



Measure

For the men and women of Hewlett-Packard/OCTOBER 1971

COVER:

Is that Batman? Or Icarus? Or one of the teenage Wright brothers? No, that's an HP experimental machinist, Dave Kilbourne of Cupertino Division, in his very own personally designed delta-kite paraglider. Dave is one of just two or three people in the world to indulge in this particular sport. He is the *only* one ever to employ his wings to leap off a cliff, which he did recently at California's Tulloch Lake, descending 700 feet over a distance of two miles to a hotel-beach landing (and a good fee). Dave's machine is also rare in that it can soar on its own, lifting him as high as 1,200 feet above his starting point. He controls it by shifting weight, and gets a top speed of 40 mph and a stall speed of 8 mph for landings. Dave, a former professional water skier, sincerely feels paragliding is not for everyone. Nevertheless, he has instructed AMD secretary Donnita Holland to the point where she is now the world's first woman para flier; he also envisions futuristic scenes of delta-winged daredevils soaring like seabirds among the cliff-bred thermals of the California coastline.



The Wide World of HP

If ever you wanted evidence that individualism still flourished among the inhabitants of the halls of industry, the HP people represented in the following reports would be proof personified.

All of them here have at least one thing in common. And that is a very high level of achievement in their chosen sport. Most of them, in fact, are holders of trophies and titles involving top-grade competition. A few others have obviously had to set their own competitive standards. Either way, they rate an accolade as champions.





Many bowling trophies adorn the home of Jessie Kafka, Solid-State Lab technician in HP Labs. She sports a 185 game average, and has a high sanctioned game of 269 and a 686 set. To average bowlers this is mighty impressive, along with the fact that she has won a number of top-level tournaments. But even a non-bowler can understand Jessie's pleasure at winning more than \$1,200 last year. That's right, she's a professional bowler who stakes her own way—and plays to win.

Winners



Sal Blas, technical illustrator at Santa Clara Division, demonstrates the karate style that has won him quite a few "black belt" championships of regional and national stature. These include the Northern Pacific Nationals in 1970 and the U.S. Summer Championships along with various team championships.

Black belt is the highest order of the sport, although there are ten degrees within that order up to and including Master—of which there are only three in the world. Sal, a first degree black belt, took on karate as a method of self-defense. In competition, he says, the hitting is controlled—like "pulling" a punch—and points are made by correctly showing where to hit and how to hit an attacker.

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Soaring is Dick Cook's way of getting above it all. The AMD R&D section leader logs some 200 hours in his sail plane each year, most of it in contests and cross-country events having a competitive challenge. And he hopes one of these years to represent his native Canada in world competition; he was first alternate for that country's four-man team that competed in Texas last year and is holder of three Canadian records for speed and distance soaring. Dick's preference seems to be for long-distance flights, such as the recent run he made from the Lake Tahoe area of California to Malad City, Idaho. This required more than nine hours in the air and involved at least four major climbs including the initial lift to 30,000 feet aboard the "Sierra wave." In addition to its competitive challenge, the soaring spirit for Dick is an amalgam of solitude, quiet, unhurried viewing—and the willingness of his crew to follow by car and tow him back, if necessary.



Crossing the finish line in first place at the Mid-Winter Regata at Tampa, Florida, is Tom Shaw, HP calculator field engineer out of the Orlando office, with friend aboard a Hobie Cat. Tom has competed in national racing in California and won the Texas Regionals in 1969—little more than a year after he took up sailboat racing. As the photo suggests, his type of boat is excellent for surfing. He has surfed hurricane-blown waves as high as 15 feet and has been clocked doing 21 knots.

HP Winners

Leading a sprint during mid-week track racing is Arvid Danielson, art director for the *HP Journal*. Arvid is a top "A" competitor in the San Jose Bicycle Club, the oldest and largest club in the western states and one loaded with Olympic racers, past and present. To match up to such competition, Arvid cycles to and from work most days, 21 miles each way. Often he will top this off with a couple of evenings of track racing, and weekend road races of up to 120 miles. Arvid notes studies indicate that cyclists have the most efficient hearts and lungs of all classes of athletes. His own heart, he says, slows to 45 beats per minute at total rest, versus the norm between 60 and 70.





John Racine, one of the stalwarts of the Avondale Division receiving department, shows the form that recently brought him a perfect 300 game in official tournament play and the Maryland State championship. A bowler for the past seven years, John carries a 192 average. His previous competitive high was a 277 game and a 700 set.

The sudden prominence of table tennis, thanks to Peking's recent "ping-pong diplomacy," is long overdue, according to Jim Naik, accountant at the Santa Clara Division. Last year Jim won the California State mixed doubles championship, the men's doubles "A" Division, various other local mixed-doubles competitions, and the HP (Bay Area) championship. Table tennis is a very important international sport and very popular in his native India, says Jim. He won a junior championship there at age 17, dropped out of it while taking graduate business studies in the U.S., and resumed the game on joining HP International in Palo Alto. One measure of its rising popularity: more requests for exhibition matches at schools and colleges in the area.



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Champion show horse Mar-Lo's Donlyn, a 5-year-old Morgan stallion, is the pride and joy of Frances Piel, who works in the Loveland Division IC department. The list of Mar-Lo's championships is very impressive—undefeated in dressage, and many firsts in English, Western, Obstacle, halter, and grand championship contests held in Colorado, Wyoming and New Mexico. That's real horse country. What's more, all the training and showing have been done by Frances as an amateur. However, Frances has been at it from age 13 when she tamed a wild horse and then trained it. Since then she has trained many more horses for other people. Her husband, Gene, whom she met at HP, also has caught her enthusiasm for horses, and hopes to compete on his own some day.



Sprinting to a new track record (21.9 sec.) at Bay Meadows, Calif., last May in the 440-yard Golden State Derby Trials is In Vogue, a 2-year-old racing quarter horse owned by Bob Boniface, vice president—Marketing, and his wife Susie. The Bonifaces became interested in quarter horses in 1963 when they bought a small family ranch as a means of giving their children some experience in ranch life. Marketing man that he is, Bob soon saw that quarter-horse racing was a booming sport so they entered into the business of breeding as well as racing. The results: Last year their 8-year-old Pueblo Miss was named Broodmare of the Year in the California Horse Racing Hall of Fame, their 2-year-olds won three out of four major Futurity races on the West Coast, and Bob was elected president of the Pacific Coast Quarter Horse Racing Association.

HP Winners



Barbara Coutts, order coordinating supervisor in the Point Claire (Montreal) office of HP Canada, is what you might call a sports buff — and how. Her original bag was badminton — junior provincial champion for three years starting in 1958, New Brunswick champion in 1959, and Quebec team member to the Canadian Games in 1967. Then she took on the tennis world with the result that she represented Quebec in 1969, won the provincial intermediate championship the same year, and has been ranked among Canada's top five women players since 1968. *C'est la vie!*



When Jim Herlinger isn't concentrating on an auto race of some kind he's likely concentrating on an automotive test system for Automatic Measurement Division. In the former his success is a matter of public record—Formula Vee Pacific Coast champion in 1968 and 1969, and winner of numerous other track and road events. He also entered the infamous Baja race—850 miles of rough going down the rocky Baja California peninsula—three times. In 1968 he took a VW to fifth place in the sedan class of this event. Why does he race cars? "I've always been fascinated by them. I got my first car at 12. But I prefer small cars that stress the driver's skill rather than power and mechanical perfection. For me, a race is a period of intense concentration." Meanwhile, Jim's experience as a race driver and as a former mechanical engineer with the Ford Motor racing division provides perfect casting at AMD where Jim is marketing manager in a project aimed at automated engine-testing systems.



Group of Microwave managers take stock of the big wall chart. From left are: Dick Were (materials), Mac McGrath (manufacturing), Bob Gilmour (information systems), Paul Ely (general manager), Tom Dooley (production control), and Bill Ashton (accounting).

System, system on the wall...



When a systems analyst approaches the problem of improving a business procedure you'd expect him to be systematic. And that he is—very. He documents all of the objectives, the priorities, the costs and the implementation. Then right in the middle of it all he does something that can really open your eyes: it's called "wall flow charting"

That's the technique shown in the spliced photograph above. The chart stretches for more than 100 feet along a corridor wall in Building 6 at the Palo Alto plant. It's the work of Bob Gilmour, manager of information systems for Microwave Division, and individuals from various divisional departments concerned with material flow and order processing.

The idea is that such graphic presentation of the paper work and routing involved in a system gives the participants an overview that can lead to questions and challenges and, eventually, to changes.

It takes about an hour, in Bob's estimate, for someone to get an understanding of the functions and flow of information revealed in the wall chart of a major system.

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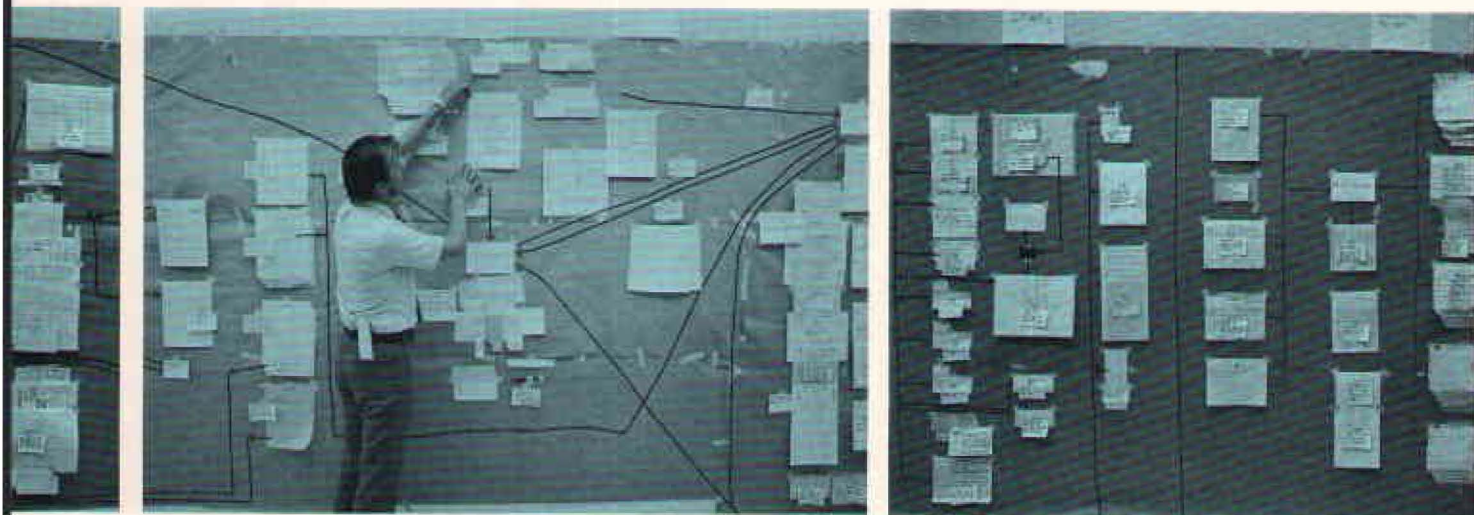
Who has the fairest form of all?



"After that," he says, "they can begin to see the warts and weaknesses. A lot of procedures that were fine when an organization was young can become monsters as it matures. In the short term we can cure a lot of those problems, but the long-term goal should be to retrace the procedure and redesign it for the future."

An example is the Microwave production-floor document system. Until recently this was made up of seven separate documents; today it's a single card that follows a product from the start of production right through to finished goods inventory. Other systems are undergoing similar streamlining, including master scheduling, order processing, and daily time cards.

However, Bob, who got his start in records management back in the '50's with Ford Motor Company and who has instituted many new systems for companies around the world, said the biggest payoffs are not those realized through clerical streamlining: "On the contrary, they come from systems that deal with the problems of managing the business and they can have an impact on the operating success and competitive position of a company for many years in the future."



Awesome complexities of administrative procedures involved in such systems as the flow of production materials and order processing within a division are suggested by this 100-foot-long wall flow chart. This chart happens to depict the interrelationship of Microwave Division systems. Putting finishing touches to it, from left, are: Bob Kalsey, who is responsible for presenting the Sprint system of getting new products into production; Dave Thoennes, manufacturing specs manager; and Bruce Greenan, materials control. Visual analysis of such charts can lead to pinpointing problem areas and development of improved procedures.

Having followed Model 10 all the way from breadboard through prototypes and into production, Loveland line leader Joyce Bosse identifies closely with the powerful new HP calculator. The instrument is also being produced in the Boeblingen plant for the European market.



Model 10: Now it's the World

□ Had you been listening in the right places lately you might have heard such phrases as:

"a real contribution . . ."

"technically well ahead of the field . . ."

"marketing-wise, a smash . . ."

"a unique production approach for HP . . ."

The subject of these phrases is the Model 10 calculator which shapes up as a potentially big winner in the highly competitive world market for programmable calculators. Centerpiece of the all-new Series-9800 calculator system, the Model 10 recently went into production simultaneously at the Loveland and Boeblingen plants.

Of course, all the returns are by no means in yet, so it would be unwise flatly to declare the new system a winner on the basis of the above acclaims. But, with orders mounting strongly, with production well underway, with field sales people really turned on to it, and with doors to

new markets beginning to open up, frankly "things" do look very favorable for the new super calculator and its peripheral host.

But how about the people involved? What does it mean to them?

Joyce Bosse, production line leader for the Loveland calculator, looks on the new machine with a mixture of enthusiasm and sophistication: "I think we all feel the 9810 will be great—is great. But since we've been in the data-products field for almost three years with the 9100, it was not unexpected. At the same time, we've felt the effects of competition here, so everyone was really behind the new project. Quite a few of the girls in final assembly have even learned to program the machine just so they can do a better job of checking it out.

"Keeping the project a secret for two years was a bit of a chore. During the pilot run we kept all visitors out.

And if anyone didn't have name badges and safety glasses on they were really in trouble with us!

"You know, when we finally had the 30 demo units ready—on schedule—I saw we were through experimenting. Now it was the big ball game.

"But one thing struck me as funny then. In getting out the pilot run, we experienced very few problems—except for Number 9. For some reason it gave us difficulty. But we nursed it through. I became quite attached to it."

A Model 10, such as the machine that earned this tender regard from Joyce, is one that can function for more fields at greater speed and less cost than any other programmable calculator on the market. So versatile and flexible is it that it can be customized to almost any calculation problem no matter what the field or discipline. In fact, it's almost easier to detail what it can't do in the way of calculation than to spell out its full capabilities.

Tom Kelley, Calculator Division manager, feels that one aspect of the 9800 system rates special attention. And that is the remarkable inter-company cooperative effort that went into its development, introduction, and manufacturing: "At least a dozen HP organizations have been in-

olved at one time or another. We started simultaneous production of the calculator at Loveland and West Germany—and that took some doing. Boeblingen also provides the tape reader. Colorado Springs contributed the printer—and there's some real industrial magic right there. LED's came from HPA. San Diego brought out a fantastic new plotter for the system. And, of course, we got good help from the HP Labs people.

"The great thing that happened, in my book, was that everything came out on a schedule set two years ago—on the button. A lot of people had to do a lot of things right!"

There's a general consensus that the market introduction was one of those right things. And for HP it was a relative "spectacular," including as it did sales presentations and press conferences throughout the sales regions in North America and Europe all in a matter of a few days.

"It was really something," says Norm Vlass, International sales planner, of his European experiences. "They really put on a show. They had all the literature and news releases translated into eight languages. During our presentations to the salesmen in the various countries, they were taking their coffee breaks to go out and phone customers to

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Series



Optional accessories for flexible 9800 System include, from left: card reader, typewriter, Model 10 calculator, and plotter. Photo at right shows function blocks that plug in to expand the machine's operational capabilities. Each block has its own keyboard template that slips over 15 keys to define their functions. A variety of such software is under development for use in some very promising new markets.

the World Series



tell them they just had to wait and see this system before buying anything else. And when a press conference was scheduled the sales guys went out and practically dragged the editors in if they had to.

"I think everybody there and in the U.S. felt the new system had really put us back in the ball game after a tough inning or two. We couldn't have timed it better. It's not going to be easy for anyone to catch up."

One reason for that confidence is the new technology HP has brought to the calculator field with the 9800 Series. Lou Dohse, production supervisor and former engineering project manager for the Model 10, said one critical element was achieving volume production of highly reliable MOS integrated circuits.

"I could feel waves of concern when I took over," Lou recalled. "There we were pushing the state-of-the-art on various fronts so that we could have a technology that would carry us forward for more than just a year or two. Yet timing was very crucial and resources limited. A few years before, one firm had lost its shirt—about \$11 million—trying to do what we did in IC's. So it was kind of a high stress project."

There were many other concerns as well. Such as how to phase out the 9100 calculator and yet keep faith with existing users. And not put the sales force in too tight a bind between the old and the new system. And—how do you follow such an act? For the moment, let the competition worry over that one. □



A week of press conferences introduced the Model 10 around the world. In the U.S., editors and reporters were given individual presentations: In Palo Alto, David Kaye of *Electronics Design* holds program card while posing question to Orin Hunter, calculator manager of Neely's northern district (at left), and Tom Osborne of HP Labs; above, in New York, Loveland's Dave Cole at left, briefs Larry Resen of *Chemical Engineering Progress*. Meanwhile, European team favored group press conferences such as the Paris gathering at right.



Customer interest in the 9800 System was evident at the recent Wescon show. Here, Loveland's Jack Walden is shown demonstrating speed and versatility of calculator-plotter hookup which set new speed records in graphing equations, printed in all the identifiers, then signed its name. Visitors flocked to the HP exhibit.

News in Brief

Rockaway — The New Jersey Division plans to begin construction next spring of a 52,000-square foot addition to its plant in Rockaway.

"This plant expansion, designed to accommodate the continuing growth of the division, represents the second phase of our gradual development of HP's 70-acre site in Rockaway," John Blokker, general manager, said.

The Rockaway plant now includes approximately 59,000 square feet of manufacturing, engineering and office space. The new construction, scheduled to be completed in early 1973, will bring total capacity to 111,000 square feet.

As part of the expansion plan, operations of the division's Berkeley Heights, N.J., plant will be gradually moved to the Rockaway plant as construction progresses. The two plants are 26 miles apart.

"This move is part of an overall plan to consolidate our New Jersey operations in a single facility, with room to grow as a unified division," said Blokker. "All of the 165 employees presently working in Berkeley Heights are being encouraged to move to the Rockaway plant. Their moving and relocation expenses will be defrayed by the company," Blokker added.

The New Jersey division designs, manufactures and markets regulated and programmable power supplies for maintenance, laboratory and automatic test applications.

Cupertino — TIDE, a text editing software program that automates the process of editing, storing, retrieving and formatting textual information, has been placed on the market by HP. The package is designed to operate on the HP 2000C Time-Shared System.

"TIDE enables a user to reduce costs while improving the quality of documents of any kind, because unlimited insertions, deletions and replacements are quickly and easily made without the retyping necessary to manual methods. Control is maintained over the entire editing process while the latest revision of the text is always available," according to Bob Yeager, marketing manager of the Cupertino-based computer products division.

The flexibility and diverse capabilities of the TIDE program enable it to automate applications such as technical manuals, form letters, proposals, telephone books, catalogs, and price, parts, and mailing lists.

Chester, Pa. — Hewlett-Packard equipment is featured in the world's largest fetal monitoring facility recently installed at the Crozer-Chester Medical Center. Purpose of the monitoring system is to give physicians a better idea of how well an unborn baby is doing, both before and during labor. The HP equipment provides an immediate warning when stressful conditions develop, greatly reducing the chances of birth injuries to the child.

Produced at the Waltham MED plant and based on the fetal monitor developed at the Böblingen factory, the system will keep track of maternal activity in three delivery rooms and six beds in the obstetrics ward. Sale of the system to Crozer-Chester Medical Center was handled by Dave Bell, medical products field engineer of HP's King of Prussia sales office.

Cupertino — Educators and students who use Hewlett-Packard compu-

ters have formed an organization to swap programs, experiences, and ideas on the uses of computers in education.

The Educational Users' Group, sponsored by the company, is believed to be the first one devoted primarily to the sharing of information on the use of digital computers in instruction.

Ed McCracken, manager of the Education Marketing Department at Cupertino, said the group was created at the instigation of many educators using the company's time-share computer systems.

"We sponsor the group because educators at all levels—from elementary through university graduate schools—expressed a desire to exchange instructional programs, curriculum materials and computer-related classroom experiences," McCracken said.

The recently formed organization now has more than 1,500 active members.

The major vehicle for communication between user group members is a monthly newsletter.

Editor and executive secretary of the group is Jean Danver of educational marketing staff at Cupertino. Mrs. Danver, a former educator with an M.A.T. in mathematics from Harvard, previously coordinated two National Science Foundation projects concerned with computers in education at the Kiewit Corporation Center of Dartmouth College.

New York — Hewlett-Packard's annual report to shareowners for fiscal 1970 has won third place in *Financial World's* 1971 Annual Report Awards among electronic firms with sales over \$100-million.

From the president's desk

Usually, I try to write this letter so that it will be of interest to all HP people. This time, however, I would like to direct it more to the management level—that is from the foreman and supervisor all the way up to those holding the top positions in the company.

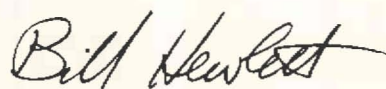
As a member of the management team, you know that your job is demanding, complex, and comprised of many parts. Much of the work that you perform is fairly obvious because it deals with day-to-day problems. One function of your job that is much less obvious, but equally important as the others, is that of management selection and development.

As the person best acquainted with the individuals reporting to you, you have the direct responsibility to recommend the appointment of people for management openings. This is not a light task, and yet the very success of your own job depends on the skill with which you make such selections. In the selection process sometimes there is a tendency to be attracted by the bright and new and to overlook the important, subtle qualities of experience, knowledge-of-the-job, and the long standing working relationships that so often make the difference between top performance and mediocrity. I am certainly not suggesting that we use seniority as a sole criterion. I'm only pointing out that we should not overlook the value of knowledge-of-the-job.

The second point I would like to make can be expressed in very simple terms. If you yourself were being considered for promotion, is there someone trained and just as qualified as you to step into your shoes? It is not at all uncommon when two people are being considered for a position for someone to point out that Tom is a good man but he has no replacement and so we should take Jack instead. Since this happens more often than you think, an effective management training program may be of more importance to you individually than you might otherwise expect.

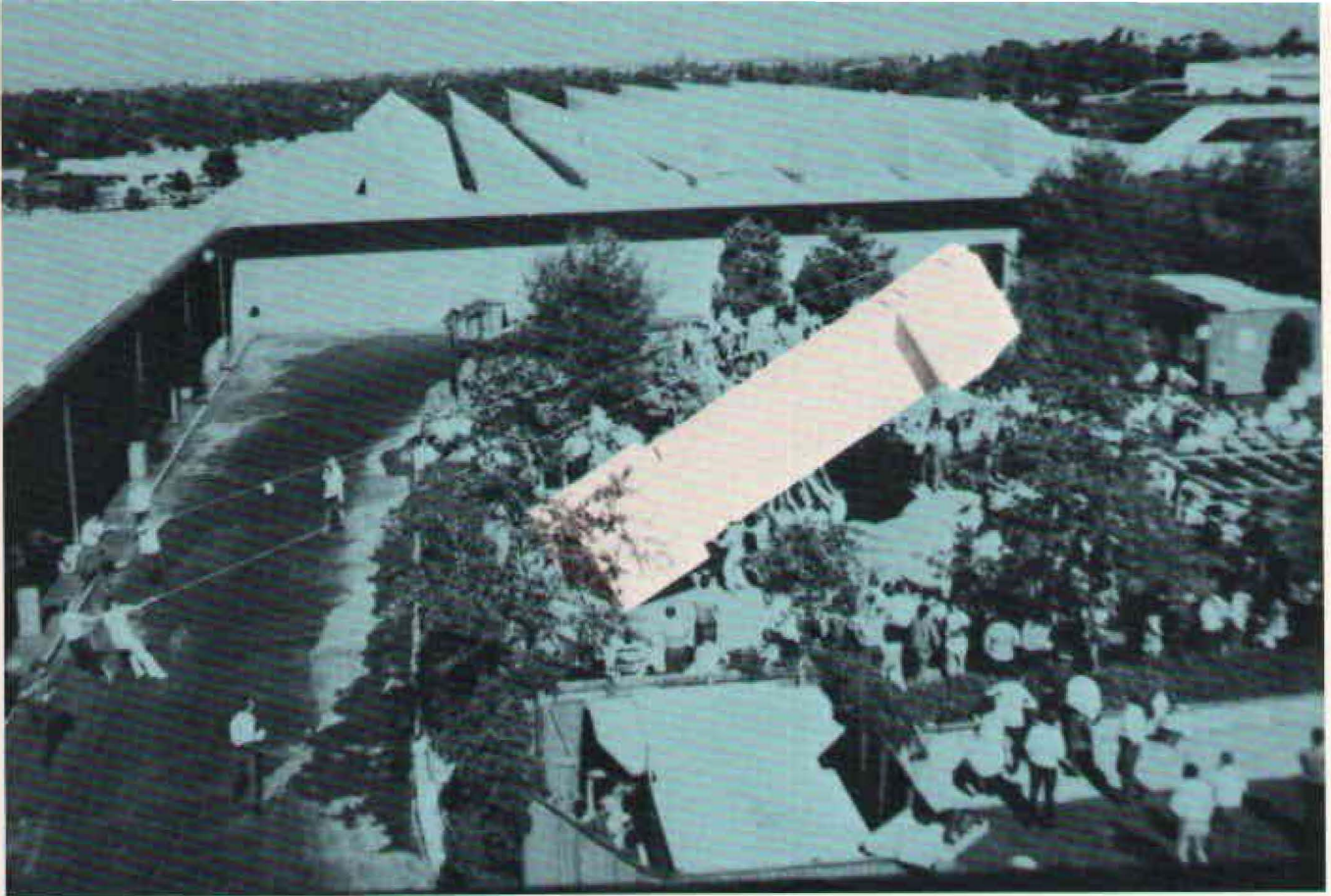
A well thought out training and development program has many other benefits too, not the least of which is the opportunity it gives you to identify and train minority employees for advancement. Such training is not only required by law, but is and has been a basic corporate policy for a great many years. Then, too, we must keep in mind and find opportunities for the many capable women in HP with potential for greater management responsibilities.

The effort you make in planning and carrying out management development programs will pay dividends for you, for the people in your organization, and for the company in the years ahead. It will be time well spent.



P.S. — It is out of bounds to ask how I am doing on training my successor.





From the halls of Microwave Division to the shores of...

John Wayne and the Marines were not really there, but the *esprit de corps* was. The occasion, on a late afternoon in August, was a patio party for Microwave people to kick off the division's campaign to achieve an Initiative Goal of number 1 leadership position in all of its product lines. The monumental figure I elevated at the party symbolized that goal. The photo at left caught some participants in a rehearsal for the big event.

Measure

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