennsylvania.

In the past Roy Micheli, Floyd Johnson, Lloyd Bielenberg, and many others have given me the friendly needle by saying "Why doesn't Eimac ever get its name in the papers like other companies do?" Well, lately we've been doing a lot more in this area. And it points out the added emphasis and importance of public relations in our company. Not that publicity is the lone measure of public relations, but we are becoming conscious of letting the technical industry, financial industry and community view the accomplishments we have made, our essential place in the industry, our productivity, progressiveness and our people.

A prime example of this was our San Carlos plant dedication and open-house in April, and attended by 5,000. During the week-long activities we greeted our employees and families, Security Analysts, IRE, Suppliers and WEMA. This occasion with technical demonstration was successful from every viewpoint and is an

on the West Coast. A few Eimac people are actively engaged in the planning and direction of WESCON in official capacities.

In addition, Eimac displays appear at the Utah State Fair, financial centers, military

indications of the high-level emphasis Eimac will put in its public relations program in the future. (See Illustration E.) *(This is a collection, not readily reproducible, of contemporary newspaper clippings with such titles as "Bay Firm Does It - Signal Bounced Off Moon Caught," "Eitel-McCullough Sees \$24 Million Sales," "Eimac Firm Shows Steady Growth Rate," and "Eitel-McCullough Dedicates New Plant." - Ed.)*

In closing, I want to mention the importance of the editorial pages in trade magazines as a place for informing our markets about the technological and product leadership of Eimac. These pages are available for technical articles written by you or others in your department, and it offers opportunity to get your name and the company name in the trade papers and be paid for it. Eimac has a liberal policy of remunerating authors for articles written and placed through the company's editorial committee and Advertising & PR Department. Each author is guaranteed \$150, or \$100 if co-authored. We can use and should place more of this non-proprietary material. Also, there is an opportunity for you to be more aggressive in preparing papers to be delivered at conventions and symposiums

This is all part of public relations!

MID-YEAR REVIEW MEETING

John S. McCullough

Fellow Eimacers!

As the Marketing people have just reported, we have a future for Eimac filled with opportunities. It is all of our jobs to make sure that Eimac is in a position to take advantage of these opportunities. It is the Research and Engineering Division's particular responsibility to make sure that our technical planning and our research and development programs place us in a position to launch the products that will be necessary. It is also our mission to provide engineering services to all parts of the company, to maintain and improve our engineering standards, and to assist in maintaining the competence to undertake the product work of the future.

Only by the improvement of our engineering standards in all phases of our work, that is, research, development engineering and engineering services, can we inspire the confidence in other parts of the company so necessary for the acceptance of our recommendations and suggestions at face value.

We have been continually reviewing the company's basic objectives to align our division's policies and objectives so that they win coordinate with and fit the company's overall plans. As an aid in interpreting the company's objectives for the Research and Engineering Division, we have recently begun work on establishing objectives for the Research and Engineering Division. To date we have in rough form approximately 10 objectives which point out in specific terms the areas in which we feel responsibility and for which the company is dependent on us. Some of the objectives are identical with the Basic Company Objectives and others represent interpretations of them. If one were to attempt to condense the 10 or so which we have evolved into a single objective, it might be said that of all the divisions of the company, the Research and Engineering Division has the greatest vested inter-

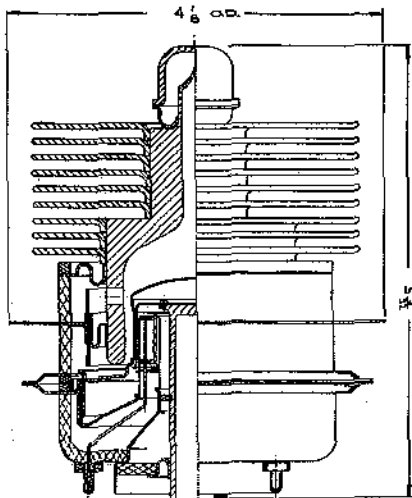
est in the company's product future. A logical conclusion from this statement might be that we are devotees of change. We recognize that in many instances, for practical and economical reasons, we must be restrained, but we feel that primary restraint must be furnished by others. We wish to be enthusiastic, forward looking and to indicate to the company where we see greater opportunities for the future in the company's product field.

We have not just recently begun a program of diversified product development. As you know, at the present time we are conducting development work in the fields of negative-grid tubes, reliable receiving tubes, high-power klystron amplifiers, microwave reflex klystron oscillators, traveling-wave tube amplifiers, and an extremely important area for Eimac's future about which little can be said because of stringent security rulings. This is our Special Projects Development Group working under contracts from the Atomic Energy Commission.

An important adjunct to the Research and Engineering Division and one which in fact is a company-wide activity is that of our Patent Department. Our primary objective in this field is well described in Basic Company Objective Number 19, and it can be seen from that objective that our patent program serves as a protection to our work in research and development and additionally as an incentive to do more and better research and development work.

We might briefly mention some of the programs of greatest interest in each of the fields mentioned previously. In the negative-grid-tube field, we have recently increased our level of activity and, as a result, are now working on the development of a 10-kW triode which we hope will find broad application in the industrial field. We have completed the design and are about to propose to the company a development pro-

gram for a rather complex 1-kW tetrode of radically new design. In the slide shown of this proposed tube, it can be seen that in addition to including all of our recent technological improvements, that is, complete ceramic-metal envelope, ruggedized electrode structures, and so forth, we are proposing that some troublesome circuit elements such as bypass capacitors be included within the tube structure itself. Special treatment is also given to the geometry of the electrodes. In addition, this group has been engaged in perfecting and bringing up-to-date some of our past development work.



X715 1-kW UHF tetrode

In the receiving-type tube field, after an extremely long research and development program, complicated by an exploratory look into the field of automatic production machinery, we are finally bringing into the product line, late this year or early next year, the first Eimac receiving type tube. The ultimate solution of extremely difficult technical problems involving subtle compromise between desired electrical and mechanical characteristics and including the concept of producibility has caused a great deal of the delay to the present time. We believe that these problems are now satisfactorily solved and that we will be able to contribute something new to the Eimac product line.

In perhaps our most active growth development field, that of power klystron amplifiers, a great deal has already been said. The emergence of this family of tubes and its nearly universal acceptance has contributed greatly to the growth of the company in the past five years. Work is continuing here and our outlook for the future is expanding rather than contracting. We have in development at the present time, and are able to report initial success on, a radar klystron which it is hoped will be used to retrofit the entire DEW Line radar. The transatlantic communications requirements of our Defense Department have resulted in development work for a 75-kW klystron amplifier which will be the pioneering effort in broadband, high quality transatlantic communications.

In entering the new field (new for us) of traveling-wave tubes, we have evolved designs on two tube types which are basically different in concept from anything presently in development in other companies or available on the market. These tubes have been specifically designed for countermeasures application but have excellent prospects in the future for an entire family of traveling wave tubes for communications and industrial applications based on these concepts.

Our Salt Lake Microwave Laboratory has been an engineering success. The designs which we have evolved there have found good acceptance among potential customers and our present problems, which are not to be slighted, are those of making these tubes in large quantities and in an economical manner. Applications here range from carrier microwave communications to the more sophisticated advanced missile-guidance systems. In addition, we are working on the development of a new device, the Voltage Tunable Magnetron. This is a very-broad-band oscillator for similar applications. It should be mentioned that this work is being done in connection with Hewlett-Packard Company and that the information that we are working on such a device is considered company-confidential

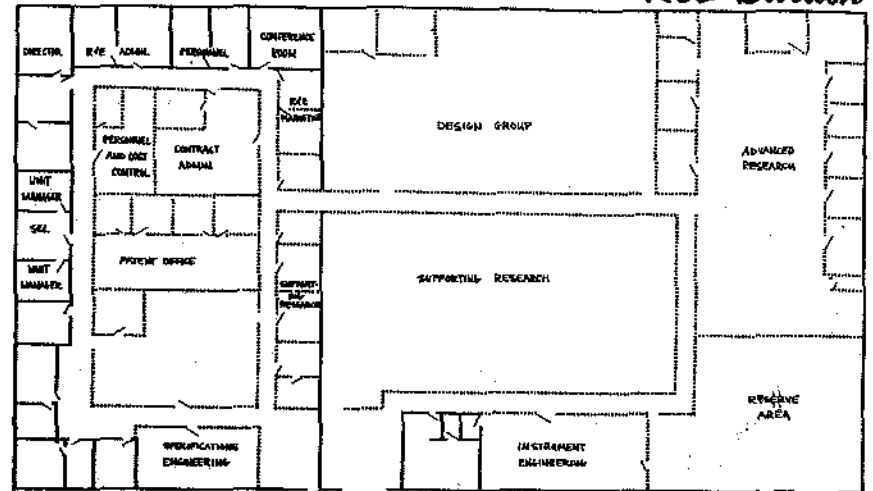
and should not be widely discussed.

In connection with our areas of greatest secrecy, that is, work in the Special Projects Development Group under Atomic Energy Commission subcontracts, there is little specific that can be said. Our present

customer has an interest in seeing production of small quantities evolve from our development efforts. However, in my opinion, as time passes and the security classification is gradually reduced, I feel that the work here will form the foundation

EITEL-McCULLOUGH, INC.

Belmont Building R&E Division



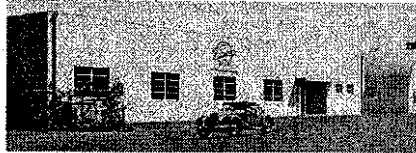
New R & E Lab building in Belmont

to launch Eimac into an entirely new product area but one in which all of the existing Eimac skills and technology can be exploited to the utmost. It is of interest to note that in this area, because of security classification and certain technical difficulties, this group has integrated their operation somewhat more than has been our policy in other groups. This has resulted in a more self-contained type of operation which has given us a better reaction capability to program changes and, I believe, a greater efficiency in doing research and development work. In the future it will be our plan to attempt to more closely integrate our development groups and to encourage a closer working relationship with the Manufacturing product-line counterpart.

From the variety of things that are going on in development, it is our conclusion that we do have essential strength in diver-

sification. Development is at best an uncertain business and diversification is a prime requirement to insure a continuity in the foundation for growth to which Eimac is committed. Development by diversification is based upon the exploitation of existing knowledge. We find in the scientific environment of today a tremendous growth being made in our field, both here at Eimac and by the colleges and universities and that we are experiencing a constantly increasing scientific and technical complexity in the products of the future. In this regard it is necessary for us to prepare ourselves to anticipate and deal with this complexity. For this reason we have recently decided to enlarge our research activities by the addition of a new research group. They will be known as the Supporting Research Group and will undertake to develop new, detailed, technical know-

ledge in areas of interest to Eimac and to provide our development and design engineers with suitable information to enable them to design our future products. This group will be an extremely busy and important one in the years ahead. More and more, our development people will look to them for the basic and fundamental information upon which our development work is based. To me, this is the most important addition to the Research and Engineering organization that we could make at this time.



R & E building in Belmont

In talking about our organization, as you are all aware, in October of 1958 we experienced what is now known as "Operation Earthquake" with the establishment of all engineering having to do with Eimac product lines in a single division. I believe that the people engaged in carrying out the new responsibility given them by the company have done an excellent job under difficult conditions. The situation in which we found ourselves last Fall was, from an engineering standpoint, not a pleasant one. The men in Engineering Services, working with the Marketing and Manufacturing Divisions, have given invaluable help in assisting them, bringing ourselves to the improved situation in which we find ourselves today. Great credit is due to many of the individuals here who have assisted in many of the vital tasks undertaken. We have received several memos attesting to the performance of individuals who have participated in this work and there has been, in addition, a great deal of work done which has not been singled out but which has contributed in as great a measure to this improvement.

In Development Engineering we have had accomplishments, too. Our Klystron Development Group has completed the

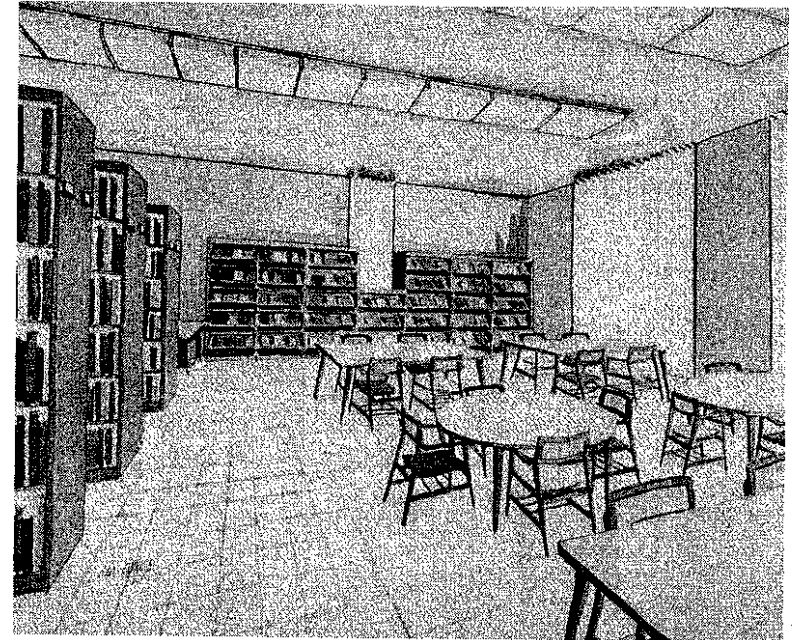
development of an extremely difficult tube type, the X626 super-power klystron for ballistic missile early warning system application. Our Special Projects Development Group has completed deliveries of items to our customers in such fashion as to encourage an expansion of the program and a move into limited production. The greatest tangible evidence of the progress is the move into new quarters in the Main Factory Building in San Bruno. Relative to this, I would like to point out that the Research and Engineering Division depends upon all other parts of the company for vital services in carrying out its responsibilities. At this point we would like to commend those people who make it possible to accomplish this particular move in a short time and in such excellent fashion. With reference to this, I would like to read you a copy of a memo from Warren Struven.

"It has been one week now since we locked the door and moved into the new Atomic Energy Commission area. An attempt was made to show our area to all uncleared people prior to that time and we have continued to show our facility to cleared people since that date. In every instance the people who remember the area as it was find it hard to believe that this is really the "old glass department." We have received nothing but praise for the improvement from Sandia and AEC personnel also, and I feel that you and your department should know this since your people were largely responsible for our area's successful completion. A special vote of thanks should go to Stu Ruggles for his cooperation and enthusiasm in coordinating the overall building program. I would also like to thank each and every person in Equipment Manufacturing for their part, be it large or small, in completing Building 2. It is a real pleasure to work in such an area."

As is true throughout the company, it has been our experience in this period, of

growth that our plant facilities have not been able to keep up with our requirements and we have found it necessary to carry on under cramped and undesirable conditions. Some relief is in sight with the prospect of a move of part of the Research and Engineering Division to new head-

quarters located on Harbor Boulevard in Belmont, approximately 1/2 mile from the San Carlos Plant. This building, comprising some 26,500 square feet of an essentially bare industrial plant, has been leased by the company for a 3-year period. Additionally, the company is investing some



Belmont research library

\$150,000 in equipping it for our use. The activities which will be located in this facility consist broadly of our existing Advanced Research Facility, under the direction of Oskar Heil, the new Supporting Research Group previously referred to, Corb Wesenberg's Design Group, Arnold Sholes' Instrument Standards Group, our Specifications Engineering Department, and the necessary supporting services. An important function of this new location will be as headquarters for the company's Technical Library, under the direction of Stella Vetter. Provision will also be made for accommodating our friends from R & E Marketing and the Research and Engineering personnel specialists from the Personnel Division. We will begin our move

shortly after vacation and will have completed it by the end of September.

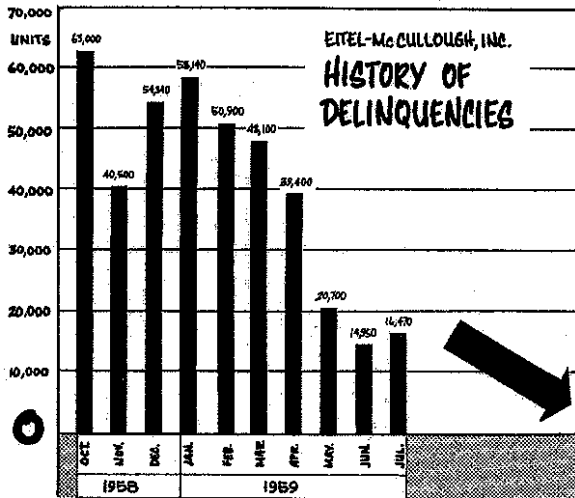
In conclusion I would like to refer back to Hank Brown's remarks concerning the challenge to the company for the remainder of this year and the opportunity for growth in the years to come. Certainly from the standpoint of the current year remaining Engineering Services will be fully occupied in assisting Manufacturing and Marketing in their respective jobs and in the future years Development Engineering will be working toward providing those products which will assist in establishing a portion of the growth indicated. All of the personnel of the Research and Engineering Division pledge themselves to do their utmost in achieving a full realization of these plans.

MID-YEAR REVIEW

Fran Migge
Manufacturing Division

I believe that this is the first time that so many key Eimac management personnel have been together at one time. Welcome to all of you.

Let's start out by seeing where the Manufacturing Division has been for the last six to nine months and where we are headed for in the next six to nine months. This first slide shows our history of customer delinquencies starting with October 1958 and continuing thru June of 1959. These are tubes promised to customers that we did



not deliver.

You are probably saying to yourself "Why the hell does this guy want to drag this dead horse around," but this chart does illustrate an interesting picture and allows us to make some comparisons with our present position. The first part of the chart, which portrays our performance in the last quarter of 1958, could be used as a horrible example of how not to run a business.

Most of you will recall how delinquency piled on top of delinquency, commitments were not met, services went to pot, and it seemed like there wasn't a damn thing we could do right. Our Company Objectives

No. 2 & No. 8, which, summarized, say, "Eimac never lets a customer down," "Customers shall have confidence in our products," sure took a hell of a beating during this period,

November of 1958 shows a dip. This was not a recovery. This cost Eimac some real dollars, for, in this period, we had to re-schedule orders and pay a penalty for non-delivery. We had to swallow another bitter pill, buy some tubes from a competitor - Amperex.

Again, at the end of this chart, it looks like we are slipping.

Let me cite a few examples of what can create this problem.

Equipment breakdown, which created this one, but it could have been lack of material planning, lack of communications between divisions, etc.

The fact that these problems can happen, each individual, irrespective of what division he is in, must be aware how his individual actions affect the total

company results.

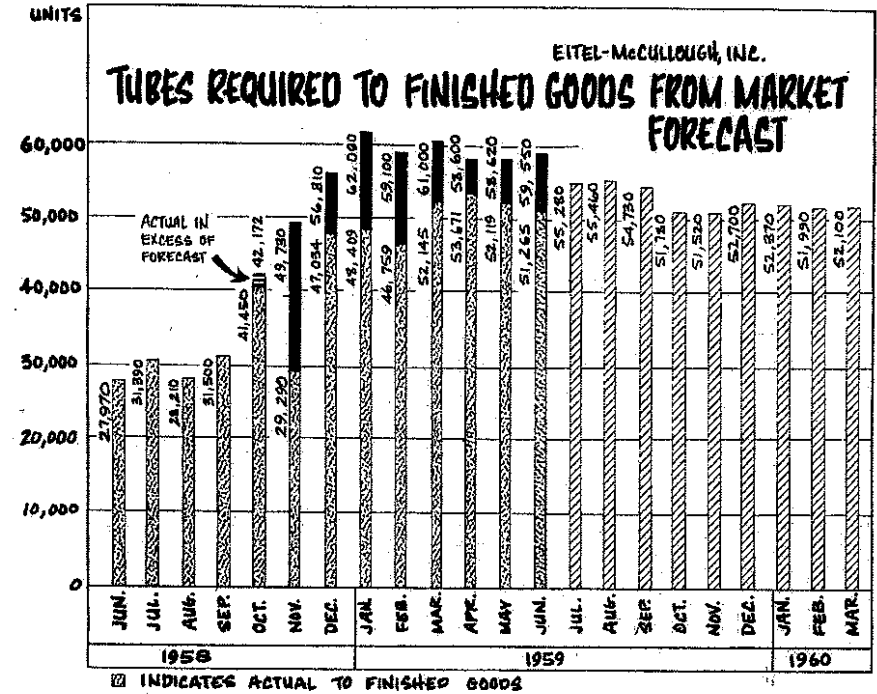
Of course, the move to San Carlos had its effect, but, if we would go back to other periods in the history of Eimac, we would find almost identical situations.

In spite of this one rise we see a definite improvement in the overall situation. This is not an accident. This is the result of planning.

How did we discover this magic key? We didn't just find one magic key but a lot of magic keys that all fit the same door. One of these was the establishing of a firm forecast for the company's future. This enabled us to sit down and, for the first

time, plan a budget for our equipment and personnel requirements. With this show

on the road we could do some intelligent production scheduling and planning.



So now we see a trend in the direction we all want to go, a customer delinquency of Z-e-c-e-ro. That big fat arrow on the end was not put there to be facetious, this is where we must be, and damn soon.

Now, if you think I have been giving you a snow job, let's move to the next slide, which shows the number of tubes required to finished goods from the Marketing forecast. As you will see, it starts in June of 1958, B. F. (Before Forecasting), that is, before forecasting such as we know it today. For the period from June thru September we show our actual units to finished goods. October thru June shows the actual units to finished goods compared to forecasted requirements. The period July thru March of 1960 indicates the future requirements.

You are probably concerned about the apparent peak during the first half of 1959 and what looks like a decline in the following nine months.

This peak is the result of an effort to recover from the customer delinquencies as was shown on the previous chart. It was an all-out six-to-seven-day operation.

The total monthly levels in the period of July 1959 to March 1960 are lower. However, the daily production rate is higher. This is a basic five-day week as compared to six and seven before. (Please don't leave this meeting and tell your people there will be no more overtime. There is still a lot of effort required to meet our goals.)

The product mix is dramatically different in this period. These units from July 1959 to March 1960 represent a sales volume of approximately \$3,000,000 per month compared to approximately \$1,800,000 in these peak months.

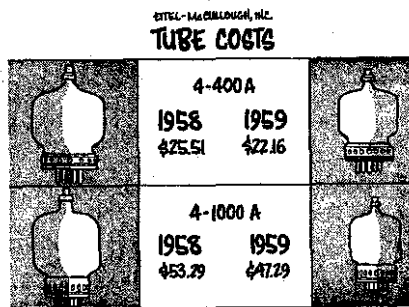
Now if we go on and draw a comparison between June of 1959 and March of 1960 you will understand why the extensive personnel hiring, facilities, and equipment

expansion must continue. Scares you a little, doesn't it, but here is when we are headed. With 2% inspiration, 98% perspiration, a little luck, and Ed McClaran's bottomless money bag we can do it.

We have not met all of our objectives, although the results are better than ever in the history of the company.

In spite of this we are not out of the woods. Our costs, like death and taxes, are inevitable, but unlike death and taxes they do not have to be so damn high. Let's face a few of the facts. We are caught in an ever-increasing spiral of higher raw-material costs and labor rates over which we have little or no control. We must cut our production costs if we are to remain in competition with people with new devices, and people in our own industry like RCA, Amperex, Machlett, Varian, Hughes Products - Hmmm! Hughes Products, that name seems vaguely familiar, must have heard it someplace.

I would like to show you a few favorable examples of cost reduction (slides, tube costs, two from each plant).



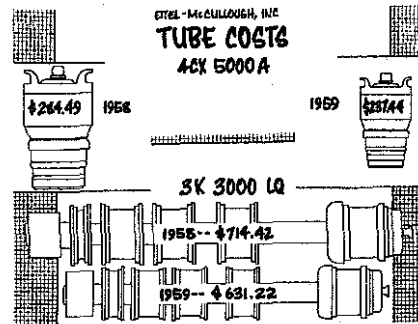
Cost reductions like this don't just happen. They require the concerted effort and cooperation, of all divisions of Eimac.

1. The R&E Division for sending people into our plant to help improve our yield.
2. The contribution of Marketing in giving us good volume for economical lots.
3. Scorekeeping by the Finance Division in keeping us aware of our costs.
4. The hiring of capable people by Personnel.

Now let's focus on what the Manufacturing Division has done; this is only the be-

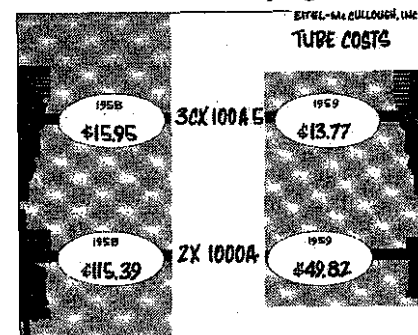
ginning.

The quality-assurance function, which monitors and reports the level of quality based on strict standards, has been a wide-awake watchdog during these past hectic months.



Many new and better methods of reporting quality have been established which are tools of reducing costs.

The working relationship between quality assurance and the government inspectors has continued at a very high level.



The almost impossible task performed by the Equipment Design and Manufacturing unit by designing, constructing, installing and maintaining the equipment required to meet the continually recurring deadlines created by the tremendous production goals established during the year.

Just to cite one example, take a good look at our three locations. (Vacations)

Accomplishments of this magnitude do not get done by shouting and arm-waving.

The very progressive safety and security program which our Safety and Security unit is performing in keeping our employees on

the job has continually received national recognition.

I think we are all aware that absenteeism is very costly to any company.

Procurement by its continuous effort to have the right material at the right price, at the right place, and at the right time, has made its contribution to cost reduction.

The Manufacturing and Industrial Engineers have contributed to the reduction of product manufacturing costs.

Standardized and improved inspection criteria have been prepared and are being used by the inspection departments, in addition, new and re-calibrated gages have made it easier for the inspectors to get more uniform and more accurate results.

In conjunction with production supervision, significant savings through methods and tooling improvements have been made.

The control grid and screen grid production lines are prime examples.

Furnace programming has noticeably increased the yield of brazed assemblies at the Salt Lake City Plant.

Production standardizing and control through more accurate, complete and current procedure books has assisted in the training and day-to-day performance of the work of new employees.

Particularly noticeable is the area of packaging. An example is the introduc-

tion of pre-cut kim-pac sheet and elimination of some precautionary marking and pre-printing on some cartons.

Work-sampling techniques which have already shown savings. Better utilization of the machines in the Punch Press Department is one very good example.

In addition to the service units mentioned, there are other division staff functions established, which contribute to the overall effort toward cost reduction. One of these is to guide and coordinate facilities for the company; a second, a function for monitoring all equipment installed in the manufacturing areas consistent with damn good manufacturing practices; and a third to compile and coordinate the manufacturing budget, as well as many other administrative activities.

Now let's take a look at the people who make these bloody tubes. We have three plant managers - their staff and their line organization.

When we start talking costs, the effort put forth by these people, incorporating the tools provided by the service units of Eimac, has produced the greatly improved results we have seen in this last six months.

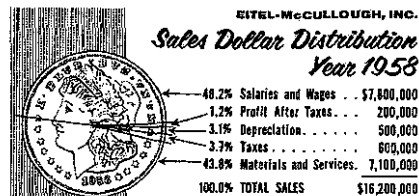
Functions and people such as these I have mentioned are the blood and guts of this company or any other good company. Together we have arrived at our present position.

FINANCIAL ASPECTS OF SALES GROWTH

E. E. McClaran

Vice President-Finance

It frequently has been said that a business never remains static; that it either forges ahead or drops backward. Certainly this applies to one in the electronic industry, a young, dynamic industry that has had such tremendous growth since World War II. In the last ten years the electronic manufacturing industry has grown from a sales volume of \$1.8 billion to approximately \$8 billion. During this same period Eimac sales increased from \$2 million in 1949 to over \$16 million in 1958, and Hank and Fred have told you what anticipated sales volume is planned for the current year, 1959, and the succeeding several years.



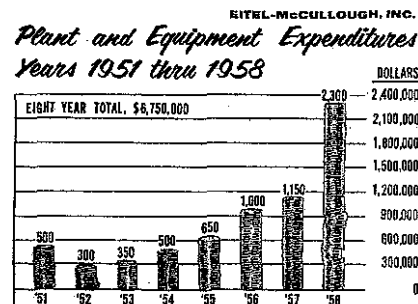
Slide 1

To achieve sales growth requires dollars; dollars for new plant and equipment, dollars for working capital, and dollars to pay salaries and wages. Let's take a look at this slide showing the breakdown of the 1958 sales dollar (Slide 1). Note that almost ½ of each sales dollar was expended for salaries and wages, exclusive of fringe-benefit costs. The remaining half of the dollar was spent for material and services, taxes, depreciation; and in 1958 there was very little remaining as profit.

Let me comment for a moment on the dollar amount of plant and equipment that has been purchased over the past eight years by Eimac to provide the Research & Engineering Division with space and equipment to carry on its development program and engineering services; to the Manufacturing Division the facilities for improving and expanding its production capacity to meet the increased sales vol-

ume; and to the Marketing Division, Finance and Accounts Division, Personnel Division and Administration, the space and equipment required for their enlarged operations. Note particularly the dollar amount of additions made in 1958 (Slide 2).

In addition to the items of plant and equipment capitalized and shown in the summary, considerable amounts have been spent for plant rearrangement which have not been included in the summary, but charged off to expense in the year in which the work was done.

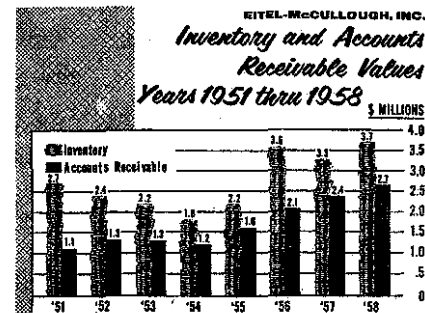


Slide 2

To handle the increased volume of operations requires additional working capital. By working capital I mean the cash funds or their equivalent as represented by inventories and accounts receivable. For example, we find that, on the average, it takes about 45 days from the time we ship and invoice an order of tubes to a customer until we receive cash in payment of that invoice. Obviously, the larger the volume of sales, the more dollars we have in outstanding accounts receivable. In the case of inventory planning, the level of inventories maintained is roughly equivalent to that needed for three months' sales. To show what this amounts to in dollars, let's take a look at this slide which shows the amount of accounts receivable and inventories which the company had at the end of each of the past eight years (Slide 3).

At the end of 1951 it was \$3,800,000; at the end of the year 1958 the sum was

\$6,400,000. This is an increase of \$2,600,000 that had to be provided to carry the larger receivables and inventories.



Slide 3

In addition to the need for working capital brought about by increased sales volume, funds must be provided with which to purchase the plant and equipment which I spoke about earlier.

Let's consider the sources of cash funds which may be available to a business organization. Please note, I said *may* be available - all of the sources are not always available, and even when they are, there are limits as to the amounts.

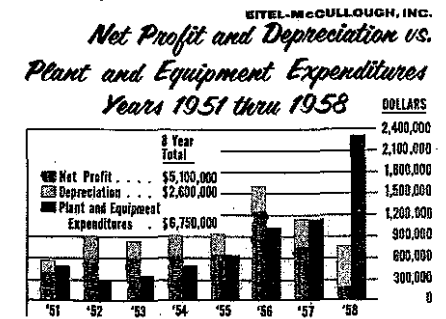
First, there are the funds put up by the founders at the time the business is started. In the case of Eimac, this was the large amount of \$5,000.

Second, assuming the business prospers, there are the profits or earnings which may be reinvested. Of course, if the earnings are reinvested, then they no longer are available for distribution to the owners. In the case of a corporation, the shareholders are the owners, and there would be no cash dividends. Thus, we find many companies going on year-after-year not paying out cash dividends even through they are making a profit, because this profit is being reinvested in the business to finance in whole or in part its growth in sales volume.

Third, there is the money made available by charges made against profit and loss which do not require cash expenditure in the same period. Let me re-state this and simply say that with Eimac it's essentially the cash, equivalent in amount to the de-

preciation charged off in the books (since this is the main bookkeeping charge which falls within this category).

Let's pause for a moment to compare the amount of cash expended in the purchase of plant and equipment with the amount of funds made available by the second and third items; that is, profits and depreciation (Slide 4).



Slide 4

I believe the significance of this chart is quite apparent - capital expenditures over the past a years amount to almost as much as depreciation charges and net profits combined. Historically up through 1957, Eimac has been able to finance its growth by the reinvestment of its profits in the business (and temporary loans), as shown by the chart. Of course, this meant that little of the profits were available for distribution to its stockholders by the way of cash dividends. In fact, Eimac has paid no cash dividends since 1955. As shown in the chart, capital expenditures were particularly heavy in the year 1958 to provide the production facilities needed to meet the sales forecast that Hank Brown spoke of.

With the current year's budget for capital expenditures of over \$2-½ million, it's obvious that we will have to turn to sources of funds other than profits to finance the accelerated sales growth we are currently experiencing. While it is the desire of the Company to provide the facilities and equipment essential to achieve the sales goals that have been indicated earlier, I would like to impress upon you the necessity for careful review and consideration

by each of you of your capital equipment requests. If some of the requested items are deferred or turned down, please remember we don't have a bottomless cash barrel!

Fourth, cash funds may be obtained from borrowing. Under this category are short-term loans which require repayment within a matter of months, and long-term loans which may be paid back over a period of years. Our open line of credit with the bank is an example of short-term loans. The mortgage loan we arranged with the insurance company to finance, in part, the San Carlos plant is an example of long-term borrowing. It is similar to the mortgage one may have on his home which requires repayment over a period of years in monthly installments. These are the two sources of outside funds Eimac has used in financing its growth up to the present time. There are other forms of long-term debt such as bonds, subordinated convertible debentures, etc. They have one thing in common: like all borrowings, they require repayment and interest.

Fifth, another source of cash is the sale of additional shares of stock. This, of course, brings about a dilution of ownership to the shares that are already outstanding. For example, if you own 100,000 shares out of a total of 1,000,000 shares outstanding, your holdings amount to 10% of the total. Now, if the corporation sells an additional 100,000 shares to new stockholders, then your holdings of 100,000 would be 1/11th or approximately 9% of the new amount of 1,100,000 shares outstanding.

In connection with both sale of new shares and borrowings, the achievement of a satisfactory earnings record is extremely important. Just recently I received a brochure issued by one of the larger brokerage and investment houses, and it contained a paragraph on the subject of profits that I'd like to quote:

"Profits are, of course, the ultimate measure of a company's success. The most successful companies are those that are able to maintain profits at a

consistently high percentage of sales and net worth while growing at an adequate rate. Profit as a percentage of sales on military business may frequently be lower than on industrial and commercial business, although returns on investment still may be very satisfactory. Profit margins may be sacrificed for a short time while abnormally large expenditures are made on research and development; however, if margins cannot then be increased, doubt would be cast on the effectiveness of the company's management or research program. Stockholders are naturally interested in per-share earnings figures. The company that increases the dollar amount of net earnings without increasing per share figures is not benefiting its shareholders, and its method of financing expansion should be critically examined. In the industry's vigorous stage of growth, nearly all participants operate profitably. Generally speaking, those companies with consistently high profit margins will prove to be the most able to compete under all conditions."

There you have the investment broker's attitude on profits and, since these are the people we deal with when going to the market for additional funds, the statement should be very carefully considered.

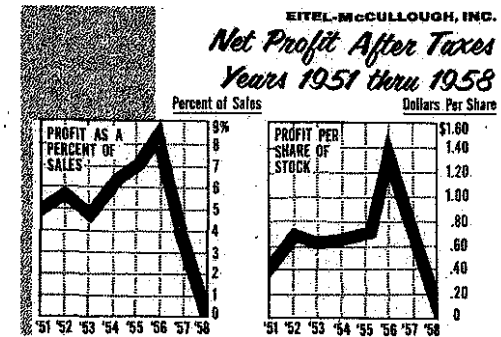
Now - what about operations for 1959? The original budget for the year planned for sales amounting to \$27 million, of which \$15 million were planned for the first six months. Actual sales for the first half of the year amounted to \$12 million, so we were about 20% under the budget.

Profit for the first half is not as yet available, although the Finance & Accounts Division has been working overtime to button up the books for this period. Preliminary estimates indicate the margin has improved very materially over that of the preceding year, as previously noted by Gould. In speaking of profits, however, I think it is important to point out that profit

margin has varied considerably in the past. Let's take a look at the chart showing the profit picture over the past eight years (Slide 5). As indicated, profit margin has been somewhat erratic.

I had hoped to say a few words on budgeting, but these will have to be deferred to

some time in the future. Let me conclude my report, therefore, with the statement that by use of budgeting practices - plans of action expressed in numbers and dollars - we feel confident that more effective and adequate planning can be accomplished and a more stable profit margin achieved.



Slide 5

MID-YEAR REVIEW

Hai Hoffman

Personnel Director

Thank you, Gould, and good afternoon, ladies and gentlemen. First of all, I want to thank those of you I have met and worked with so far, for your kindness and courtesy in helping me get acquainted with Eimac. To me, it has been a convincing and heartwarming demonstration of the famous Eimac spirit and hospitality that I heard so much about even before joining the company.

And so, I'm glad to be here with you and I'm proud to be the personnel director of a fine company like Eimac. I promise you that I and my staff will do our utmost to provide you, the managers of this company, with the best possible personnel services and advice, in order to help you in your most important job of managing the employees of this company; and that we will do everything we can to help you maintain Eimac's outstanding employee-relations record.

Now I would like to explain what mean when I say that Eimac has had an outstanding employee relations record. And I want to do this, because I know from experience, that it is difficult for line managers in any company to keep in mind the overall employee-relations picture in face of the day-in and day-out problems and gripes that are bound to arise in any working group. And yet it is of vital importance to the success of any company that its managers and supervisors feel good about their company, and that they pass this feeling on to the employees in their unit. I have seen situations in other companies where the opposite is true, and where line managers and supervisors have in fact sided with their employees *against the company*, and believe me, the resulting losses in morale and effectiveness were sad to behold. I know this is not the case at Eimac, but I have seen elsewhere how easy it is for managers to unconsciously reflect a negative attitude toward their company, completely forget-

ting that they, as managers, *are* the company in the eyes of their employees so I urge each of you to stay alert to your very important responsibility of keeping your people reminded of the many real advantages of working at Eimac. And we in Personnel will help you do so by giving you the information you need to do this crucial job, in fact, the whole purpose of this meeting is to give you the facts you need to stimulate the enthusiasm of your people for the opportunities that lie ahead.

Now before you accuse me of being naive or trying to give you a "snow-job" up here today, let me say that I know we have some personnel problems too. I intend to discuss these problems very specifically and very openly in just a few minutes from now; so hang on to your seats.

First, however, let's look at the positive side of the picture and let me tell you why I feel so good about Eimac's employee-relations outlook.

First Eimac's owners and top management are "people-conscious," and I can cite good evidence of this, as follows:

Their emphasis on good human relations in the statement of the basic objectives of the company. And I can assure you that they take these objectives seriously.

Their keen awareness of personnel problems. In most companies I have worked for, the personnel director has to work hard to get management attention to these problems; here at Eimac, it's the other way around. Jack, Bill and Gould often are on top of a personnel problem before the personnel department hears about it. Needless to say, I hope to reverse *that* sequence.

Their instructions to me on the type of personnel program they want for Eimac, what they want, I'm happy to tell you, is a top-notch personnel program

and they want it just as fast as sound, practical programs can be developed.

Their demonstrated willingness to turn a goodly share of profits back to the employees in the form of constant improvements in rates of pay, working conditions, stock options, production bonuses, and other direct and fringe benefits.

And last but not least, their great personal concern whenever a long-time Eimac'er leaves the company.

And Fran knows damned well where he heard about Hughes, because he caught as much hell as the rest of us from Jack and Bill for not telling those people about the opportunities at Eimac.

And so - it is abundantly clear that the welfare of their employees is of utmost importance to the top management of this company, and this concern on their part does a lot to explain Eimac's excellent employee-relations record.

Another factor which contributes significantly to Eimac's favorable employee-relations picture is *the company's initiative and ambition*. There is no need for me to recite the considerable evidence that such initiative and ambition exists in ample amounts at Eimac. But what does this ability and willingness to get and keep leadership in the industry mean to our people? It means at least two very important things: *Job security and opportunity for growth*. People like to work for a company that's going places and that's us!

And here is another very important reason for our good employee relations. *The company is internally controlled*. By that I mean we run our own show and the future is in our own hands. For example, our employees have not found it necessary or desirable to ask outsiders, and I mean a union, to come in and represent them to management. So we don't have a bunch of business agents telling us what we must do or how to run our business. Nor are we a part of some monstrous organization like Lockheed or Hughes with management

control in the hands of some far-off ivory-tower group who know little or nothing about their employees. Nor are we subject to the wildly fluctuating employment requirements of companies like that. What's more, we're nobody's stepchild or financial football, to be kicked around at some financier's whim. Now all these things are important to our employees, ladies and gentlemen, and if you don't believe *me*, ask *them*.

Another good example of what mean is our demonstrated ability to attract and hold good people.

As you will see later in my talk, Eimac has been able to hire at will, large numbers of competent production, clerical, and technical personnel, despite an extremely tight labor market for good people. For example, we recently ran some ads for male production workers at San Bruno and were nearly swamped with applicants - and over 100 of those applicants were hired in the past few weeks, thanks to Bob Ferguson's good work and the excellent cooperation of Frank Corr and his department heads. So people *want* to work at Eimac and this speaks very well for our employee-relations reputation in the community.

Moreover, Eimac's turnover rate is much lower than the national average, and considerably lower than most companies in this area.

And while I have not studied comparative figures on this point, I feel certain that Eimac's average length of service per employee is far greater than most other companies in the industry. For example, the average length of service of the people in this room is *more than eight years*. And since this group includes every management job in the company, from department head up, whoever said "newcomers get all the breaks at Eimac" must have holes in his head.

And, finally, as if more proof were needed, let me point to the truly remarkable performance of our people during the past year. When you ask people to work miracles and they do - there can be no doubt about the quality of your employee relations.

With that kind of spirit and know-how in the employees of this company, I am very certain, that nothing can keep us from meeting or exceeding the challenging goals outlined here today.

Now I promised you earlier that I was going to talk specifically about our personnel problems, and I am, actually, I'm glad that we have a few such problems to talk about, because if companies had no personnel problems, there would be no need for personnel specialists, and I'd have to go to work for Fran Migge or live off my phony golf handicap, or something. In fact, the personnel problems we have here at Eimac, while rightfully a matter of concern to all of us, are not at all unusual and the solutions to them would pretty well describe a progressive personnel program such as we're developing at Eimac. And let me say too, that my mention of these problems today does not mean that I am convinced that all these problems really do exist to any serious extent. I do know, however, that some of our employees *think* they exist, so it is up to us to take speedy and positive steps to convince our employees, either by corrective action or better communications, that Eimac's management will not tolerate unfair personnel practices.

Now, let's look at these little monsters one-by-one, and at some of our plans for killing them off.

One of the first squeaks we plan to silence is the so-called "buddy system" of selecting employees for promotion. *If* this has been going on at Eimac it is unfortunate but not surprising. It is quite natural for supervisors to want to promote the people they know most about and are most comfortable with. However, this practice obviously is not the way to pick those most deserving of upgrading, and it raises hell with morale.

Closely related to the "buddy-system" problem is the problem of assuring our present employees that they will be given full consideration for desirable job openings before we hire from the outside. You

will note that said "full consideration." This does not mean that we can promise, nor should our employees expect, that we will always fill desirable jobs from within. There will always be the need to bring in "new-blood" from outside the company, and there are many valid reasons for doing so. For example, in recent months, Eimac has broadened its scope to include such new activities as industrial engineering, market research, the TWT program, and production of microwave tubes at Salt Lake. In many cases, it was necessary to hire people experienced in these activities from the outside. However, it is most important that we establish specific procedures to assure ourselves and our employees that we are fully utilizing the experience and skills now present in the company. I believe the procedure outlined on the following slide will give us that assurance.

Now I could talk all day about the detailed mechanics of this program and the many important advantages that will accrue from it, and I would like to, because it's dear to my heart. But our time is limited, so for now I will just comment briefly on each step of this program. (Slide 1.)

Step 1. Determine specific qualifications for all jobs.

This simply means that we are going to get down to brass-tacks about the skills, experience, and education needed to do our jobs. For instance, in some of our job descriptions we will be talking about the scholastic knowledge required to do the job in terms of specific courses, rather than in terms of academic degrees, per se. That way, we can be sure that none of our good people will be held back only because they lack a few units to acquire a degree, or because of some other requirement that may not really be necessary to do a particular job.

Step 2. Take and maintain an inventory of every employee's skills and aptitudes.

One of the most crucial parts of our mutual manpower responsibility is identifying

and utilizing individual abilities. We should not be content just to hire someone for a particular job opening and then let him stay in that same job for evermore, ignoring the fact that he may already have, or have acquired additional skills. In this day of skilled-labor shortage, I believe skillful handling of this problem to be the essence of good personnel management.

Step 3. Upgrade individual skills through training and education.

In addition to utilizing all the skills already present in our people, we have another challenging responsibility to *add* to their skills. It's good for our people, and its good for Eimac. I won't say more now, but you'll be hearing plenty about this later, since I am determined that Eimac will have the best training program in the industry.

Step 4. Establish company-wide promotional roster.

This means that as we identify or develop an individual's skills to the point where he or she is qualified for a certain higher level job, and there is no opening in that higher level job at that time, the individual's name will be placed on a waiting list to be considered for the next job opening. And please note the emphasis on *company-wide* - we don't want any island or "closed" groups here at Eimac, we want *one company*, with everybody pulling together and sharing opportunities equally. If we do this, we will all come out ahead, believe me.

Step 5. Invite employees to bid for better job openings.

Despite our best efforts as I have just described, someone is bound to be overlooked from time-to-time. This step of the program simply means that we will make it possible, by one means or another, for such an employee to bring himself to our attention. And if we do this right, we'll let all our employees know that our promotional system is above question.

Step 6. Require concurrence of personnel department and approval of next higher line manager on all upgradings.

I think the reason for this is obvious. It is *not* an attempt to restrict the judgment and authority of any line manager, it is merely following good practice in applying more than one man's judgment to a process that is watched very closely by all our employees.

Step 7. Tell other candidates why they were not selected, and suggest ways to help them qualify for future openings.

Again, this is simply using good common sense on our part. And I promise you, if you've never had the opportunity to experience the wonderful reaction that comes from employees when you do this right, you've got a treat in store. In brief, if you ignore a disappointed job candidate you're a heel in their eyes, but if you face them honestly, they'll respect you.

And I would like to add another step to the ones outlined on the slide, and that is: *check all employment requisitions against the promotional roster* before hiring from the outside. This is simply a final check to make sure we have followed the other steps in this program.

Obviously, such a program is going to require a lot of work for all of us. But it will be worth it, for in addition to eliminating the "buddy system" and "new-people-get-the-good-job" complaints, it will also do the following:

1. Bring to light skills and experience we may have previously overlooked.
2. Serve as a basis for individual and group training programs.
3. Simplify and expedite filling of job openings.
4. Improve the quality of our wage and salary administration.

The next problem we must face, involves *complaints about pay levels and fringe benefits*. This problem, of course, is as old as industry itself, and like death and taxes, will always be with us. Because of its great importance to employee morale and willingness to produce, however, it requires constant and skillful attention by all of us.

You will note that I have lumped fringe benefits and pay into the same problem, although I find that employees usually think of them separately, since the dollars used by the company in paying for fringe benefits are the same as payroll dollars (and just as hard to come by), however, we must think in terms of *total compensation*, and *above all* talk to our employees in the same terms. Considering the really tremendous cost of fringe benefits these days, I feel strongly that they are the most neglected part of management's story to its employees, and we've got to fix that and in talking with our people about the *total Eimac* package, let's not neglect to mention improved physical surroundings, tools and equipment where it is possible to do so. With the new plant at San Carlos, recent improvements at San Bruno, and the forthcoming improvements at the Salt Lake plant, we certainly have a lot to talk about on this score. The point is that new facilities cost a lot of money and management doesn't build them just to look at or show-off. They built them to accommodate expansion, but that could be done with much less cost if they did not want attractive, comfortable work surroundings for their employees. Before talking about other benefits, however, let's discuss a subject dear to all our hearts, *wages and salaries*. Although I have not yet had time to get all the facts I need to be certain, what I have learned *so far* about our wages and salaries indicates to be that we may need some improvement in certain areas. Since it is unwise and dangerous to make spotty, random pay adjustments, and since general adjustments may only magnify existing inequities, we must make a careful, thorough wage and salary study to see where we stand, and this next slide will show you the steps involved in making this study and correcting any problems we find as a result (Slide 2).

1. Study all jobs (to determine skill requirements).
2. Group jobs into distinct skill levels (classifications).

3. Make wage-and-salary survey of similar classifications in the area and the industry.

4. Establish wage and salary structure by job classification.

5. Classify employees according to job assignment.

6. Fit employees into established rate ranges according to skills, experience, and demonstrated ability.

7. Make necessary pay adjustments.

Again, I could talk a long time about this very important program, but I think the purpose and steps involved are pretty straightforward, it's a time-consuming job, but we have already started and it will have high priority until it is finished, and we will need a lot of help from you people, since you know most about the jobs in your group. So please be patient with us, and we'll move as fast as we can. Meanwhile, we have a wage and salary program that is working fairly well, and while I believe there is room for improvement in some respects, it has certainly worked well enough to enable us to get and keep lots of good people.

Now, a word of caution - I must emphasize that until we have completed this study, no one can be sure that any inequities really do exist. Moreover, we must be careful not to let our employees know that we are making this study, for fear they might all expect a raise as a result. This probably will not happen, since I have learned that a careful wage study usually uncovers inequities in both directions, too low and too high. In any case, I can assure you that under the program I have described, internal inequities will be eliminated, new hires will not be paid more than present employees *who have equivalent skills and experience*, and that Eimac will continue to pay the best possible wages and salaries consistent with the need to protect *everybody's job* by making enough money to stay in business and finance growth, which means more opportunity for everyone. And as you have seen from the facts

presented earlier by Ed McClaran, this takes a sound, careful approach to costs and expenditures. I need not remind you people, I'm sure, that as administrators of the largest single company expenditure, wages and salaries, you and have a great responsibility to ourselves and the company to use our very best management judgment in this complex and difficult part of our jobs. I can assure you now, that the personnel department will give you all the facts and techniques you need to help you in this area. These will include the following:

1. A great deal of wage and salary survey information.
2. Wage and salary histories for each of your employees.
3. Cost-of-living reports and analyses.
4. Information on job classifications and rate ranges for comparable jobs throughout the company and the industry.
5. Periodic reports showing, by departments and groups, average pay and increase rates throughout the company.
6. And last, but not by any means least, an improved merit-rating system.

Now, let's talk about fringe benefits. As I said before, this is the least known part of the total compensation package in most companies, and I am afraid that it is the same at Eimac. In fact, in talking with a few of the fellows who were considering offers from Hughes, I was amazed at how little they knew about the value *to them* of our present fringe benefits program. And we are constantly adding to these benefits, as this next slide will show. (Slide 3)

You will notice that we have recently made two significant and costly improvements, with the increase in holiday and vacation benefits. As an example of how fringe costs can mount in a hurry, let me tell you that these two items alone will cost the company approximately \$100,000.00 in 1959. And remember, we use the same hard-gotten dollars to pay for these as we do for any other costs. Moreover, these are continuing costs, that is, we will have to pay them this year and every year, come what

may. For instance, if we project the estimated 1959 costs on just these two additional benefits out ten years, you can see that we have committed ourselves to a total cost of *one million dollars*. And please note the total cost figures for 1958. One and three-quarter million dollars! Now, if we add this one and three-quarter million dollars of fringe costs to the almost eight million dollars Ed cited for wage and salaries in 1958, we get a total compensation cost for 1958 of nearly *ten million dollars*, which is almost exactly 60% of our total income for 1958. So, when I talk about compensation being our single greatest cost item, and about the tremendous responsibility this places on us to spend this money wisely, I'm not just putting words together, *I really mean it!*

EIMAC'S FRINGE BENEFITS PROGRAM RECENT IMPROVEMENTS:

- Paid holidays increased from 7 to 8, July, 1958.**
- Vacation increased from 1 week to 2 weeks after 1 year's service, July, 1958.**

OTHER CURRENT BENEFITS

- Outstanding health and life insurance program**
- Full tuition refund plan**
- Free in-plant medical assistance**
- Free coffee and snacks**
- Pay while on jury duty**
- Social and recreational program**
- Subsidized cafeteria**

FRINGE COSTS FOR 1958

- Over 22% of each pay dollar**
- Equivalent to approximately \$1200 per employee**
- Equal to approximately \$1,750,000**

PLANNED ADDITIONAL BENEFITS:

- Retirement plan financed out of profits**

(Slide 3)

The reverse side of this compensation picture, of course, is what it means to our people. As you can see from the chart, our employees received, in 1958, over and above their pay, an average of \$1,200.00 in

benefits, and even this figure doesn't really state the dollar value of these benefits to them, because it would cost them considerably more to purchase some of these items on their own.

Despite all this, however, the company is even now committing itself to another, and very major improvement in our benefits program!

I am very happy to announce, that we will have a retirement plan in effect on January 1st, 1960!

The details of this plan are now being worked out between a committee composed of Jack McCullough, Ed McClaran, myself, and a firm of expert consultants on retirement plans, the Herman Zischke company of San Francisco. While the detailed workings of this plan are not yet settled, I can tell you now that the plan will be fully paid for by the company. Obviously, this is great news for all of us and for all of our employees. And don't forget to let them know about it soon! But here, again, this new benefit must be paid for somehow, and we all know that profits do not magically appear from nowhere, nor can we expect Jack and Bill and the other stockholders to dig into their own pockets to finance such a plan. The plain truth is that paying for this retirement plan may mean less money for other things. For instance, it is obvious that we will now have to make relatively more money before we will have anything left to distribute in bonuses. So it is up to us to do everything we can to reduce costs and improve efficiency, so that all Eimacers can continue to benefit from the excellent fringe package we now have, and so that we can continue to add to this package as the years go by.

I hope you are as enthusiastic about this excellent fringe package as I am, and that you will pass your enthusiasm on to all your people. The personnel department will soon furnish you with the information you need to do this very important job. This information will include data on fringe benefits in the companies in our area and

our industry, national averages, etc.

The final problem area want to discuss today, is the matter of management-employee communication on personnel matters. I am sure you have all been burned up at times, as I have, when your boss failed to tell you something important or when he forgot to talk to you about your performance for months on end. Well, remember, you're a boss too! And your people expect you to remember that they are sensitive human beings and that you're an important part of their lives. Now, before somebody walks up here with a soapbox, let me tell you this - if the employees in this or any other company conclude that management does not care enough to show an active and sincere interest in their problems and their progress, they will go out and get somebody who can make management pay attention, and believe me, this has been the major reason for the success of unions in this country. The typical reaction of management, after their company has been organized and it's too late, is to say "if I had known how our people felt about this or that we would have done something about it long ago." So let's not let that happen here at Eimac. I cannot stress too much that this job is up to you. No one can do it but you! I know it's hard to do, but find the time to talk to your people frequently, and see that the supervisors in your group do the same. It's the most important part of your job! The personnel staff will help all we can, and here are some of the communication tools we plan to have in the near future:

- Frequent conferences with line managers, supervisors and employees to explore and resolve current employee-relations problems.
- An employee handbook covering among other things: information on history, products and future policies. Pay policies and fringe benefits. Rules of conduct, hours of work, etc.
- A new employee orientation program.
- A supervisor's newsletter to keep you

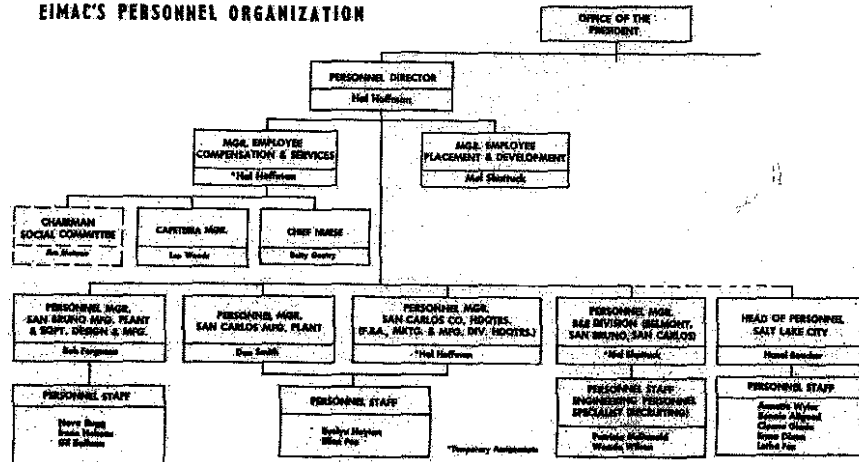
better informed on company activities.

I hope you agree that all these things we have talked about represent a forward-looking personnel program that will help us materially in meeting Eimac's goals and objectives.

Needless to say, the program I have outlined represents a lot of hard work on the part of all of us, with the personnel department rightfully taking the initiative, in devising the tools and techniques, formulating the programs; and giving all supervisors and managers the training and information they need to make the best use of them. But the day-in and day-out job of personnel management can only be done by line managers and it is *your* responsibility.

The personnel department, being a staff and service function by its very nature, can only lead, consult and advise the line. And the personnel department has the responsibility of making certain that these services are rendered promptly and efficiently. This takes competent personnel specialists organized in such a way that they know line management's needs and are readily available with advanced techniques to service those needs. To show you how we plan to meet this requirement, I would like to explain the organization of the personnel department. And by the way, this organization and the necessary budget to staff it have already been approved by top management. May I have slide 4, please?

EIMAC'S PERSONNEL ORGANIZATION



Now, there are several significant things to notice about this chart. First of all, it shows that I, as head of the personnel function, report directly to the top management of the company, and specifically Gould Hunter. This shows again, your top management's concern about their people. As my left and right hands, I will have two "experts" who between them and working with me, will be responsible for the formulation and coordination of all personnel programs across the company.

Then, following out my conviction that personnel specialists should be located

where they are needed, we have broken the company up into its logical coherent units and assigned a specialist to each.

Very quickly, I would like to read you the major responsibilities of each of these jobs.

MANAGER - EMPLOYEE PLACEMENT AND DEVELOPMENT

A staff position responsible for developing policies and programs and coordinating activities in the following areas:

- A. Professional recruiting
- B. Employee selection and placement
- C. Employee orientation and indoctrination
- D. Employee, supervisory and technical

licked and put out of our minds. During the last half of 1959, however, we intend to begin improving our methods and techniques in quality control and cost control to help ourselves to do a more effective job on both. Imagine what it would mean to the whole operation of Eimac if we could make a 50 percent reduction across the board in our present shrinkage, and a 50 percent reduction in the value of replacement tubes. In the year 1958, the replacement of defective tubes cost the company \$360,000. Saving half this sum would have nearly doubled our slender profits for that year.

To go over once again where we stand at the middle of 1959 - Our basic long-range growth plan is to increase our gross business at a rate of 20 percent per year compounded. When 1959 began we recognized two key factors, (1) that we had not grown at this rate in 1958, in fact we had not changed our operating rate much at all, and (2) the market situation presented an opportunity to exceed our planned growth rate in 1959. The customers were knocking at the door. We therefore adopted for 1959 a lofty objective totaling \$27,000,000 for the year or a growth of 70 percent over 1958. By mid-year we find that we have indeed increased our business by about 70 percent over the first half of 1958. However gratifying this accomplishment is when compared to the past or to our original goals, the fact is that in the mean time the customers' louder and louder knocks at the door have caused us again to change our objective upward. The last half of 1959 now demands much more spectacular accomplishments. In round numbers we are planning for a gross of \$19,000,000 in the last half or a total for the year of \$31,000,000. If

we do this, 1959 will exceed all of 1958 by around 95 percent. If we do this, we will end the year operating at an annual rate of \$42,000,000 per year.

Let's take a second look at one of the charts that Hank Brown discussed. Just concentrate on the years 1958 and 1959. The shaded areas show what we have actually accomplished. If you consider the tops of both these bars they tell us that we are attempting a tremendous leap this year - almost enough to scare you. But if you then note how the tops of the shaded areas compare, you see that in only six months of 1959 we have accomplished three quarters as much as in all of 1958. We are already well on our way toward our objective for this year.

We foresee still further increases in the next few years, although not on so steep a curve as during the present critical year. We do not for a moment think of our present scale of operations as a temporary bulge or an ultimate peak. We therefore look forward to a continuing expansion, offering more jobs and bigger jobs for Eimac people. This final slide summarizes the whole prospect. It is repetitive of previous data but the importance of these future objectives warrants the emphasis. One may ask why the dollar curve and the tops of these Eimacer heads do not form parallel lines. The explanation for that is easy. While both are going to go up, we expect - by the use of more modern methods and equipment - to achieve a higher per capita productivity during the years ahead. Even so, the Eimac family will reach a pretty impressive size as these little images portray.

This concludes the scheduled program for this afternoon's session.

BILL EITEL

I am going to talk to you about opportunities at Eimac. I believe the afternoon speakers have made it quite clear that Eimac is a dynamic outfit and going places.

I am going to put a different slant on why I think there are opportunities at Eimac, because we have seen some of our old-timers leave us in recent weeks seeking greener pastures.

Eimac has been in business continuously for 25 years this coming September. During this period we have been leaders in the power tube field with products developed, manufactured, and marketed by ourselves.

The company was started with \$5,000 and three people. We have grown to 2,200 people and a corporation with assets of \$12,000,000. This record was made possible by Jack's and my policy of plowing back the profits so the company could grow. I think you will find very few companies in any line of business with a history of returning such a large portion of their earnings for growth.

I was very pleased with Hal Hoffman's statement that the people present for this affair have an average of eight years' service with Eimac.

The growth I have mentioned has made it possible for you to be a member of the Eimac management team. Our continued growth will make possible further advancement for most of you and allow others to fill vacancies created by your advancement.

I have grown up with the power tube industry on the Peninsula. This has given me an opportunity to observe the rise and

fall of various companies. I feel quite safe in saying the companies that are exclusively in the power-tube field are the fastest growing and those that are tied to other activities are not growing very fast or have completely vanished from the scene. It is interesting to note that Eimac, Jennings, Varian, and Huggins are all very fast growing companies and they are all independently managed. If independent management is an important ingredient for growth, one wonders about the future opportunities for some of those that have recently left Eimac.

It is quite obvious that I have been dwelling on growth at Eimac. There are many good reasons for growth but we are also confronted with the fact that we are in a very dynamic industry at a very critical time and we must either meet the challenge of growth or wither away. We in top management have made the decision to meet this challenge. It has already presented us with many new problems and I am sure there are many problems yet to be faced.

One of the purposes of this meeting is to acquaint you with our problems so you will understand them and can help others understand them. It is much easier to solve a problem when it is understood.

In closing I want to again say that there is opportunity for advancement at Eimac for those that are willing to apply themselves to the tasks ahead. I am very glad to have had this opportunity to talk with you and I hope you have found this meeting worth while.

JACK McCULLOUGH

I am sure our first attempt to have the key people of Eimac all assembled in one room for a discussion of our plans has been successful. Our organization is getting larger at a very rapid rate and we are increasingly aware we have a communication problem. Today's meeting was based on a simple premise - get as many of our people as practical together and discuss with them our thinking about the past, the present, and the future. We would have liked to have had all 2,200 of our men and women here today. For obvious reasons we could not do this, so it falls upon your shoulders the task of carrying the story to the rest of the team. We are anxious to learn whether today's method of communication was successful. Why do we want to communicate? I think the answer is simple. We want to establish mutual confidence between all the members of Eimac. We believe if everyone in Eimac knew what the company's objectives were, how we are attempting to carry them out, and more specifically what each person's role was in this overall program, we would have at least a firm base to start building this mutual confidence. I do not think anyone can possibly question my next statement. The change in stature of Eimac in the past eighteen months has been occasioned by the fact that we have developed a plan, our company objectives, the knowledge of which has been shared by all Eimacers and in which there is company-wide confidence. This mutual confidence brought about by a plan and communication has resulted in team action like we have never seen before at Eimac. You have heard about the results from such action this afternoon.

My son, Jack, has participated in competitive sports from his grammar-school days until the middle of his college career. Probably because I had never been active in sports I watched his efforts with a great deal of interest. In competitive sports, as in business, the main objective is to win.

In all team sports the winning team is the one that has all members doing the right thing at the right time. In football one of the major jobs is for each member of the team to learn the plays and the accompanying signals. In this game at least no one questions the necessity of a signal caller, the quarterback. It always looks silly to see the confusion that results when there is a mix-up of signals. In football, communication has reached a high degree of effectiveness. In the huddle there can be feedback from each member of the team. There never should be any doubt on what play is to be run. The more sophisticated quarterback can even change the play at the line of scrimmage by calling a certain number. Every member of the team gets the message in this interesting method of communication.

Jack was a member of the Stanford freshman basketball team. This team was composed of a distillation of high-school stars that had migrated to Stanford - some on athlete scholarships. It was rather startling to see these "stars" get knocked over by some of the local high-school teams in their early games. Each week there was vast improvement. By the end of the season they emerged as a respected team. The answer, I think, was simple. The boys had learned to communicate, either by sign or gesture, so that each member was doing the right thing at the right time. This was now a team.

It is interesting to compare a business to professional sport. In professional sport the rules of the game are laid out in great detail - the number of men on a team, the size of the playing area, the duration of the contest, the method of scoring, etc. But in business, surely you couldn't consider a dozen-man organization a worthy opponent to some of the giants of industry. Let us look a little closer before you reach such a rash conclusion. The companies score in the market place. The customer buys the best product, the best service, and at the best price. At first blush you would

expect the large company to out-perform the smaller company even if only by sheer horsepower. This technique is only successful if the large company can efficiently utilize its manpower. If the big company cannot meet the new challenge by an adequate offense competently manned in all areas, it may soon lose the battle. A lot of companies do not know there was a battle until it is too late. Another case of poor communications. What was the scoring factor in this game - profits. No company can exist for long without profits. If there is no profit there is no excuse for being. A company can only grow from its profits. If there were not the promise of profits, the normal sources of capital such as by loans from a bank or the sale of the company's stock, would not be available. These normal sources of financing are debts that must be paid off out of profits. Maybe there are some politicians who think the government should subsidize the unprofitable operations, but aside from a few special military programs and the farmers, it looks like most companies will have to continue trying to make profits the old-fashioned way. Many a small, well managed company can turn a good profit and make a larger, older company look silly in the market place. Either the larger company mends its ways or goes out of that particular business. It is that simple - the smaller company has beaten the larger company in this highly competitive game of business.

Eimac is a highly complicated organization running the gamut from our advanced research group whose problems are years beyond our immediate practical ones through the immediate problem research and development group. Then we have engineering - the group that makes certain our current practices and techniques are under control and are the most efficient and modern. And, of course, production - they must produce and then reproduce ten, a hundred, or a hundred thousand tubes with uniformity, the highest quality and, very important, at the lowest cost. We

have our vast logistic groups - first there is marketing. This group tells, sells to, and delivers to the entire world the products of our manufacture. Our purchasing activity must buy and deliver on time the hundreds of thousands of items needed to keep our plant and production lines going at full tilt. I am sure Ed McClaran this afternoon has convinced you that the Accounting Division has many other functions aside from providing the weekly pay checks and paying for the goods we buy. Personnel, besides keeping our people healthy and happy, must provide the right number of people of the right competence to the right place at the right time. There are many other functions at Eimac that do not fall in these broad categories but all are important to our successful operation. No one man or small group of men can understand in detail all of the functions that are carried out at Eimac. The reason of course is that Eimac is composed of specialists that are blended together into a smooth-functioning whole.

One of the major activities of the past year has been to work on our organization line-ups to improve our overall efficiency. We have seen many organization charts of late with the dotted lines, the solid lines, the boxes above and below. I assume you understand them. For the sake of my remarks today let's call these organizational charts communication charts. You see inherently we have the network for communication. Maybe we are not using it properly.

Communication is a two-way deal. Top management is leaning over backwards in an attempt to keep everyone advised of the thinking and planning at Eimac. Indeed this very meeting today is prompted by a strong desire to be sure the message gets through. How about the other way? Each of you is responsible for some activity at Eimac. Is the communication that goes on within your group such that there is no question who has the responsibility for an action? Is the communication to you clear so that you know how your activity fits into the overall company program? Are the

your group available in a form that would make sense five years from now? Can the work your group is doing today be built upon by others in the future? Faulty organization and recording in the past, yes I mean faulty communications, have meant doing many jobs over for the "umpteenth" time. This redoing of a problem usually occurs in a three- to five-year cycle. Progress cannot be made by constantly redoing the work of others. Progress can only be made if the knowledge you develop is organized and made available in a form that can be built upon in the future. There are few if any actions taken by anyone at Eimac that does not have some bearing on Eimac's present or future. Reports, I think, should be subjective and should be written with the knowledge that they could influence a decision or a commitment. I am at a loss to understand what purpose is served by some reports I see when I note the information contained therein probably could be more accurately obtained from the payroll department.

Communication is an interesting problem. The ease of communication seems to be some function of the confidence the people doing the communicating have in each other. In the case of the five-man basketball team, after confidence had been established, communication was by a simple gesture with no doubt about its meaning. New people in particular, yes even some of our old-timers, have difficulty in establishing confidence in other members of the team. These people are particularly difficult to communicate with. We must recognize this as a real problem. You managers must be extra alert to the fact your message may not be getting through.

Ladies and gentlemen, we are engaged in the rough-tough game of competitive business. We have aboard some of the very best talent available. If every person carries out his part of the team effort, we are unbeatable. The signals are going to be coming thick and fast. Let us be sure that half the team is not out for a forward pass when actually the play was an end run.

I would like to summarize what transpired

here today. Nobody can doubt it was a very successful social gathering, but that was only incidental to the real serious business. Every person that spoke today tried to emphasize these facts:

(1) Eimac is destined for large and continued growth.

(2) The consensus of opinion is that this growth will continue at varying rates for the next decade.

(3) 1959 is a year in which we are attempting two years' growth in one year, a nearly 100 percent increment. If the rate of increase continues throughout the rest of the year the same as the first part, we are going to come mighty close to reaching this objective.

(4) 1960 will see continued growth but maybe at not the same rate as 1959.

(5) Growth means change and change means opportunity.

(6) Growth means long-range planning.

(7) Management has the real difficult task to see that each activity grows in phase with all other activities.

(8) To you people in this room today falls the full responsibility of carrying out these programs.

(9) To you people in this room today falls the full responsibility of deciding how and informing the other 2,000 men and women of Eimac what they are to do to help in carrying out this big job.

(10) You have heard from each of the Division heads, including your own, tell what activities have been and will be going on for the next several years.

(11) I think the most interesting report to you as individuals was the dynamic and far-reaching program as outlined by the personnel department. The program is designed to give the maximum possible opportunity to those capable of taking advantage of that opportunity.

(12) Continue to improve our communication up and down as well as within each group so that there is never any doubt in anybody's mind where we are going, why we are going there, and what each individual man or woman's job is in reaching our objectives.

With the wonderful team we have at Eimac, how can we lose?

EITEL-McCULLOUGH, INC. BASIC COMPANY OBJECTIVES

February 10, 1958

1. To engage in the research, development, manufacture and sale of products involving electron physics and associated components.

This objective defines in broad terms the intended scope of the company's activities. It is meant to include all the present activities of Eimac involving electron tubes and closely associated components such as sockets and klystron amplifier circuits. It is also meant to leave room for future expansion of our field of activity into technically related areas. On the other hand, it is meant to imply an intention to confine ourselves to activities that are electronic in their technical nature. Success, therefore, will depend upon cultivation of special technical skills in a well defined area. Because of the dynamic nature of our chosen field of activity, continued growth demands the ability to exploit the frontiers of technology while at the same time maintaining our interest and our proficiency in existing, better established areas of activity. Advances into new fields must be based on a solid foundation of continued activity in established fields.

2. Integrity in all relationships with others, including our employees, customers, suppliers, stockholders, creditors and the community.

A reputation for integrity has always been a basic objective of Eimac management. To achieve it requires not only fundamental honesty, but consistent reliability in honoring every obligation, open and above-board methods of dealing with others, devotion to high standards of ethics, and constant concern for the good name of Eimac. Management aims for performance which will soundly justify the reputation that "Eimac never lets a customer down." It is equally essential that we not let down our own employees or others with whom we must maintain business relationships.

3. Consistent maintenance of reasonable over-all profits, not as an end in itself, but as a prerequisite to the achievement of other important objectives.

It is the nature of the free American economic system that a business enterprise must, in the long run, produce a profit in order to continue to exist. Management depends upon profitable operations for the means with which to satisfy the legitimate aspirations of employees, of customers and of stockholders. When circumstances result in an unprofitable operation in one area this must be balanced by profits derived from other areas. Without consistently profitable operation, management cannot attract capital, maintain its credit standing or provide for the continuing growth of the company. At the same time, profits must necessarily be viewed from a long-range, over-all standpoint. It is frequently necessary to do a limited amount of business without an adequate profit as a means to securing greater profits later on. The introduction of a new product sometimes illustrates this. In the over-all view, however, profits are an essential ingredient for successful business operation.

4. Steady growth at a rate primarily dependent upon our ability to develop an effective organization and the personnel to support it.

Management firmly believes that a business enterprise must either go forward or backward - it cannot stand still. We are fortunate to be a part of an expanding American economy and even more fortunate to be a part of the dynamic electronics industry. It is almost axiomatic that we must grow merely to keep pace with our environment. Healthy growth requires intelligent long-range planning. It depends on people more than on any other single factor - adequate numbers of competent people, working as a team, and developing both individually and as a team to assume broadening responsibilities. Growth, as measured by the handiest yardstick of gross revenues, would ideally proceed at a steady rate to which plans could easiest be fitted. It is not to be expected that growth can be controlled in this ideal way since it is influenced by many uncontrollable external

factors. Short-term growth at rates higher than the ideal plan should be accepted as desirable. Adjustments in long-range plans should be made to accept this.

5. Maintenance of a market-oriented philosophy as the basis for planning.

This objective affects both our product development planning and our actions with respect to our existing product line. Market orientation is defined as follows: "Companies which are market-oriented are exemplified by the pharmaceutical, food products, many electronic-components manufacturers, and the industrial "supply" companies. These companies look to their customers for cues in research planning. The financial effectiveness of their research efforts is importantly influenced by the level of communications with the marketing divisions. The organizational tie between sales and research may be formal or informal, but the research management is expected to be conscious of commercial implications and sensitive to market requirements. The individuals in technical management tend toward the inventive, the urgent, the widely informed. Product-oriented research need not be a superficial "customer service" type of activity, as witness the fine scientific accomplishments of many pharmaceutical houses. Management policy, however, must be sensitive to technical trends in consumer industries and responsive to technical as well as economic competition in the market. This responsiveness requires careful time scheduling of research and often leads to "crash programs."

6. Maintenance of corporation headquarters at a West Coast location.

Long-range plans for the future growth of Eimac should provide for the possibility of building or acquiring additional facilities in various parts of the United States or in foreign countries, when circumstances make this advisable. It is the intention of management, however, to base its operations in California and to maintain corporate headquarters on the West Coast. This is not intended to place any restriction upon future growth in other areas.

7. Recognition by the industry for leader-

ship in technological fields of our own choice.

It has long been an unwritten objective of Eimac to achieve and maintain a reputation for a quality product, something better than the competition, in selected product areas. We should seek to be identified with products for which we have special capabilities. Emphasis is to be placed on the words "of our own choice" in this objective. Technological leadership requires a certain degree of concentration upon those areas for which the company knows itself to be best equipped and best staffed. Technological leadership depends not only upon the manufacture of an outstanding product but also upon engineering competence in the application of these products and in all technical services performed by the company.

8. Customer confidence in our products and services.

The confidence of our customers depends in part on our success in achieving several of the other stated objectives. It depends upon the quality of the products themselves and also upon the many varieties of service that the customer expects from the company - from such small matters as the promptness with which his mail is answered to the thoroughness of our engineering service in his application or maintenance problems. His confidence in many areas is affected by the internal efficiency of our organization such as the degree of our success in coordinating the activities of our various divisions in a common program. It depends upon our attention to the customers' small requirements as well as to his large orders. It depends upon the manner in which we stand behind our products and services and the manner in which we respond to his demands. This is by no means to indicate that it is Eimac's policy to cater to every customer whim or accede to every demand.

Respect is also to be gained by taking definite stands against customer requests when it is technically or economically sound and defensible to do so.

9. Domination of the market with products of our own choice.

ognition be accorded to those who possess these abilities and that every effort should be made, by example and by training, to develop these abilities in our technical personnel as well as to select new employees who possess them. Innovation in the form of new products or of new applications for Eimac products as well as in the form of new manufacturing processes and equipment are all included in the meaning of this objective.

14. Stability of employment, minimizing radical ups-and-downs.

As a long-range policy, stability of employment makes for more efficient operation on the one hand and greater security for deserving employees on the other. These desirable goals should not provide an over-secure haven for incompetent employees. Neither should they restrict management from undertaking profitable programs simply because they are expected to be of short duration.

The fluctuating requirements of national defense are probably the largest factor which can produce radical short-range expansions or contractions in our operations. These usually have to be accepted but management should plan for minimizing their effects. We should particularly resist sudden contractions and provide as much as possible to compensate for these by programs of our own.

15. Social justice for all employees.

Eimac management tries to treat each employee as an individual and to provide the maximum job satisfaction to every individual. It believes that human dignity and recognition of accomplishment are as important as monetary compensation. It believes that fair treatment requires uniform and consistent application of fair personnel policies. It believes that each member of its team is entitled to rewards proportionate to his value and his contribution to the team effort. At the same time, all members are entitled to recognition of the need for their contribution regardless of its size or importance.

16. Maximum opportunity for individual self-development of employees, both in the special skills required for specific jobs and

in the broader skills necessary for advancement within the company organization.

The growth and the success of Eimac depend more on people than on any other factor. Without adequate numbers of qualified people with whom to build an effective organization, no wealth of other assets can bring success in the long run. Many varieties of skills are essential, particularly technical and management ability. It is the purpose of management to provide its employees with opportunities for training within the company and to support the individual in his efforts to improve himself outside the company to the end that a growing organization with expanding responsibilities can be staffed as far as possible by promotion within the company. At the same time, it is also essential that a growing company be strengthened by the addition of personnel who can add to the skills and competence in both technical and management fields. Provision has to be made in the organization for the addition of skilled personnel and for assuring their acceptance.

17. A high standard of quality in personnel to assure quality of our products and of our administrative development.

This objective is another recognition of the importance of people to the success and the growth of the company. We must maintain high standards of qualification for bringing new employees into the company, recognizing that this does not mean a single standard of ability for all types and levels of work. We must set and maintain high standards of performance on the job and assist people in reaching them. We must be objective in our evaluation of ability and performance. In the interests of both the company and the individual we must avoid assigning responsibility or authority for which the recipient is not adequately prepared. Finally, we must accept the necessity of drawing on outside sources for qualified personnel when they are in fact not available within the company.

18. Development of informed loyalty among all employees.

Loyalty of employees is one of the most valued assets that management can pos-

sess. Over the years Eimac management has enjoyed such a loyalty to a marked degree. It is recognized that this is more difficult to maintain in a larger organization where frequent personal contact is no longer possible. It is also recognized that this calls for affirmative and constructive action to communicate from management to all employees. It will be a permanent objective of management to develop and practice improved communications of this nature.

19. Maintenance of an active patent program to protect our products, and through such protection encourage the use of inventive abilities to produce new and improved products and processes.

The company's patent program should enable us to gain for our products the fullest competitive advantage which the patent laws are intended to secure to those who exercise inventive effort. It should develop and maintain a strong patent position for Eimac products in the electronics industry. It should stimulate individual or-

iginality and provide recognition to the individual for patentable contributions to the company's business. It should support the company's reputation for technological leadership. It should foster favorable arrangements for obtaining licenses under patents belonging to others, and it should minimize the need for such licenses.

Additional Objective Issued February 10, 1959

20. To develop, manufacture and sell a quality product.

Quality in our products is the result of careful attention to details of design, tooling, workmanship and process control. Quality at any period of time is related to the industry state-of-the-art. Eimac has a reputation for quality and must continue to build quality-mindedness within the company and in the field. Our standard is a product equal to, or superior to, our competitors' best.

"THE BEST LAID PLANS . . ."

The tone of the presentations in this package is quite upbeat, looking toward substantial growth in sales and staff. However, the forecasters at Eimac couldn't foresee the cutbacks in military spending that were about to take place. As reported in Making Silicon Valley: Innovation and the Growth of High Tech, 1930-1970, Eimac's power-grid and microwave product lines lost \$1.5 million (on sales of \$28.3 million) in 1960. Instead of hiring, the company had to lay off a third of its workforce. Draconian reorganization and a change of upper management saved the company, but the microwave business formed a major drain on profits until the 1965 merger with Varian Associates. Forecasting is a tricky art. - LAS