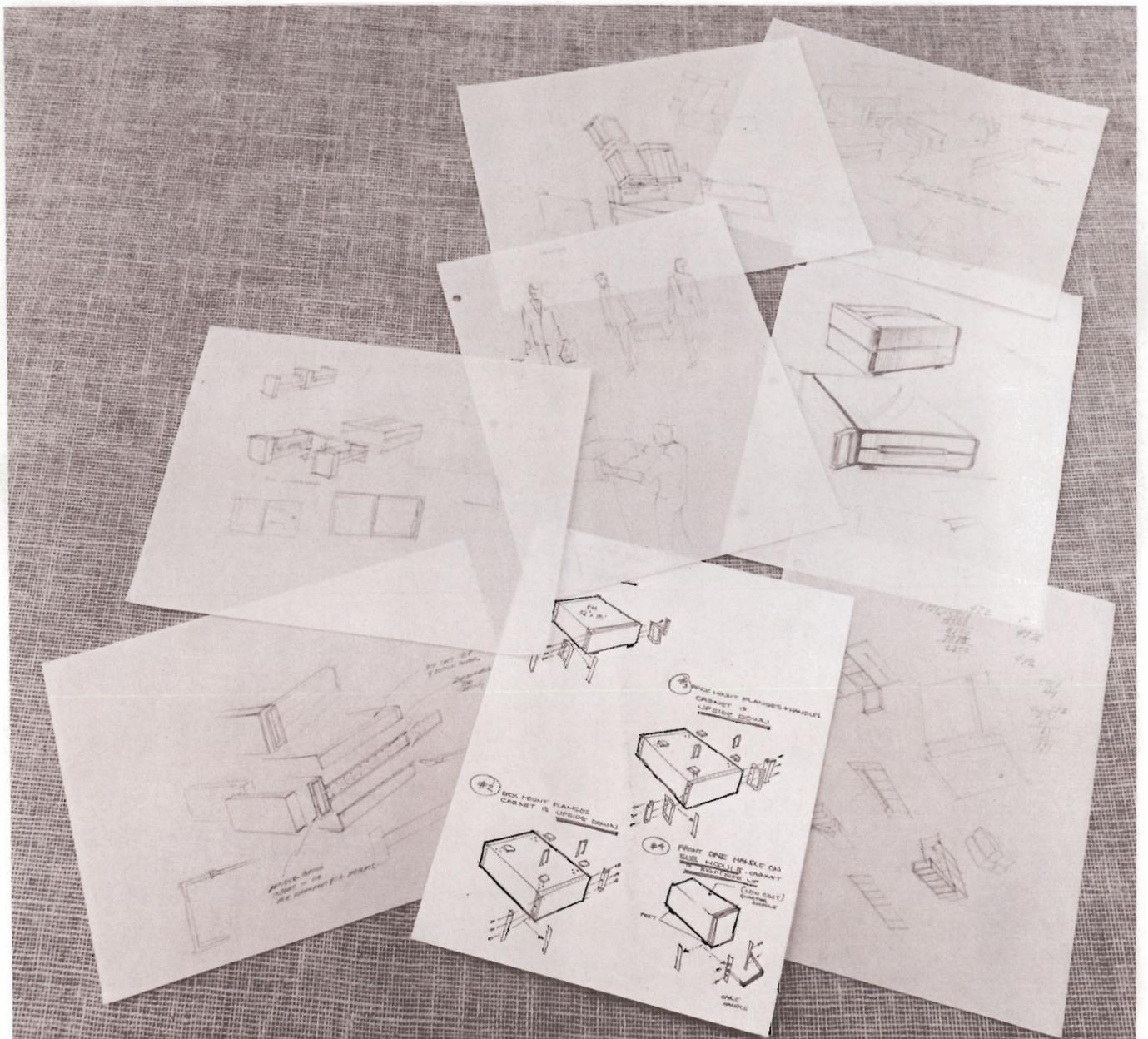


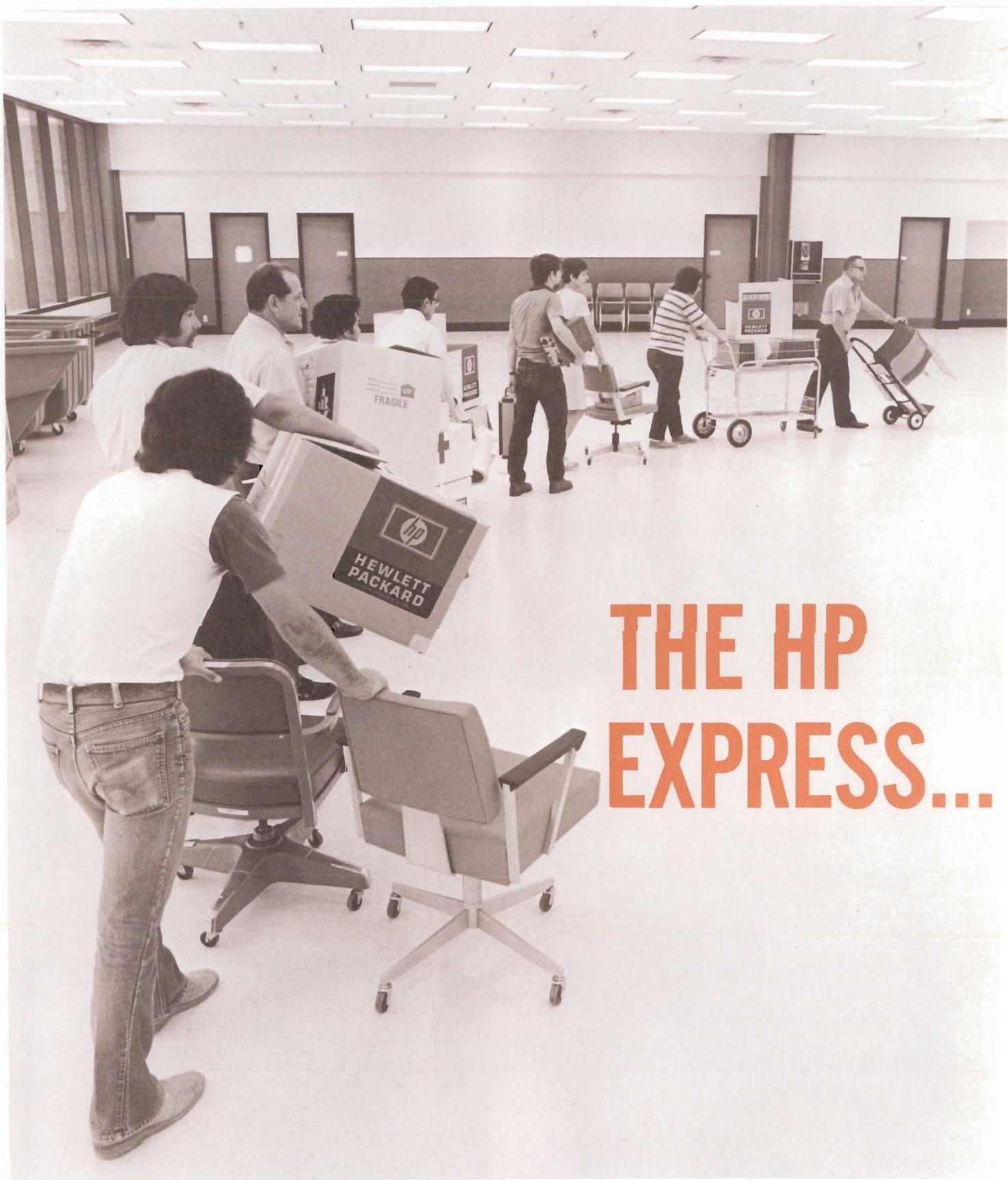
Measure

For the men and women of Hewlett-Packard / SEPTEMBER 1975

HP's new cabinet system: A design for all reasons...

story pages 8-11





THE HP EXPRESS...

□ Indeed, never before has the company engaged in moving or planning moves into so many new communities. Just last month three new name places popped up in the news with announcements of the start of construction work at Andover, Mass., Boise, Idaho, and Corvallis, Oregon. Meanwhile other sites were being researched on behalf of other divisions.

Taken together, all of it reflects HP's belief and experience that there's nothing like a well-defined division operating in its own well-defined location for generating enthusiasm and team spirit.

But what does that mean to HP people, particularly the men and women and their families who participate in a move to a new community as a result of a move by a division? Also, what does such a move mean to people who join HP after it has arrived in a new community? Such questions may be answered by the experiences of some of the people involved in the two most recent major moves, specifically at the Santa Rosa Division in northern California and the Boise Division in Idaho.

Actually, there's quite a contrast in the way these two organizations arrived at their new communities. The Santa Rosa Division originally was a business segment of the Microwave (now Stanford Park) Division, and necessarily had to think in terms of transferring quite a number of people. On the other hand, Boise Division didn't exist until a team of five HP managers arrived in the Idaho capital to begin a business built around computer peripherals.

Here's what some of the people involved in both of these moves had to say:

...now arriving at Santa Rosa, Boise, Corvallis, Andover, Campinas, Winnersh, and other new plant sites north, south, east and west.

Sue Larson has the job of administering the transfer program on behalf of the Santa Rosa Division's personnel department. In his report on the division's move, Santa Rosa personnel manager Jack Grout noted that a full-time person was needed when 60 or more transfers a year were planned. Hired locally for that reason, Sue brought with her a real estate background that has helped many of the transferred people over the hurdles of disposing of one home and buying another. Nevertheless, she says it is not her role to find homes for people; that has to be up to the individual.

"In my view," Sue says, "people are generally too naïve in buying a home. They should negotiate harder, particularly those buying a home for the first time.

"At one point we held a roundtable discussion by wives on the subject of the troubles encountered by people who had moved from a city environment to a country home. It was pointed out that in doing this you will have to face up to the problems of remoteness, of water supply, septic tanks, of finding playmates for the children — and there is no actual cost advantage. The main thing, though, is the attitude of the family. That can make or break any situation."

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HP Express



Sue Larson



Marlene Minegar



Julie Stacy

Marlene Minegar, assistant production engineer at Boise Division, didn't have to exercise too much persuasion on her husband and their family of three boys in joining HP's move to Idaho from Mountain View, California. "In fact," says Marlene, "Don told me he was going to Idaho anyhow. It's been his happy hunting ground for years." In moving such a family, Marlene advises very thorough preparation. "We took a full week to look into every aspect of the area — the housing, the schools, the recreation and so on. It has really paid off. And fortunately, Don has been doing very well in his business and the boys are very busy with school or work — including Pat who works here part time as a draftsman while going to Boise State University."

One result of the move, says Marlene, is that the Minegars have grown a lot closer as a family, traveling and learning to ski together, raising a horse and tending a vegetable garden.

Wayne Stewart, production line manager for the HP 2607 printer at Boise Division, was one of the original five HP'ers who established the Idaho organization in September, 1973. "It has been a very rewarding experience, personally and professionally," he says. "I think we've all been a bit amazed at our success here. Demand for our products has just seemed to take off, and we've all had to run fast to keep up. One aspect that can be both challenging and frustrating in a start-up situation like this is the need for a supervisor to wear many hats. The secret is in knowing when to delegate or give up the extra hats and concentrate in your own chosen area. But it is very reassuring to see people respond to the challenge and to develop their abilities on the job.

"As far as personal aspects of the move go, it couldn't be better for us. My wife and I are originally from Utah, so we are very much at home in this same kind of wide-open environment. As a matter of fact, I think you'll find that a lot of the people here or wanting transfers to these new locations are people like us who came from the mountain or desert areas. Our kind of industry makes it possible for them to work here."

Julie Stacy, line leader for printed circuits at Boise Division, recalls how local people first were concerned over the possibility of hundreds of people pouring into town to work for Hewlett-Packard. That didn't happen, of course, and now she says her friends and neighbors believe HP's arrival was very beneficial for the community. For one thing, Julie points out, the area previously had nothing in the way of a light industry of any size. Julie particularly felt the lack of such employment opportunity because she had spent 24 years in the electronics industry before coming to Idaho. At the same time, she feels that the HP way of doing things — "management by objective" — sets a standard that can only be of benefit to the community. "I don't know what I'd do if I had to go back to the other kind of 'big boss' industry."



Candy Fitzpatrick



Bob Lombard



the Petersons

Candy Fitzpatrick, secretary to Boise Division general manager Ray Smelek, enjoys watching the change that generally comes over people moving from California to Idaho. "The first thing they come for is the challenge of the job," she says. "Then you begin to see the area influence their way of life. Before you know it, they're wearing cowboy boots and hats."

Candy and her husband, Dennis, a professor of business administration at Boise State University, were already in residence near Boise when HP announced its local plans. However, she had worked for the company in Palo Alto, specifically the F&T and Santa Clara divisions, a few years ago. The Fitzpatricks moved to Idaho in 1972 because of the interesting combination they found there of professional opportunities and plentiful outdoor activities.

Bob Lombard at Santa Rosa Division says he was more or less "in limbo" in 1972 when he read about the HP move to that community. His career to that point consisted of high school and driving tanks for the U.S. Army — hardly a basis for great expectations in the electronics industry. But he read about HP, knew it had something to do with electronics, and decided to give it a try. As he recalls, "I waited ten weeks. Almost gave up. Then they called me. I took the one-week assembly training course and passed it. A little later they called me with a job offer."

Bob showed not only aptitude but also interest in his work, and ten months later started taking the training that has equipped him to test various instruments and systems. Supplementing this, he also has started some math courses at Santa Rosa's excellent junior college, and an electronics correspondence course in which the "final exam" will consist of building a color TV set. His aim: "To become an electronics technician—I hope."

Meet the Petersons of Boise Division. Carl is the plant custodian and general maintenance man, Barbara manages a wire-cutting machine, and adopted daughter Penny is a clerk in purchasing. But the Petersons are interesting not so much because they work for the same employer as for the very evident enthusiasm they have for their work. In their 35 years of marriage Carl and Barbara have worked at many jobs, but say that never before have they seen such an open and friendly environment as at HP. Barbara, in fact, expresses very strong feelings on this subject, especially when she contrasts it with her previous employment — a meat-packing plant where first one sweated to keep up with the flow of production then froze when it slowed. "They went bankrupt," she recalls with a hint of satisfaction.

(continued)



Beth Tucker



Dick Bingham

Santa Rosa manufacturing section manager Bill Keilig and his family still can't get over how smooth a move they made from Redwood City, their home since 1951. The big thing, he says, was getting everyone to agree that the move was a good idea even though it meant leaving many friends behind. One decision that really paid off was that of putting their daughter in school in Santa Rosa before the end of the school year so she could make new friends prior to summer vacation.

"It's a great change of pace from before," Bill acknowledges. "You'd have to say it is quite a bit slower. In the stores, for example, the clerks tend to chat a bit longer. And I get to fish once in a while, something I haven't done in the past ten years."

On the job, he says, he realizes just how important is the presence of experienced people. "You can tell new people how HP likes to do things, but they don't really know it until they've been through it or seen the way it's done by old timers."

Beth Tucker, a lead assembler on the Santa Rosa microelectronics line, was one of the more than 4,000 job applicants who responded in the first several weeks to HP's announcement of a local plant. She and her husband, Bill, were operators of a hairdressing shop — and not enjoying the long hours and low return. She learned that she might have to see an eye doctor — but then was called back and advised that the test machine used for her eye exam had not been functioning properly. Beth thereupon took HP up on the offer of a four-day pre-employment training class without pay to determine whether her interests and the needs of microelectronic assembly work were a good match.

Later she studied schematics, and was given a lead position that involves ordering parts, opening work orders, keeping evaluations, and generally being concerned for the eight people in the department. In the process she has become a firm believer in the HP way of doing things. One result is that Beth became quite active in the local United Fund and Santa Rosa Division's Affirmative Action committee.

Husband Bill, by the way, also quit the hairdressing business to become a utility company troubleshooter.

Dick Bingham, a member of the Santa Rosa engineering lab, and his family rather enjoy most aspects of the pioneering style of life, but they're glad they no longer have to trek to the local YMCA for a bath. As Dick explains it, the Bingham family deliberately sought a home location something like their native Washington when they transferred to Santa Rosa in 1972. Near Sebastopol they discovered some hilltop property overlooking the coastal valleys where Alfred Hitchcock filmed "The Birds" — green, fertile and unspoiled. For many months they camped in a trailer and had to carry in all of their water. They were told there was no underground water on the property, but they drilled and found an ample supply 106 feet down. The pumphouse thereupon became the bedroom for the youngsters. Meanwhile, they cultivated a large vegetable garden, raised a steer, and ground their own wheat to make bread. Finally, the contractor finished building their house and the "Y" lost some regular visitors.

Commenting on their move, Dick thought HP's transfer policy worked very well. "It was a painless experience, and I'm very happy we came along."



The property where Santa Rosa Division's new plant is nearing completion was given the name Fountaingrove by the leader of a religious commune that settled there a hundred years ago. It was — and still is — a Utopian setting of rolling hills, cool springs and groves of oak trees. At some time in its history Fountaingrove became Fountain Grove, and its character also changed only slightly as its vineyards were replaced by grazing cattle.

In recent years, the encroachment of the town and the steady increase in taxes have made further change inevitable. But the present owner, Bob Walter, is determined to preserve the pastoral character of Fountain Grove through a very gradual and carefully planned devel-

opment offering a balance of residential, commercial, industrial and recreational facilities and retaining much of its openness and natural landscaping.

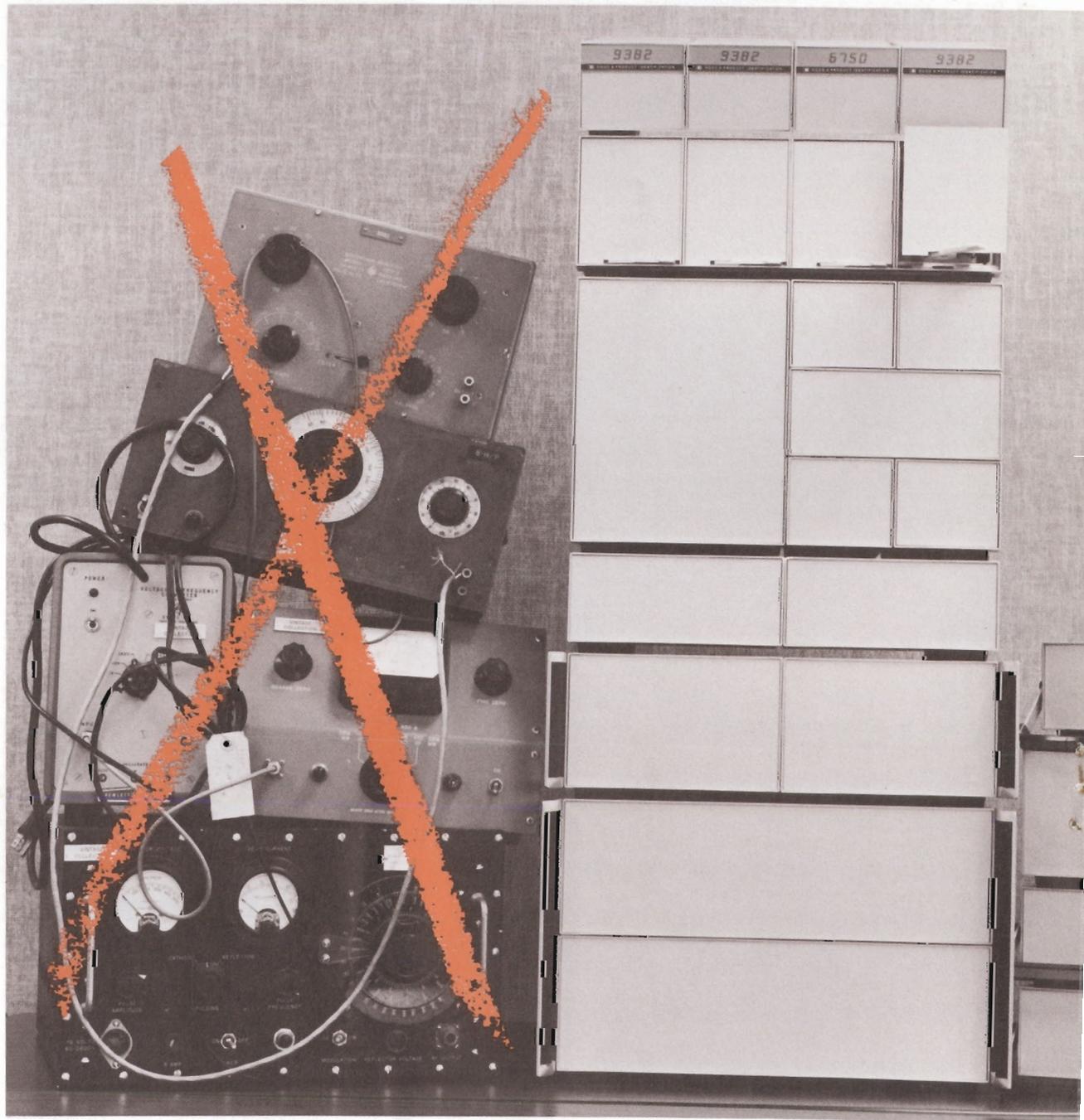
It was with this understanding that Hewlett-Packard acquired 190 acres at Fountain Grove and a permit to build a plant and office complex that would be an aesthetic and environmental asset to the community. Its low-profile buildings would be stepped down the hillside in harmony with the contour of the land. Trees removed for construction would be replaced on at least a one-for-one basis. Areas requiring change would be heavily landscaped, and as much area as possible would remain unchanged.

The architectural beauty of the first

two HP buildings at Fountain Grove clearly lives up to that promise. At this writing the landscaping is incomplete, but the trees and shrubs are standing by in containers, ready for planting. Nestled among the hills, the Santa Rosa Division's new headquarters seems as much a part of the scene as the golden grass and gnarled oaks.

The HP plant is the first development of any kind for the planned community of Fountain Grove — and what a good beginning it is! □

Look what's happening to those gray



boxes!



New HP instruments are being housed in the most thoroughly engineered and versatile cabinet system in the industry.

□ Advancing technology has done wonders with HP instruments. It has made them more useful and reliable, more compact, more economical — even “smarter,” thanks to microprocessors that pack a lot of computing power on a tiny chip.

So why put these brainy new electronic marvels in the same gray boxes? Look again. A closer inspection will show that, aside from the color, they're not the same at all. In fact, some of the more remarkable changes in our newer instruments are in the System II cabinets — the end result of an intensive design and tooling effort that began about five years ago.

When electronics was a young industry, an instrument enclosure was simply a wood or metal box big enough to accommodate the electronic parts. It was made for a particular product, and had no common parts or common dimensions with any other.

HP's first enclosure “system” — now referred to as System I — was designed more than a decade ago and was a notable improvement over the earlier approach. By making it convenient either to mount instruments in racks or stack them neatly for bench use, it solved many of the prob-

lems of grouping increasing numbers of instruments in complex measurement set-ups. Access to the internal parts was also made easier, and the space put to more efficient use. It was an entirely new concept in instrument packaging. It served HP's customers well, and was copied many times over by other manufacturers.

But continuing changes in the nature of instruments themselves created new needs in cabinet design. Even greater access was required to the more densely packed circuitry. Space on front panels was being taken up by a growing number of controls and displays, and there was no built-in provision for the increasing use of plug-ins. Radiated electrical interference was also becoming more of a problem. And because of the limited number of sizes in the old system, some instruments were bulkier than they should have been.

The Corporate Industrial Design Department, headed by Al Inhelder, brought together industrial designers from several major divisions to work as a team for what turned out to be nearly two years. Under the leadership of Roy Ozaki, now the in-

(continued)

Those new gray boxes

Bill Alexander turns molten metal into cabinet frames with a huge Wotan die-casting machine. The Wotan can exert a "clamping" force of 770 tons.



dustrial design manager for Data Systems Division, the design of a system that would meet the needs of most of HP's product lines was created.

According to AI, the new cabinets had to be strong: "Without the covers, the System I cabinet was not rigid in itself. It meant that the engineers had to design structures inside to reinforce the cabinet. Our goal was to design a basic structure which had inherent rigidity, and make it easier to design the interior. With System I, a mistake in the product design could make it too weak to pass vibration testing."

It had to be a modular system: "System I was a system of modules, but not a modular system. There was no dimensional compatibility between the different sizes."

Another goal was to simplify assembly: "A real problem we discovered with System I was that it limits you in assembling the product because you have to put the front and rear panels on first, and on a deep product you have to work way down inside. The cabinet design required a specific sequence of operations that wasn't to our advantage. What we wanted was to

make possible a sequence based on the needs of that product."

All these requirements — and more — were inputs from the divisions, and the design team set out to meet as many of them as possible. The system that emerged seems to exceed all expectations, with hardly a desirable feature left that any product designer, production manager or customer could hope for. "Every aspect of the old system was evaluated," AI explained, "and every area that needed improvement, or that *could* be improved, was re-designed."

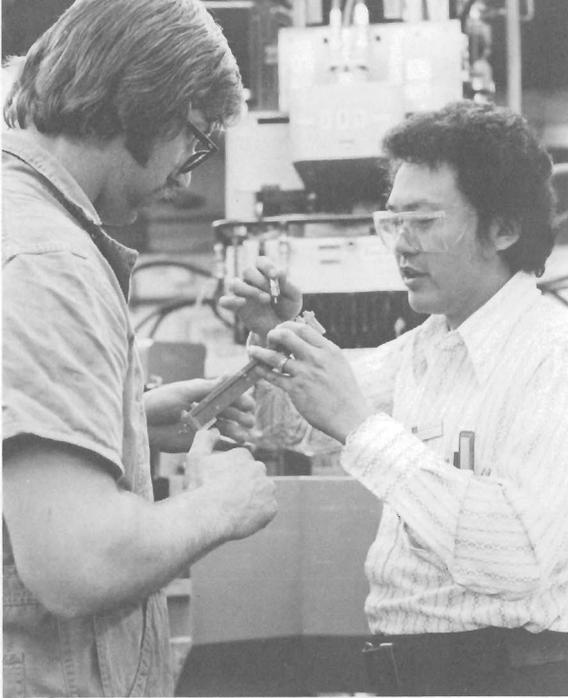
The cabinets are lightweight but far stronger. They simplify assembly and servicing. There are 14 different sizes of cabinets, but they have many common parts. The smaller ones are mostly plastic, but in color and texture they match their metal counterparts almost to a tee. No space is wasted, either inside or on the front panel. And no matter what the sizes of the various instruments in a set-up, they can easily be racked, stacked, joined together (even with common side panels that make two instruments appear as one), or

tilted forward or backward when placed above or below eye level.

Roland Krevitt, Manufacturing Division's tooling coordinator for the program, likens the system to "a set of very sophisticated building blocks with a great many combinations of volumes." The complexity of the system resulted in a number of very complex parts that were a monumental challenge in manufacturing engineering, and required a development effort as thorough and intensive as the design work.

The complex front frame is a key part of each System II cabinet, according to Roland, and requires some very sophisticated tooling, die casting and finishing techniques. "Many of the die casting experts we contacted across the country told us that the front frames are the most difficult-to-cast parts they've seen because of the thin walls, close tolerances and the need for low porosity to meet strength requirements. At first these presented quite a challenge, but now the die-casting is almost routine."

A five-headed drilling and tapping machine devoted exclusively to making the



John Luan (right), engineering coordinator for the finishing of die-cast parts, checks a completed cabinet frame with Len Bushnell. Len operates the five-headed drilling and tapping machine designed and built by HP at a cost of about \$250,000.



Gary Young (left), and Roland Krevitt discuss the use of manufacturing space in the new building being planned for the System II cabinet program. The special-purpose facility will be part of the manufacturing complex at 395 Page Mill Road in Palo Alto.

28 varieties of front and rear frames for System II had to be designed and built completely within HP, in order to insure the quality parts that are required. Gary Young, manufacturing engineering manager for the modular cabinets, says that many other phases of the program were equally challenging. "It seemed that the further we got into the program, the more it was like an onion. No sooner was one layer of challenges met than the next layer came into view. They were all related in complex ways. Fortunately, like peeling an onion, each new set of problems wasn't as big as the ones before."

"We wouldn't have been able to make these cabinets ten years ago," Gary continues. "The alloys were difficult to work with, the machine-tool and die-casting technology didn't exist, the plastics color matching technology didn't exist. We're able to do it now because Manufacturing Division has a broad background in these areas and has been developing this expertise for a long time."

Historically, the division's strength has been its ability to serve as an in-house job

shop for small runs of thousands of different parts. The cabinet program is changing that. "By dedicating manufacturing processes to turn out cabinet parts, we can make very large runs and not be constantly changing tools."

Jim Ferrell, general manager of the division, stresses the investment of time and capital that has gone into these manufacturing processes. "We've tried to put the same high quality effort into the manufacturing aspects of the cabinets that went into the original design. For instance, we've spent close to 50 man-years on tool-building alone. These cabinets will solve a lot of instrument enclosure problems for a long time to come, so we tooled up from the very beginning based on anticipated volumes. As a result, the cost is already very close to that of System I, and it's a much better product. We're even planning a new building dedicated to System II cabinets."

The building is to be built at 395 Page Mill Road in Palo Alto, site of the first HP-owned facility. It will be the company's only special-purpose building, de-

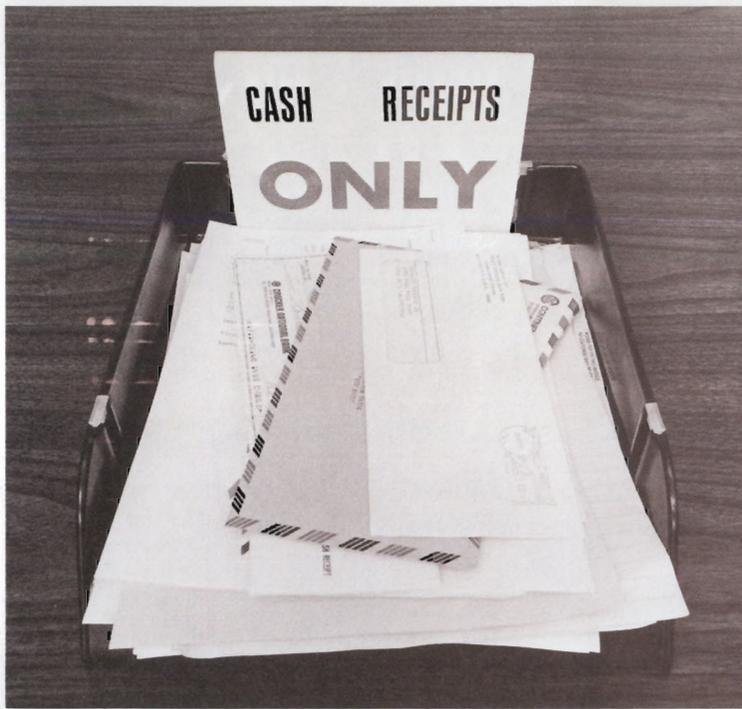
signed specifically for making cabinet parts.

The first HP instrument to be housed in one of the modular cabinets was introduced two and a half years ago. Each year since then, more and more new products have appeared in these enclosures, as will most 1976 introductions.

But there's more to come in developing a complete line of cabinets. "The System II program is an on-going project," Jim explains, "with additional features, sizes and components to be added in the future to meet HP's needs even better."

The System II Program is the only modular cabinet system of its kind in the electronics industry, and this gives HP a tremendous advantage in meeting the needs of its customers. The success of the program is a credit to the design ingenuity, manufacturing know-how and perseverance of a great many HP people.

Some of those people used to wear a small blue and black button on their shirt pockets that promised, "I'm going to make it work." It has now been replaced by a new button, proudly proclaiming "I'm making it work!" And indeed they are. □



The collectors

□ If HP people have cause to cheer various achievements of the past year — one hopes there will be plenty of those — they should certainly consider giving at least one good round of applause to the people responsible for handling receivables and credit collection. Working against an adverse economic current and the drag of too many slow-paying accounts, they really brought their ship home in style — laden with treasure.

To be specific — and a bit technical — just consider the tremendous turnaround they helped to create in what are called

“Days Sales Outstanding.” This index refers simply to the amount of money owed the company divided by the average daily dollar volume of sales. In other words, it measures how many “days sales” are unpaid. That’s roughly the opposite of a family figuring out how many days of pay it owes in charge accounts. For HP, the DSO stood at 81 as of January, 1974, at 67 by the end of October, 1974, and all the way down to 62 this past May. Meanwhile, a lot of other companies that had gotten just as deep in receivables, and seemed to be trying hard to get out,

weren’t experiencing anything like HP’s reduction.

That raises several questions. In the first place, how did we get “that way?” Next, how and why was HP so effective in trimming receivables? Finally, why is all of this so important?

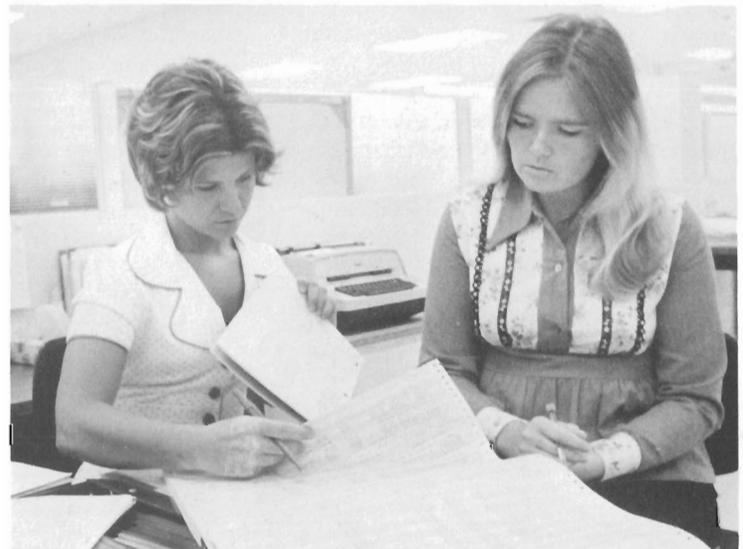
Chairman Dave Packard recently put the first point into perspective for some HP managers. In his view the company got caught up in too-fast growth — “growth for growth’s sake” — in the boom years of 1972-73. Among other things, receivables got out of hand.

Joe Barr, Corporate Marketing administration manager, and Carl Finrock, Corporate Credit manager, see it as a case of growth overtaking the capabilities of the receivables and credit organization at that time, plus some problems created by over-emphasis on getting products out the door.

“We were just beginning to look at ways of automating the flow of receivables information in 1972,” says Joe, “when the boom hit. We soon got into trouble with too much paper to process manually and not enough experienced people to handle it.”

According to Carl, the pressures of trying to keep up led to a rising rate of errors in order processing and invoicing, as well as shipments of products not checked out for quality as completely as they should be. All of these represented internal problems that gave affected customers reasons for not paying promptly. On the other hand, as money got tight, some customers simply chose to delay paying their HP invoices while waiting for their customers to pay them. And so on.

At the Lexington, Mass. office, Collector Pat Clarke, at right, has spotted a paperwork problem developing in an upstate New York account, so she brings it to the attention of Nora Myers, one of two credit specialists at the area office. According to Nora, “The best course is to visit them and have a good housecleaning of all the details. We’ll also go out to pick up their checks, especially the larger ones, and at the end of the month I’ll be out scooping up everything I can get my hands on. I suppose some people don’t like to talk money with clients. But I enjoy it. We do not act tough. However, even where we are being firm I think that’s a benefit to the customer, because it can be a warning signal to them that it’s time to be careful and not become over-extended. Let me add that one of the pleasures of this job comes from working with so many HP people, especially factory people when we’re tracking some information down.”



The whole process peaked about a year and a half ago when HP's accounts receivable exceeded \$185 million. At that point some of the various fixes devised by HP began to take hold.

Among these, but not necessarily in order of application or importance, were the following:

- Training and general upgrading of new people in order processing and collection roles began to pay off in reduced errors and more efficient processing.
- Automated systems tied to the Heart system of order processing began to speed up the flow of receivables data, and accelerate the invoicing of customers.
- Product divisions began to recognize and remedy the various problems created at the shipping end — such as quality problems, partial shipments, and the like.
- Sales regions decentralized the credit collection function, placing more people out in the field offices and nearer their customers.
- Field sales people took more notice of the credit status of customers.
- All participants in the process of obtaining, processing and filling customer orders were encouraged to regard it as a total team effort, each having a responsibility to the customer.
- As business activity began to level off it was possible to spend more time evaluating and contacting neglected business, such as accounts that were more than 90 days outstanding.
- Most important, Dave Packard, Bill Hewlett and others got hot onto the trail of all the elements that were creating a

cash bind for the company — chiefly inventories and receivables. The awareness they sparked and the total team spirit that grew out of it brought forth results that one securities analyst, as quoted in a leading business publication, acclaimed as “nothing short of astounding.”

Short-term borrowings that topped \$130 million in December 1973, and that had been needed to finance the overgrown inventories and receivables, began to shrink dramatically. In turn, top management was able to drop its discussions of a plan to finance growth through long-term debt — which would have cost millions of dollars in interest right off the top of profits and profit sharing. Company indebtedness was reduced to more or less a working minimum.

Wouldn't you say, though, that we're still in some debt to the HP people who made it happen? Here's what several of them have to say about their roles:

“Our major role is getting accounts-receivable information to the U.S. field organization in timely fashion,” says Frank Kopish, systems manager for Corporate Accounts Receivable. “Each week, Diana Desper, A/R systems administrator, provides the field with data on open invoices, cash status, bad debts and other information derived from the Heart system. We presently send this information to the sales regions and the APD and HPA divisions where it becomes the basis for action by the collectors. The program consolidates all of the data relating to a customer so that the picture is complete. It automatically ages open invoices, updates pay-

ment status, and generates the ‘dun’ letters to overdue accounts.”

“We salesmen are supposed to be the good guys,” says Bill Hilliard, Data Systems field engineer who covers the Palo Alto area, “so we try to stay out of the mainstream of the credit check process once we've put the customer in touch with our credit people. Only when there's a problem will we involve ourselves in it. Even then we're there to help the customer solve the problem, not to act as collectors. Actually, I believe the HP collectors do a fine job. Customers know HP is not a wheeler-dealer outfit, and they expect a firm businesslike approach.”

“Our credit collectors are all highly qualified and well able to reflect the HP philosophy when talking with customers” says Steve Jones, Western area credit manager for the Southern Sales Region. “They go about their jobs with a selling attitude — that is, helpful and professional.”

“As an example, take an account that's about 90 days overdue. The customer will have received a first letter at 25 days out that simply notifies him the invoice is still ‘open’. A second letter 30 days later says ‘we haven't heard from you’ and is basically seeking facts. Thirty days later a third letter suggests more firmly that ‘it's time to do something,’ and by then we've also been in phone contact.”

“We're aware that in tight-money times some customers have difficulties getting loans to pay their bills, so we may try to help them find financing. Our philosophy is never to give up on a customer — unless he shows he doesn't care or feel responsible for making payment.” □



How would you like the job of collecting accounts that are overdue by as much as three years? Bas Van Leersum, finance manager for IHP in Europe, left, with Corporate Credit Manager Carl Finfrock, notes that HP Italy has had such a problem in obtaining payments from hospitals. But the payments situation there and elsewhere is improving — dramatically in some cases such as the United Kingdom. “Other than local situations such as hospitals in Italy, the problem of receivables in Europe was due mainly to our own lack of emphasis. Now that we're paying attention to it we are getting some good results. In most of the larger countries, for example, we've appointed country cash managers, strengthened the collection organization, concentrated first on cleaning up older accounts, and recently put a new decentralized automated receivables system into effect. We still have some improvements to make, but we're off to a good start.”

News in Brief



Jerry Carlson

Palo Alto — Jerry Carlson has been appointed to the newly created position of corporate controller for HP, it was announced last month by Bob Boniface, vice president for administration.

Carlson formerly was corporate accounting manager. In the new position, he is responsible for managing all HP accounting functions, preparing corporate operating budgets and coordinating the activities of controllers throughout the company.

He will have a close working relationship with Ed van Bronkhorst, HP vice president-treasurer and the company's chief financial officer.

Carlson joined HP in 1961 as an accountant and held a series of financial and managerial positions before being named corporate accounting manager in 1970. He earned a bachelor's degree in economics from the University of California at Davis and a master's degree from Stanford University.

Palo Alto — HP has reported a 5.3 percent increase in sales and an 11.8 percent decrease in earnings for the third quarter of the company's fiscal year, compared to the same period a year ago.

Sales for the third quarter ended July 31 totaled \$245,880,000, compared with \$233,582,000 for the corresponding quarter of fiscal 1974. Net earnings amounted to \$20,286,000, equal to 73 cents per share on 27,565,278 shares of common stock outstanding. This compares with earnings of \$22,995,000, equal to 84 cents per share on 27,121,886 shares during last year's third quarter.

Bill Hewlett, HP president, said the company's incoming orders for the quarter amounted to \$261,938,000, a gain of 6.1 percent over orders of \$246,798,000 booked in the corresponding period of 1974. For the nine-month period ended July 31, orders totaled \$753,248,000, up 9.2 percent from a year ago when orders were \$689,756,000.

"Increasing pressure on profit margins, particularly in pocket-sized calculators, plus order and shipment rates lower than we had anticipated in several other product categories, resulted in the decline in earnings for the period," Hewlett said.

"International markets have been particularly strong," he said, "with orders from foreign customers amounting to \$381,538,000 for the nine-month period. This represents a gain of 18 percent over the corresponding period of 1974. Domestic orders for the same period have risen 1.5 percent to \$371,710,000."

Sales for the nine months amounted to \$706,256,000, a 10.5 percent increase over the corresponding period of 1974. Net earnings rose 8.0 percent to \$62,651,000, equal to \$2.27 a share. This compares with earnings of \$57,992,000, equal to \$2.14 a share, during the first nine months of last year.

Palo Alto — Carl Cottrell has been appointed corporate customer support manager for Hewlett-Packard Company, it was announced recently by Al Oliverio, vice president, marketing.

Cottrell, formerly deputy director of HP's international group, replaces Jim Arthur, who recently was named general manager of the newly-formed Terminal Products Division.

In his new position, Cottrell has worldwide responsibility for HP's replacement parts operation and coordinates the company's efforts in the areas of customer support and service.

"His extensive international background is particularly valuable in this new position because of the growing importance of overseas markets to Hewlett-Packard," Oliverio said.

Cottrell joined HP in 1952 following graduation from DeVry Technical Institute in Chicago. He has held a number of engineering, marketing and management positions, including an assignment as manager of the company's European operations.

Palo Alto — Advanced Products Division plans to begin assembling some of its pocket calculator products in Oregon early in October, according to APD's Gerry Inman, who will manage the temporary operation.

Initial production will be located temporarily at the McMinnville Division,

approximately 45 miles north of Corvallis, future APD headquarters.

The company's pocket calculator operation will be transferred to its permanent location near Corvallis next summer. Construction is underway on a 154,000 square foot engineering laboratory and manufacturing plant on a 139-acre site northeast of the city.

Eight or nine employees will be hired initially from the Corvallis area, and these employees will be transported each day to and from their jobs in McMinnville.

The first calculator products to be assembled in Oregon will be the HP-55 programmable scientific calculator and the HP-80 financial calculator. Shipments from the Oregon operation are expected to begin in November.

In June the McMinnville Division moved into two new buildings with a total of about 85,000 square feet of space. The pocket calculator operation will occupy only a small portion of that space.

Cupertino, Calif. — The first pocket calculator to combine full financial evaluation capability with advanced statistical and mathematical functions has been introduced by Advanced Products Division.

The new six-ounce HP-22 business management calculator is priced at \$165.00 in the U.S. Its preprogrammed calculating power gives financial, technical and industrial management people a new, more efficient tool for making vital business decisions. It also can be used as a personal calculator to help in evaluating family financial opportunities. The HP-22 will handle calculations ranging from simple arithmetic to complex time-value-of-money computations.

The user of the HP-22 can evaluate a wide range of financial opportunities from several viewpoints to find the most profitable solution for his or her particular business situation.

The handbook which comes with the calculator is a valuable educational tool, providing a survey course in modern management problem-solving, analysis and planning.

The HP-22, like other HP pocket calculators and accessories, will be sold through leading college bookstores and department stores, by direct mail and through HP's calculator sales force. The standard 30% employee discount applies, with a lifetime limit of one per employee.



From the president's desk

As you know, we recently announced the results of our third quarter operations. Although shipments were up somewhat, our earnings were about 11 percent below the comparable quarter last year. The natural questions arise — “What happened?” and “Is it serious?” Let me try to answer each of these questions.

Incidentally, the numbers that I will use will be slightly different from those published in our third quarter earnings news release. The reason for this is simply that we are required to report certain foreign income and expenses differently to the public than we have traditionally treated them in our internal reporting.

Our order picture continues to be relatively weak when viewed in light of previous years' comparisons. Domestic orders for the third quarter were about 2 percent less than those of the comparable period last year. International orders, on the other hand, continued strong, showing about a 15 percent improvement. Taken together, we realized about a 5 percent overall increase in orders for the quarter.

Our shipments did not quite track the order rate, as they increased by only about 4 percent. However — and this is encouraging — we were able to maintain our production expenses in line with shipments. Thus, gross profit (profit before such expense items as R&D, marketing, and administration) showed a 4 percent improvement over the comparable period last year.

Although keeping production costs in track with shipments when shipments are less than anticipated is not easy, it is extremely difficult to control longer-range expense commitments such as R&D, marketing, and administration under such circumstances.

The principle item of increased expense is to be found in our R&D program. As we indicated early in this fiscal year, we felt it was imperative to get R&D expenditures back up to more traditional levels. As a result, these expenditures have been running considerably higher than last year. In the third quarter, they were up 31 percent over the corresponding period in 1974.

Even so, the amount expended is right on target, and reflects Dave's and my view that the future of HP lies in its ability to consistently create new and useful products for our customers — products that can be produced at reasonable cost, and products whose performance justifies their purchase.

In dollars, our marketing expenses were less than targeted but, nonetheless, 12 percent higher than those of last year's third quarter. Likewise, our administration costs were about on target in dollars, but 16 percent ahead of the same period last year.

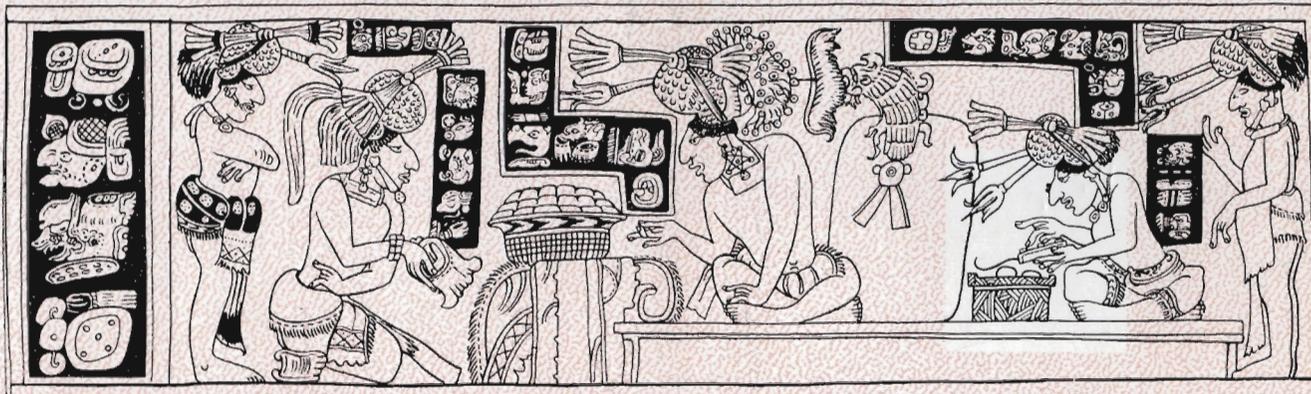
With only a 4 percent increase in gross profit and an 18 percent overall increase in these major expense items, the net result was a substantially reduced operating profit. This operating profit was adjusted by certain items of income and expense from foreign operations, profit sharing, and taxes, to produce the 11 percent drop in net earnings reported earlier.

The third quarter of 1974 was a very strong period, and it is not surprising that it is a difficult quarter to compare against. However, the fact remains that the results were less than hoped for. It is very difficult to point the finger at any particular area, however, there is no question but that the pocket calculator marketplace is much more competitive and difficult in 1975 than it was in 1974. I want to assure you though, that we are not running a gift store in our pocket calculator division (APD). Despite the stress of competition, our profit margins on these calculators are still as good or better than for the corporation as a whole. It is simply that we do not have the unique position that we held in years past.

What does the future look like? The answer to this, of course, depends on the trend of the U.S. economy and the economies of the major trading nations. If we assume that there will be no further degradation, I would say we would do fairly well. I say this for two reasons: 1) We will begin to see the fruits of our intensive R&D program during the final quarter of this year. Quite a number of our divisions will introduce significant new products during this period. 2) We have had troublesome production problems in some areas, and these have held back needed shipments. It now appears that many of these problems have been solved, and this will allow us to ship against the substantial backlog that we picked up during the first quarter of the year.

What is more important, I feel that the impetus from our new products will carry well into 1976. Any substantial improvement in the economy would only tend to accelerate these positive trends.

Bill Hewlett



Reprinted with permission of the publisher from *THE ANCIENT MAYA*, THIRD EDITION, by Sylvanus Griswold Morley; revised by George W. Brainerd (Stanford: Stanford University Press, 1956), Plate 93, p. 400.

The First Pocket Calculator?

With tongue in cheek, a New Mexico engineer copied the above illustration from a book called *The Ancient Maya* and wrote to HP's Advanced Products Division in Cupertino: "I believe this is the earliest pictorial proof of the use of an HP pocket calculator by an ancient Mayan mathematician. Your salesmen really get around."

The original art was on a vase excavated in Guatemala and judged to be about 1200 years old. The man referred to appears to be counting something in the basket. And, sure enough, the tool he's using, the grasp of his left hand, and the poised index finger all suggest a pocket calculator. Since no HP sales personnel would admit to having been around that long ago, some APD people sought a better explanation.

A University of California anthropologist said she thought the object was, in-

deed, a calculating device — perhaps something similar in function to another ancient computing tool, the Chinese abacus. An archaeologist disagreed, and thought the man might be preparing food.

Whether the figure represents a chef or a scientist, it's true that the ancient Mayans were very advanced in their knowledge of mathematics. They had made the great discovery of positional notation, employing the digit zero, at a time when the ancestors of the Anglo-Saxons were still illiterate hunters. The Mayan civilization was also innovative in hieroglyphic writing, astronomy, calendrics and architecture. Paradoxically, they never invented the wheel, nor used metal for anything other than jewelry and ornaments.

Was it, then, just another \$19.95 four-banger?

Measure

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