

MEASURE

For the people of Benoit, Colorado

November-December 1982

HP in
Colorado



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MEASURE

"Man is the measure of all things."
—Protagoras (circa 481-411 B.C.)

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Hewlett-Packard Company designs and manufactures computers, electronic test equipment, handheld calculators, electronic components, medical electronic equipment and instrumentation for chemical analysis. Manufacturing facilities are located in 22 U.S. cities in seven states and in 10 cities in nine countries in the rest of the world. HP sales and service offices can be found in more than 80 U.S. cities and (including distributorships) in approximately 200 cities in 70 countries around the world.

ON THE COVER:

HP conducts business with a Western flair in Colorado. Cover photo by Jerry Downs, story by Betty Gerard.

UPFRONT

Hybrid boots and a sense of contentment in Colorado

JERRY DOWNS



Ray Dorst

Those remarkable boots on the cover symbolize HP's blending of business with the Western style in Colorado.

The one-of-a-kind boots belong to Ray Dorst, who transferred from HP's Farmington Hills, Michigan, office to Neely Englewood in 1981 to become area computer manager for the Rocky Mountain states.

Noting that Ray was still devoted to the wing-tip shoes he brought from the Midwest, his new sales force commissioned Tony Lama Bootier in Texas to make this handsome hybrid footwear.

Usually the boots have a place of honor on Ray's office bookcase but he pulled them on for our cover shot.

Reflecting on his adopted state, Ray sees Colorado as a place of special contentment in peripatetic America.

"Everywhere else, it seems that people have a dream spot where they want to go next. In the Midwest, it's California. In Los Angeles, it's Hawaii or Alaska. But people here say 'Hey, I really don't want to move.' They know what they've got in Colorado."

Other HP people helped gather photographs for the Colorado story.

Gregg Piburn's shot on the opposite page was taken under the wheels of a covered wagon at an indoor barbecue during the Loveland Instrument Division's annual review. Greeley Division's Jim Heckel volunteered to photograph The Denver Center for the Performing Arts while in the city. And Joan Sollers supplied her photo of TV crews filming the Colorado Telecom open house, which she had helped organize.

Runoff from heavy rain blocked the road the first time that Desktop Computer Division's Joyce Lincoln scheduled a photo session at John Armour's 40-acre property in Rist Canyon. It was still drizzling when she took the picture on page six on her second try. Her two youngsters saw the shearing of a rare Karakul sheep and took home handfuls of wool to share in class the next day.

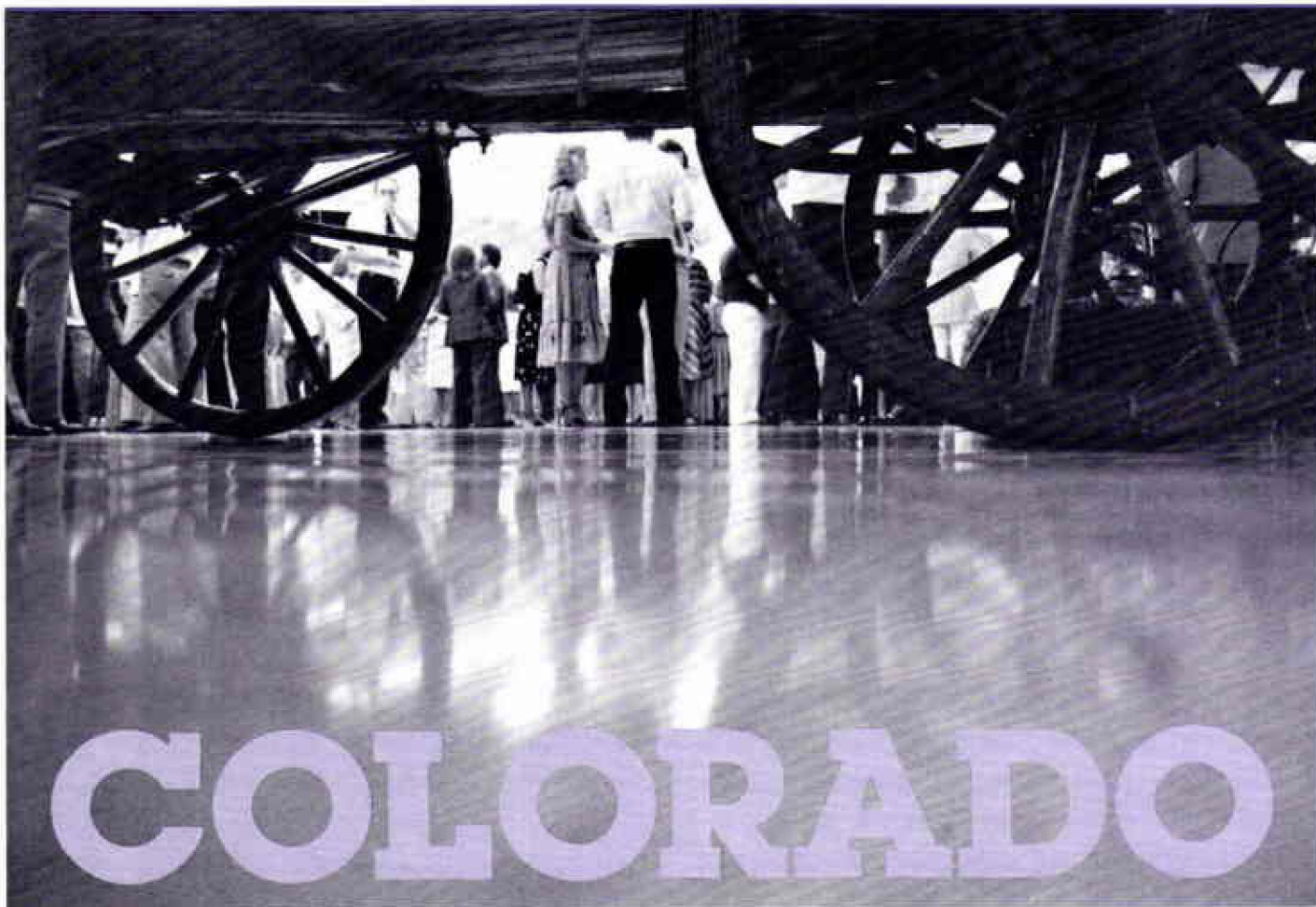
Susan McLean of Colorado Springs Division's graphic arts department went to the Broadmoor Ice Rink, famed training center for Olympic stars, to photograph a colleague's children.

She also asked her co-workers to share snapshots of mountain recreation. From an eye-catching assortment came the panoramic view of HP climbers on page six and the photo on this page. Seven-year-old Jane Hunter, photographed by her daddy Joe among the wildflowers in an alpine meadow, sums up the pleasures of the Colorado outdoor experience with her smile. **M**



Jane Hunter

JOE HUNTER



After more than two decades on the front range, Hewlett-Packard has grown to become the state's largest industrial employer.

If there were such a thing as the HP Colorado brand, it would be stamped on as healthy and independent a bunch of critters as any corporate coral could hope to have.

Today, through the success of products generated right in the state, HP has a concentration of facilities in Colorado second only to the Bay Area:

Five established divisions range along Interstate Highway 25, plus various integrated circuit entities, a software house, and a couple of fast-growing operations ready to buck their way to full division status. Nine of the company's product lines originate within Colorado. And Colorado-based sales and service activities reflect the robust growth which the Rocky Mountain marketplace is still enjoying.

With more than 9,000 employees, Hewlett-Packard is Colorado's largest industrial employer (despite a stampede of electronics companies into the state in the past five years).

Along Colorado's front range, where the plains country ends at the base of the first tier of the Rocky Mountains,

Hewlett-Packard is a name that commands respectful attention.

In 1960, HP became the first large electronics firm to locate a major facility in the state—on a gentle sweep of farmland in the northern Colorado community of Loveland. Two years later another HP plant began in the cultural and resort center of Colorado Springs, along the road leading to the red rocks of the Garden of the Gods. HP's Colorado growth stepped up in 1977 with the siting of a desktop computer facility on the edge of the college town of Fort Collins. The pace hasn't slowed since.

"The question I'm asked frequently is, 'How large is HP going to grow in Colorado?'" says Bill Parzybok, former Loveland Instrument Division general manager who now heads the Electronic Measurement Group, the first group with headquarters in Colorado.

"It's difficult to answer that with a firm number," says "Parzy". "It's really a function of the quality of our business plans, new product ideas, community impact and our ability to at-



Crews from four TV channels in Colorado Springs and Denver videotape the Colorado Telecom test area during an April open house for the community.



Information Resources Operation's Don Kirkpatrick, Mike Pralsner, Judie Neetz and Ray Stover have offices in this modern building in Englewood.



Cross-county skiing near Steamboat Springs makes a scenic backdrop for a map of HP's Colorado locations.

"Our growth in Colorado is dependent on our ability to generate profits and products."

tract and retain talent."

Ask the same question of general managers Don Schulz at the Desktop Computer Division in Fort Collins or John Rikken at the Colorado Springs Division and the implication of a master plan for growth is challenged.

"Our growth in Colorado is dependent on our ability to generate profits and products," Don points out. "People outside the company talk about growth as an independent variable; it's the other way around." Adds John. "It's a function of products, people and inventions in Colorado—not moving entities wholesale into the state."

The vigor of HP Colorado is readily apparent:

In northern Colorado, construction is underway in Greeley on a permanent location for the Greeley Division now resident in the Fort Collins facility. The Engineering Systems Operation, now part of DCD, becomes a full-fledged division on November 1. Twelve miles to the south, Loveland Instrument Division has already spun off one division—the Lake Stevens Instrument Division, just completing its move to Washington state—and has lined up an expansion site in nearby Longmont for its own future growth. New on the scene is the Integrated Circuits Division, recently formed within the Electronic Measurements Group, which is headquartered in Loveland.

South of Denver, the Colorado Springs Division (which celebrated its 20th birthday this spring) will see its Logic Systems Operation receive full division status on November 1. The new Logic Systems Division will eventually move to a new site in the Briar-gate section of town, along with the Colorado Telecommunications Division which arrived on the scene from California in 1981.

(The former Delcon Division is one exception to Colorado's general pattern of self-growth rather than transfers in. "We felt we were too small to pioneer a new community and looked at existing HP communities," explains Al Steiner, Colorado Telecom general manager. "Colorado Springs Division had done an outstanding job of positioning HP as the premier company

in town." One-third of the division's present 385 people came from California.)

In the center of the state, the Neely Englewood sales and service zone headquarters located in a Denver suburb expects to double its space in 1983 to handle growing activity in the Rocky Mountain states it serves. Newest addition to HP's Colorado corral is the Information Resources Operation, also in Englewood. A former major customer for HP 3000s, it was acquired a year ago to strengthen HP's software offerings.

For a time in the late '70s, however, HP's top management was convinced that the time had come to carefully plan future expansion of Colorado activities. Opposition to development was becoming a political issue in the state, and the Denver area had become plagued with smog. The available water supply was hampered by legalities which allowed most Colorado-generated water to flow to 18 other states. When it came time for the Loveland Instrument Division to expand, a site was selected north of Seattle, Washington.

In 1979, reassurances were given by the governor's office that HP's planned growth was welcome in Colorado. Since then the company has purchased three additional sites along the front range and added a 3,000-acre parcel of land to the two recreation sites already owned in the state.

Certainly any limitation of growth in Colorado would be self-imposed by HP—the communities selected for future development have made it quite clear that they are eager to welcome an HP facility, the sooner the better.

The growing HP presence in the mile-high state is inevitably causing the divisions in northern Colorado. Colorado Springs and the sales headquarters to come together as a single force in the political arena.

The Neely Englewood office, located at midpoint, serves as a convenient meeting place for a number of HP task forces studying state issues. A public affairs committee representing all Colorado entities meets there quarterly to monitor legislative sessions. It is

chaired by Bob Shuffler Sr., longtime director of community relations for the northern Colorado divisions.

Perhaps one reason for not placing an upper limit on HP's growth in the state is that Colorado's environment of Western independence, friendliness and self-confidence seems to fit HP's special business style like a well-tooled pair of boots.

A MATTER OF STYLE

What is the source of the proudly independent but relaxed style of HP Colorado?

Old-timers point out slyly that Colorado is more than 1,200 miles east of HP's home base. The company was still experimenting with off-site manufacturing when it set up shop in Colorado—the only facility then located outside of Palo Alto was in West Germany.

The distance between the two U.S. locations dictated that the Loveland and Colorado Springs divisions have their own full complement of functional managers at a time when their California counterparts were still depending on corporate departments for personnel, quality assurance and financing functions. The Colorado divisions thus pretty much ran their own shows from the beginning.

"It's the frontier ethic of people who are proud of their own accomplishments," says Chuck House, who recently left an operation manager's post in Colorado Springs to become corporate manager of engineering. "You find a spirit of teamwork and cooperation and a sense of what can be done without a lot of outside help."

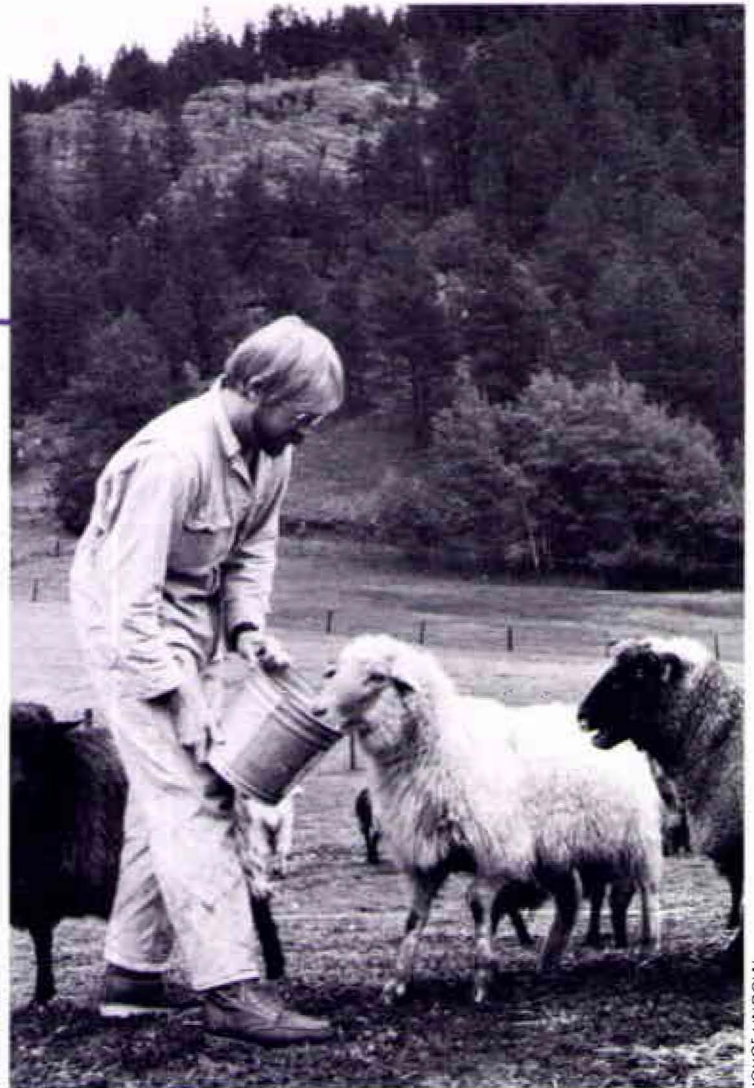
In a friendly Western fashion, cooperation between Colorado divisions cuts across product group lines—whether it's providing some parts that are in short supply or brainstorming solutions for a product under development.

Observers of the Colorado spirit point to the large numbers of Midwesterners who have moved to the state, bringing with them farm-honed skills and the appreciation of what it means to have a good job. With the number



SUSAN McLEAN

In Colorado Springs, Andre Zarb-Cousin talks with his children, Chantell and Jason, before they perform in the annual Broadmoor Ice review.



JOYCE LINCOLN

When DCD's John Armour moved from Ohio to Colorado four years ago, he continued his hobby of raising rare Karakul sheep and selling their wool.



HOOPER TROTTER

HP climbers conquer Ellingwood Peak, one of 54 mountains in Colorado that rise over 14,000 feet above sea level.

"All the roughnecks and mountain rats in the company wind up in Colorado jobs."

of independent small farms in Colorado decreasing, many capable people are leaving farming to find jobs in industry.

The extravagant outdoor charms of Colorado have also served as a special attraction. Tom Kelley, general manager of the Greeley Division and one of the original cadre of HP people who started the division in Loveland, says fondly that "all the roughnecks and mountain rats in the company wind up in Colorado jobs."

"People here like to be referred to as mavericks," says Bill Tippet, general manager of the Loveland Instrument Division. "They're independent thinkers who will challenge things they feel aren't correct."

"We may be wrong in some of the ideas we come up with—but we still come up with a lot of ideas. And we believe in growing good people."

BREEDING WINNERS

The complete breeding line of Colorado-born products is too long to detail in full.

After a modest start manufacturing instruments that had been designed in Palo Alto, the two pioneer Colorado divisions soon began innovating.

Loveland engineers developed the first desktop calculator into a commercial product—an engineering tool so successful that it became the basis for today's Desktop Computer Division. The world-famous HP Interface Bus was the result of cooperation between engineers at LID and the Santa Clara Division. (The recently introduced HP Interface Loop involved a similar Loveland-Corvallis project.)

Other Loveland-developed products with special impact on the company include low-frequency spectrum analyzers, data acquisition systems, board-test systems and electronic distance meters.

The growth of the Colorado Springs Division has come from three product lines: oscilloscopes, which have been automated and brought to a sophisticated level of development from the original transferred instrument, and the display product and logic systems

lines which both grew out of scopes.

The small memory devices which are now the Greeley Division's product line were developed in HP's northern Colorado labs.

So were some successful products now transferred to divisions in other states: the Loveland-developed integrator to the Avondale Division and the HP 250 office computer system from the former Fort Collins Division to the Computer Systems Division. Similarly, Colorado Springs Division's pulse generator product line was the forerunner of the Böblingen Instrument Division's logic signal sources business.

Colorado divisions have also been developing the building blocks of high technology. There are three integrated circuit facilities in the state, still located in the divisions where they originally began but now organizationally part of the two umbrella IC divisions formed within computer and instrument groups.

The Systems Technology Operation in Fort Collins—part of the Computer Integrated Circuits Division—focuses on miniaturization of digital ICs, always directed toward future HP products. STO supplies ICs to eight divisions and expects to add more to the list soon. Its engineers caused a sensation last year when they announced a 32-bit chip under development—promptly dubbed "Superchip" by the press. (The Engineering Systems Operation is developing an advanced engineering computer system based on this technology.)

Two of the three specialized IC operations within the Electronic Measurements Group's Integrated Circuits Division headed by Art Darbie are located in Colorado. Increasingly, they will serve the needs of a number of instrument divisions. Loveland's IC operation has special capability for producing high-precision fine-line resistors and MOS switches with very low leakage. The IC operation housed in the Colorado Springs Division makes bipolar monolithic ICs and has the only thick-film processing production facility in the company. One-third of its total microcircuit output already goes outside the host division.

Already serving a number of HP divisions is Loveland's fabrications operations. Four-fifths of its printed circuit boards go to other HP divisions. Work is currently underway on a state-of-the-art finstrate process to dissipate the heat created when 32-bit chips are used. (LID's shops are also the company's only source for such items as precision meters and the standard corporate knobs used worldwide for HP products.)

Colorado Springs Division is the only internal supplier of the cathode-ray tubes used by many HP divisions in their products.

In addition to growing and promoting their own product lines, three Colorado divisions serve as the U.S. marketing arm for overseas divisions:

LID has a team of four people handling literature, ads, service support and other marketing needs for component measuring equipment manufactured in Japan by YHP. Colorado Springs Division does the same thing and more for the Böblingen Instrument Division: four of BID's small pulse generators are actually manufactured in the Colorado plant and revenues from their sale pay for all marketing services provided there. Sanhei Hattori of YHP and Reinhard Hamburger of BID are currently based in Colorado with local marketing teams.

Queensferry Telecom's entire U.S. sales and service support team, managed by Gordon Reid, is located at Colorado Telecom.

CRANES ON THE SKYLINE

Construction cranes silhouetted against the Denver skyline mark the upward thrust of the state's capital city and largest metropolitan center.

Some two dozen or more high-rise buildings are now going up. Denver has become an oil center in the same league with Dallas or Houston, Texas, and Calgary, Canada. It has the second largest number of federal agencies in the U.S. and serves as the headquarters for many of the more than 700 high-technology firms now represented in the state.

"HP has been like an elephant trying to be discreet: when we move, we get attention."

"It blows my mind how active and dynamic this area is," says Tom Tinkle, general manager of the zone created by Neely Sales Region in 1980 to serve Arizona, Utah, New Mexico, Colorado and parts of adjacent states.

The combined zone/branch sales and service office which was opened in an Englewood industrial park that year is already overcrowded. A growth rate of 51 percent in sales over the past three years has slowed down, relatively speaking, to a still-healthy 22 percent this year.

The Colorado portion of HP's Rocky Mountain marketplace lies along the front range from Fort Collins to Pueblo, and the western slope of the state which stretches to Utah. Aerospace and electronics industries, hospitals and schools, and a constellation of companies that feed the oil industry make up a good part of HP's local customer base.

Tom, who formerly headed Neely's Albuquerque office for 17 years, sees a tremendous growth potential in Colorado due to the manufacturing which is developing in the area.

He's found his own way of relaxing from the galloping pace of the office. The Tinkles have bought a four-wheel-drive vehicle to make it up the towering mountains to go fishing or to watch slalom races. There are special moments, says Tom: "Last weekend in the San Juans we were the only ones sitting in a sea of wildflowers—just listening to the sounds around us."

HP: CITIZEN OF COLORADO

Each segment of HP Colorado has the traditional supportive HP relationship with its local community. In both northern and southern Colorado, the general managers and personnel managers of neighboring divisions meet regularly to improve regional coordination. Since 1978, HP has been increasing its statewide presence.

HP is already represented on a number of state organizations. Bill Tippet is a member of the Colorado Forum, which lends top management expertise to the state to solve its problems. John Riggen and Stan Selby are board members of the Colorado Association of Commerce and Industry (CACI),

which is the only statewide business association. Don Schulz serves on the Colorado Public Expenditures Council which looks at taxation issues.

Recently HP's general managers in Colorado have also begun to host individual members of Congress and state officials at HP facilities for a firsthand look at the electronics industry.

In 1980, HP's Colorado top management team agreed on a set of community relations objectives which emphasized two key statewide issues:

- Colorado colleges and universities have traditionally supplied large numbers of graduates to HP. (Colorado State University and the University of Colorado at Boulder are among the top 10 U.S. schools in numbers of HP employees who are graduates.)

However, the demand from local industry for electrical engineers and computer scientists has taxed the availability of graduates in these fields. The immediate answer is to hire elsewhere—and Colorado's attractions, including reasonable housing, have made it easy to recruit out of state. To look for a longterm solution, an ad hoc HP committee began meeting in 1979 to coordinate relations with Colorado campuses.

Since then, nearly \$300,000 has been contributed by Colorado divisions to the SURGE foundation which supports Colorado State University's televised courses for continuing edu-

cation in engineering.

Al Steiner now heads an HP task force made up of managers from all the Colorado entities. It's looking at ways to help colleges retain engineering faculty and strengthen curriculum. It also makes recommendations on all HP grants to Colorado schools. Al also serves on a CACI committee promoting technical higher education.

- Tammy Johnnie, environmental control manager at the Colorado Springs Division, serves on the governor's hazardous waste task force, which will develop a set of regulations for Colorado that is compatible with federal regulations. She also heads HP's own task force on environmental concerns.

To take a broader look, HP's Colorado entities now are attempting to revise the statewide set of objectives.

"We've sometimes been at odds among ourselves about how involved we should be in state matters and in what areas," says Bob Valdez, personnel manager of the Greeley Division who serves on the public affairs committee. "HP has been like an elephant trying to be discreet: when we move, we get attention. It's time to frame a statement on community and public affairs that concern us so we can be at the front end of some good things."

Squint your eyes a bit and the outlines of that imaginary HP Colorado brand are easy to see. **M**



Nearly one million people each year see first-quality entertainment at The Denver Center for the Performing Arts, which will receive the grant of an HP 3000 computer this fall.

THE COLORADO GARAGE

When Hewlett-Packard's search for its first U.S. manufacturing site outside Palo Alto led to Loveland, Colorado, in 1959, leaders of that small community were eager to talk business.

Loveland banker Paul Rice was one of the local organizers of the Loveland Development Fund, which had already acquired a large farm on the edge of town as a potential industrial site.

Loveland, located at the base of Big Thompson canyon, had been astir with activity in the late 1940s when a tunnel and power plant were under construction in that area to bring water to Northern Colorado.

"We woke up one day and the builders were gone," recalls Paul. "We didn't want to be just a sleepy little bedroom community of 10,000 people. Loveland needed to attract industry, not only for economic reasons but so our young people could find work at home."

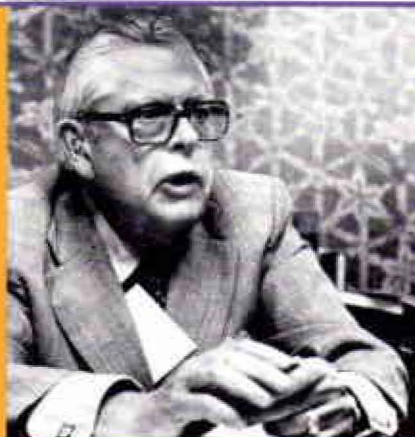
"When Stan Selby came to town looking for a site, I'd never heard of Hewlett-Packard. It seems absurd now, but I got on the phone and checked out that it was a reputable firm. Then we went to work to make a good case for ourselves."

After Stan returned to Palo Alto, he invited a Loveland delegation to come to California to make a pitch about the town to HP management. Paul and appliance dealer Bob Hipps, the future mayor, were asked to represent Loveland, along with the governor's representative for industrial development.

"We had a crash program to get our show together," Paul remembers. "We took pictures of Loveland and explained its advantages as a manufacturing site and a desirable place to raise a family."

"Then we had the local shoe-maker construct a canvas carrying case for our presentation."

"We even tried to give HP the land



Banker Paul Rice

so they'd agree to come, but they insisted they didn't expect something for nothing.

"Years later I had a laugh with Bill Hewlett about that selling job we put together in one week. 'It was crude,' Bill agreed, 'but you were sincere.'"

The first HP employee transferred from Palo Alto to Loveland was Don Cullen, who arrived in February 1960. He set up the first applicant interviewing and pre-training activity in leased space in a downtown garage. "In July Stan Selby came out as general manager and we started in and just kept growing," says Don.

He now manages 1,175 people in LID's fabrications operations and facilities group, overseeing a total of more than one million square feet of floor space—and the company's only natural gas pipeline subsidiary with three wells that provide a backup supply of natural gas.

Production supervisor Mary Sweitzer was one of the first employees who got things going right 22 years ago. "I came to Loveland sight unseen to teach wiring," Mary says. "When I got here I was amazed to pull up at the only stoplight in Loveland and sit there for two light changes while a farmer stood in the middle of the



HP's Don Cullen

street chatting with the driver of the pickup truck ahead of me.

"After living in the Bay Area, I've loved the slower pace of life here."

In the 1970s Loveland debated the desirability of continued growth, but the issue has since quieted down. HP is a benevolent industrial neighbor which has enriched the town with payroll, taxes and philanthropy. About three-fourths of LID's 3,000-plus employees live right in Loveland, which now has a population of about 32,000. They are quietly active in just about everything going on.

To keep from overwhelming Loveland, however, HP has put a cap on expansion there. "How much do we want to be in any one community?" asks LID General Manager Bill Tippet.

"If you take the commonly accepted rule-of-thumb that one manufacturing job creates four or five other jobs in the community, you can see that we're already a major factor in the local economy."

"Loveland has been good to us and vice versa, but we feel good citizenship requires that we not wear out our welcome. If we're not cautious about moderating our growth here, we could destroy some of the very things that attracted us in the first place."

PHOTOS BY GREGG PIBURN

YOUR TURN

Invites you to question or comment on matters of importance to Measure readers.

BLOWING SMOKE?

You really blew it with your answer to Gary Berger (*Measure*, September-October 1982) about cigarette smoking. If the burning eyes, stuffed-up nose, sore throat and all-pervasive stench were the only concerns, maybe your response could be defended. But what about the well-documented health effects (increased blood levels of carbon monoxide, increased heart rate, heavy metal deposits in lungs, etc.) to the majority of us who don't smoke?

And what about the cost? According to Dr. William L. Weis of Seattle University, each smoking employee costs the employer approximately \$5,000 per year. In a company the size of HP, we're talking about \$100 million a year.

Why doesn't HP tell its employees, most of whom do not smoke, what they're paying each and every year in medical and other benefit costs for the "right" of a minority to indulge their habit? The non-smoking majority might take up arms and demand their real rights—a smoke-free workplace and benefits plan. We'd all be better off—smokers, non-smokers, stockholders, the company and our customers (better products from a more reliable workforce).

Smoke is far worse than just an annoyance to non-smokers; it compromises our physical integrity and costs us money.

GEORGE R. SCHROLL
New Jersey Division

P.S. Actually, HP does have a smoking policy: If it affects a machine, ban it. If it only affects people, ignore it.

MISSING YOUTH

I really liked the article on HP youth programs that appeared in the July-August issue. But I feel the HP-sponsored Junior Achievement job education summer program was also worth mentioning.

My involvement with the group has given me the opportunity to work with social-economically deprived kids and has given me a great deal of personal satisfaction. The company's connection to this program is strong thanks to the efforts of Ray Demere, Gordon Wheaton and many others who have kept it going since the early '70s.

RAY SATURNIO
Stanford Park Division
Palo Alto

"The abundance of good material I uncovered on various types of interaction between HP locations and high schools made the article both gratifying and frustrating to do," said writer Betty Gerard. "Due to space limitations, I therefore narrowed the subject to academic involvement, which meant reluctantly leaving out some fine community youth programs." Don't worry, Ray and Betty. With HP's variety of activities in this field, there'll be many articles on this topic in the years ahead.—Ed.

THOSE LAB CREATURES

In the July-August issue of *Measure* you ran a story about "Creatures of the Lab," discussing the code names that our new products carry throughout their development stages. You indicated that Scientific Instrument Division's Mimir (an ultraviolet spectrophotometer) was named after the Norse god of the rainbow.

According to Edith Hamilton's *Mythology*, Mimir is really the guardian of the well of knowledge.

JAMES ROBINSON
Stanford Park Division
Palo Alto

ANOTHER CREATURE

Soledad became the lab name for a Waldbronn Division product, but not for its connection to the town in California which is famous for its prison. The derivation is sole—being the only one of its kind, unique—and dad—for diode array detector. The product was a revolutionary, stand-alone photodiode array detection system for use in liquid chromatography.

TONY BAINES
Waldbronn

KEEP IT UP

In all the years I've been reading *Measure* it never occurred to me to tell someone what a fine publication it is!

So I'd like to thank you and ask you to keep up the first-class standards.

Those of us who enjoy reading appreciate it.

BOB ASHFORD
Business Computer Group
Cupertino

Address letters via company mail to Editor, *Measure*, Public Relations Department, Building 20BR, Palo Alto. Via regular postal service, the address is *Measure*, Hewlett-Packard Company 20BR, PO Box 10301, Palo Alto, CA 94303-0890. Try to limit your letter to 200 words. Please sign your letter and give your location. Names will be withheld on request. Where a response is indicated, the best available company source will be sought.



Through mini-fairs and friendly counseling, HP buyers encourage minority vendors

On the Umatilla Indian reservation near Pendleton, Oregon, MCP Inc. assembles and tests printed circuit boards for the Vancouver Division. HP helps them keep inventory low through a just-in-time system of regular orders.

Immigrants from Asia who are unfamiliar with English can learn about assembly work at LeeMAH Electronics from instructors who know their native languages. The Chinese-owned firm, located on the edge of San Francisco's Chinatown, does assembly work for a number of HP divisions throughout the West. It had 17 employees when the first HP order was received in 1971; today there are 275.

Data sheets and manuals for a number of Bay Area divisions are produced by Delta Printing, owned by Hector Lopez—who learned both English and the chemistry of printing after his arrival in the U.S. 12 years ago. "HP is our number one customer," he says.

Minority-owned firms such as these, along with all small business, have found encouragement at Hewlett-Packard for many years. In 1972 Bill Hewlett reminded all HP buyers "to make every effort to determine the potential" of minority business enterprises that contacted them for orders.

In 1979, the U.S. government decided not to rely merely on the good will of companies to provide an equal opportunity for suppliers. Public Law 95-507 required that a subcontracting plan—with special reference to small, minority-owned and women-owned suppliers—must be submitted with each federal contract exceeding \$500,000. Murray Brunt in Corporate Materials Management now serves as the focal point for reporting by all HP's U.S. divisions.

That's the current legal underpinning for a number of cordial relationships which divisions have developed with minority vendors over the years.

In 1973, the first year that HP collected records, U.S. divisions reported some \$51,000 in purchases from small minority-owned businesses. By 1981 that figure had risen to \$9.3 million—with the percentage of business done with minority vendors multiplying 10 times in that period.

Scott Whiteman, purchasing manager for the Loveland Instrument Division, is one of the HP people active in area councils which bring together large corporations and minority entrepreneurs. Denver's council came up with the idea of smaller, more frequent mini-fairs introducing a dozen or so minority vendors at one time.

In addition, HP divisions provide management tips, financial and technical assistance. LID supervisors Spence Futtrell and Betty Acock recently gave a clinic on soldering and cable assembly at Hopi Electronics in Polacca, Arizona, a regular supplier.

Colorado Precision, an Hispanic-owned machine shop, received the surprise donation of \$4,000 in surplus equipment from Colorado Springs Division. Ernie Hendrix, black co-owner of the successful Thrift Data Service, Inc. in Santa Clara, California, talked over with corporate buyers his plans to expand from data entry to microfiche.

Thanh Ngyuen from Vietnam started to do assembly subcontract work for HP in his garage while working as a techni-



RON GEDDIS

HP purchasing agent Dorothy Hamel talks with vendor Sid Dawson at Data Systems Division mini-fair she organized in July. The Microwave Semiconductor Division held a similar event for minority vendors in September.

cian on General Systems Division's swing shift. Today his Vinatekco is a full-time business employing 35 people.

Hank Nagao, Data Terminals Division purchasing supervisor, has coached vendors of all backgrounds. "We bring in the owner, go over engineering drawings, explain HP policies and procedures and our workmanship standards," says Hank. "If someone says 'Let me see how you do it' we go down to the line for a look."

Through efforts like these, HP continues to give minority entrepreneurs a chance for business—and they take it from there. **M**

When a Stanford Park Division quality team polished off a noise problem in a deburring area, life was no longer

THE SAME

When you look at the molten aluminum, shimmering and silvery white, you'd never guess that it could create a major noise problem in Stanford Park's manufacturing operation. The molten metal is transformed into the frames and struts which eventually house HP equipment.

After the pieces of aluminum cool down from the die-casting process, they move to the deburring operation where rough edges are worn down so the metal's finish is sleek and smooth. It's noisy work.

Deburring takes place inside a machine that's shaped like a giant motorized wash-tub. The aluminum frames tumble around with chunks of resin-bonded media and a solution of soap and water.

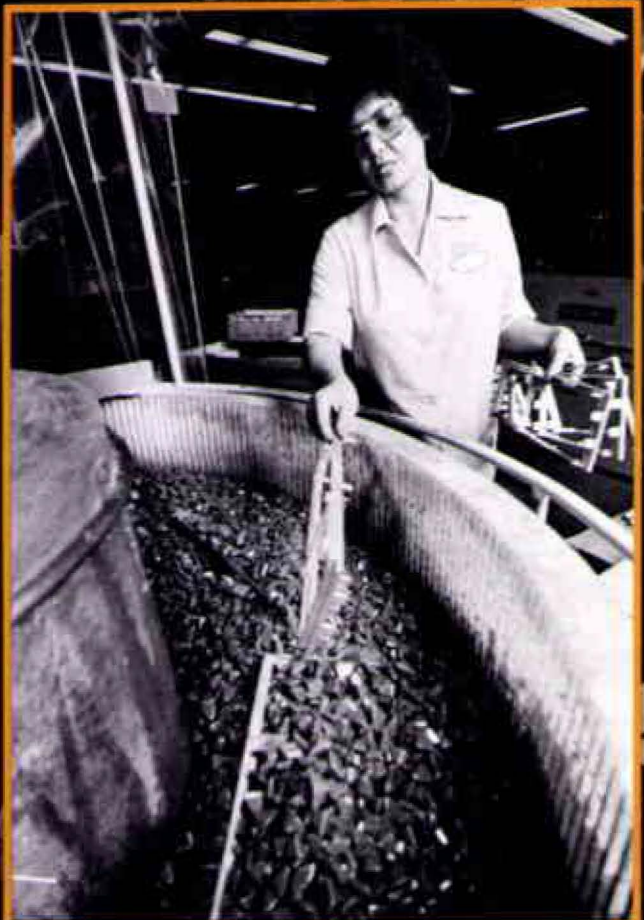
The polishing chunks resemble pieces of gravel smoothed by years of wave action on a lonely beach. In fact, they're man-made "rocks" which arrive at HP in large paper sacks. It takes just 15 minutes of agitation in the vibrating machine for the chunks to remove all the aluminum burrs.

But tumbling those rocks and pieces of aluminum in the six-foot tub used to create a deafening roar. At a noise level of 94 decibels, ear protection was required for everyone working in the area.

That was before a quality team put its collective mind to the problem. The solution developed by the "Metal Finishers" was to enshroud the vibratory machine in clear plastic strips like those used on loading docks to keep out the elements.

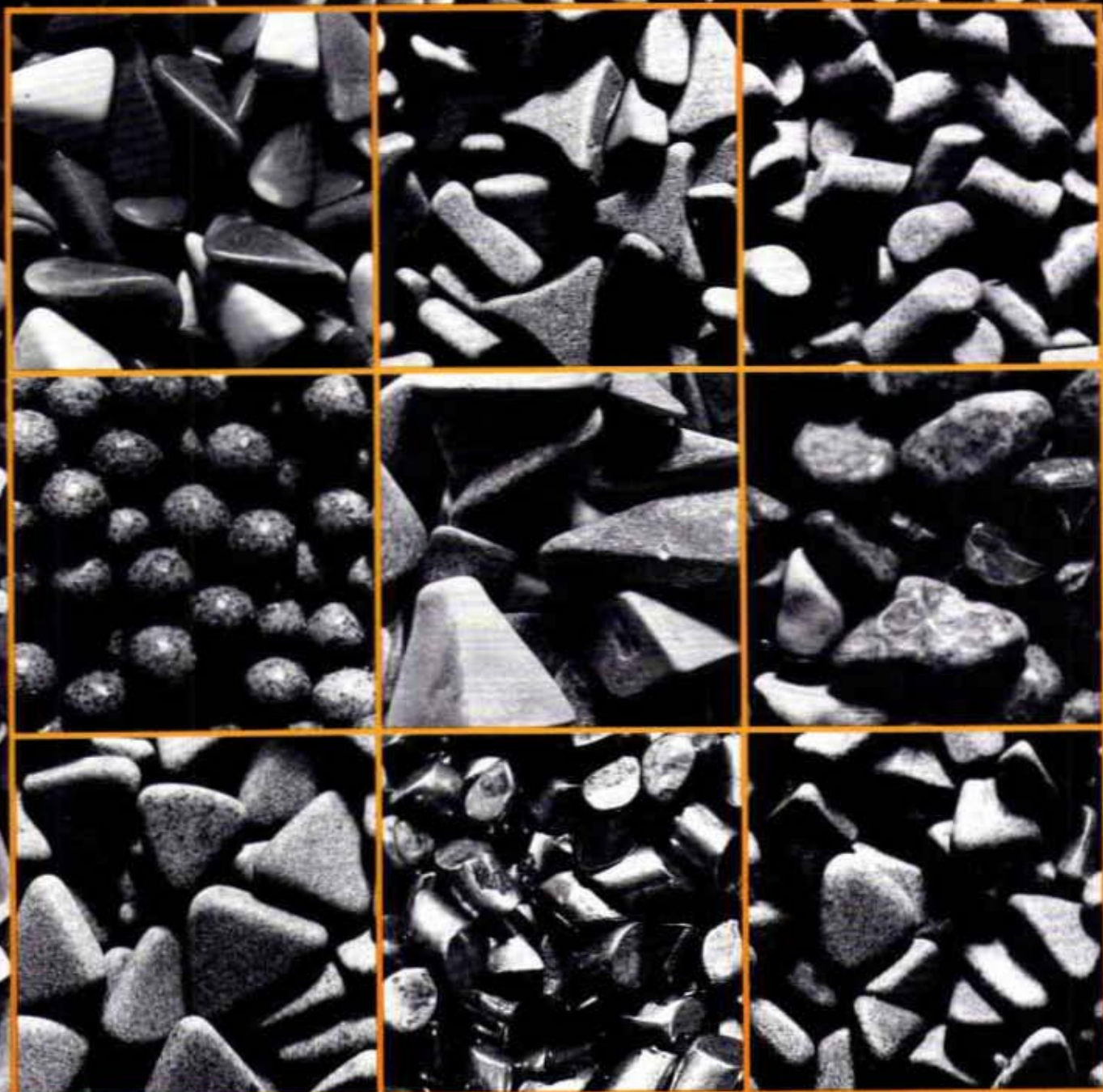
The clear strips allow employees to see and get at the aluminum frames as they tumble. Best of all, the heavy plastic reduces the noise level to 84 decibels, one decibel below HP's allowable maximum and less than half as loud as state and federal laws allow.

Thanks to the efforts of the quality team, it's now a lot quieter in the deburring area in Palo Alto's Building 12. **M**



Emily De Leone's quality team solved a noise problem with this Stanford Park deburring machine.

OLD GRIND



What appear to be multicolored stones are actually chunks of man-made polishing media used in HP deburring operations to remove rough edges from cast metal parts. Each size and shape is suited for a special finish.



TED KURIHARA

The last places to look for company co-founders Bill Hewlett and Dave Packard are their back-to-back offices at 1501 Page Mill Road in Palo Alto.

You're more likely to find either of them on the road these days... making a keynote speech, attending a board meeting, accepting an award, or serving on a national science committee.

The following pages give a glimpse of many of their activities and current interests. It's been almost five years since the pair moved into a state they label "semi-retirement," and neither Bill nor Dave has slowed down much at all.

Semi-retirement means that Dave still serves as chairman of HP's board of directors and Bill as a board member and chairman of the company's executive committee. Hewlett-Packard is, in fact, one of few major U.S. corporations in which the founders still play an active role.

If they're "in the office," they're most likely to be found in HP's original 1501 Page Mill complex. They also have available desk space in the new Corporate headquarters building next door. But today their focus on the company has changed from day-to-day operations to long-range issues—issues of importance not only to HP, but also to industry, government, community and the environment.

Bill and Dave are probably most visible in their public HP roles at the annual shareholder meetings each February. They continue to visit HP sites whenever their travel schedules take them near a facility.

In addition to the HP board meetings, they both attend the annual gathering of division general managers and hold spots at the end of the two-day agenda to share their opinions of the company's performance and direction.

The pair constantly attract their share of attention. Both were included in an October *National Geographic* magazine article about California's Silicon Valley. There are constant demands on both Bill and Dave for speaking engagements and press interviews on a wide range of topics.

Although they may not be part of the daily operations at HP, they are still very much in the picture.



RUSSELL ILLIG

Bill and Dave in 1959

What are Dave Packard and Bill Hewlett doing today?

"I wanted to go fishing this summer, but I just couldn't fit it

in my schedule." Dave Packard, who celebrated his 70th birthday in September, insists that he is very content overhauling the water system at his second home or solving a problem at the Monterey Bay Aquarium.

The aquarium is Dave's pride and joy these days. Scheduled to open in the fall of 1984, the aquarium is a blend of science museum and research facility. The \$25 million project involves most of the family, and "an average of about a day a week for me," says Dave.

The rest of his time seems to disappear in a sea of business, political and community activities, scheduled by his right-hand as-

sistant of the past 23 years, Margaret Paull.

Some of his time is spent attending board meetings—HP's and others. Hewlett-Packard's board meets six times a year (most recently in Corvallis, Oregon) and, as chairman, Dave develops the agenda and runs the meeting.

He's also a member of the boards of four other companies: Caterpillar Tractor, Boeing, Genentech and Standard Oil of California. "The first three meet six times a year, and Standard Oil meets monthly," says Dave. "And they can be time-consuming when travel is involved." Boeing's board convened in London in conjunction with an air show early in September, and Dave traveled with the Standard Oil board touring that

"As an engineer, I'm afraid I'm obsolete," says Bill

Hewlett with a devilish twinkle in his eyes. "I try to keep track of some of HP's new product development projects, but it gets harder every year."

It's been about five years since Bill gave up his titles of president and then chief executive officer to John Young. The intervening years have brought many outside projects to attract Bill's interest—above and beyond the status of the company's current R&D efforts. And obsolete is the last word most people would use to describe Bill Hewlett.

One corner of his desk is piled high with a report for the National Academy of Sciences. He's serving on a panel of business leaders

and scientists that has been studying the impact of technology transfers. "This one-year project was requested by Congress to see if the U.S. should prohibit transfer of technologies to other countries, and what impact foreign technologies have on the U.S. economy," says Bill.

It's not the first time he's worked on an academy project. Two years ago he coordinated a report on the five-year outlook for science in industrial research and development.

Bill is in his third year as chairman of the board of trustees of the Carnegie Institute of Washington. He's been a board member since 1971. The organization runs five labs in the U.S.: the Hale Observatories, the Department of Plant Biology

company's Indonesian facilities for 10 days later that month.

He's a member of the prestigious White House Science Council and serves on two council subcommittees. One works closely with the Department of Defense looking at advanced technology weapons. (Dave spent three years in Washington, D.C., as deputy secretary of defense, rejoining HP in 1972.)

The other subcommittee has taken him to many of the Department of Energy's federal labs with such notable committee members as Edward Teller and John Bardeen. The subcommittee will report on the labs' roles, their management structure and their relationships with industry and universities.



Dave shows HP's Dick Love some features of the Monterey Bay Aquarium, a family project scheduled to open in two years.

BRAD WHITWORTH

Both Dave and his wife, Lucile, are active in the Wolf Trap Foundation in suburban Washington, D.C., and serve on the performing arts center's board. A fire in April 1982 destroyed the facility, and the foundation is looking for funds to rebuild. "On some of my recent trips to Washington I've been trying to drum up some

support in Congress to help rebuild the facility," says Dave.

A complete list of the awards he's received would take up several columns of this article. He recently received the 1982 John Fritz Medal, often called the highest honor in professional engineering (Thomas Alva Edison and Alexander Gra-

ham Bell were recipients in the early 1900s). And in ceremonies at the U.S. Military Academy in October, Dave was presented the prestigious Thayer Award for distinguished service to the nation.

Despite all the honors and business connections, Dave Packard is a man who's happy when he's close to the land. He's a director of The Nature Conservancy and co-chairs a program designed to preserve the 11 most-threatened ecosystems in California.

Through the David and Lucile Packard Foundation, about 30 conservation groups receive grants. The family-run foundation also supports privately funded programs and organizations in art, education and health. Dave, Lu and the



CHRISTIANE RABY—STUDIO TECHNIC

Country manager Kleber Beauvillain welcomes Bill to groundbreaking ceremonies at HP's new French headquarters.

on the Stanford University campus, the Department of Terrestrial Magnetism and Geophysical Lab in Washington, D.C., and the Department of Embryology at

Johns Hopkins University in Baltimore.

His interests aren't limited to science or the lab environment in which he grew up. Bill was one of 32 mem-

bers of a Commission on the Humanities which considered such topics as curriculum from primary school through college and sources of support for the humanities.

In March of this year, Bill spoke before a large crowd on the "human side" of management at the University of Notre Dame (he was awarded an honorary doctoral degree there two years earlier). Bill's speech emphasized the special attention paid to employee participation and development during HP's first 43 years—"a period that saw the company grow from just two people to one that now employs more than 65,000."

"Bill has always told employees to develop outside interests, whether it's

sports or opera," says Madie Schneider, Bill's secretary for the past 21 years. "I think he recommends that to people because he has so many avenues of interest himself and feels that engineers in particular should be well rounded."

To call Bill Hewlett multifaceted is a bit of understatement. In a recent *Forbes* magazine article, historian Arnold Toynbee calls Bill "amazing. He knows more history than half the historians in the world."

Before a September trip with a Stanford alumni group down the Danube River, Bill did his homework. "It takes a lot of reading to be able to understand and enjoy the history of a region."

He's also an avid botanist,

Dave and Bill

four Packard children all serve on the foundation's board.

Daughter Susan and her husband Lynn, a chemical engineer, live in Socorro, New Mexico, where he works for the New Mexico Petroleum Research Center on a project to recover oil from shale using carbon dioxide.

Son David was a professor of classics at U.C.L.A. and the University of North Carolina before starting his own company. It specializes in word processing and typesetting systems for scholarly books. "It's based on HP computer equipment," adds Dave with a smile.

Daughter Julie is project manager of the Monterey Bay Aquarium. Daughter Nancy and her husband



Dave talks with a Colorado Springs TV crew at the U.S. Air Force Academy upon receiving the Thomas D. White National Defense award.

NURI VALLBONA

Robin also work at the aquarium, handling exhibit design and photography. All three are marine biologists.

Dave and Lu Packard are also proud grandparents six times over, with a seventh expected very soon.

Dave Packard's home to-

day is either the Los Altos Hills house he and Lu built in 1958 in the middle of 80 acres of apricot orchard or the new second house at Big

a subject he didn't study when he was in school. "My interest got started in my World War II days in Washington, D.C. Having spent most of my life on the West Coast, I was unfamiliar with the trees that grew in Washington's Rock Creek Park."

Armed with the proper books, Bill quickly learned how to identify the Eastern trees (and just as quickly mastered the Western trees when he returned to HP in 1947). Bill then turned to wildflowers. "I just ran out of trees," he states matter-of-factly. Bill filled the void by photographing and cataloging six volumes worth of flowers found near his vacation home at Soda Springs, California, and the ranch properties he and Dave Packard own in California and Idaho (see story

on page 17).

Where many people would be content to know just the common names of wildflowers, Bill's collection is organized by genus and species and includes the date and altitude where each was found. Three of Bill's photos accompany this story.

Bill, who turns 70 next May, is an outdoorsman at heart. "I love to ski, but my knees are a bit worn out." He and his second wife Rosemary have a house in Sun Valley, Idaho, that serves as family skiing headquarters in January. He also fishes, hunts, hikes and climbs mountains.

Bill's first wife, Flora, died in 1977 and he remarried a year and a half later. His original family of five children is now matched by Rosemary's five children

from her first marriage. "I kid her all the time that we may be even in the children category, but I'm nine ahead of her when it comes to grandkids."

Bill's daughter Eleanor, who lives in Paris, has four children. His younger daughter Mary and her husband have one child and live in Montana.

The three Hewlett sons all worked briefly at HP, but none has joined the company for a career. Walter, father of two, finished his doctoral degree in music at Stanford University. Jim does computer work for Lockheed in the Bay Area. The youngest son, Bill, received a Ph.D. in medicine from Stanford and is now working on his M.D. degree. He has three children.

The family's foundation,

the William and Flora Hewlett Foundation, contributes to numerous charitable, scientific, religious, literary and educational organizations. Their variety seems to match Bill's own diversity of interests.

Bill is still active on the boards of Chrysler Corporation and Utah International. His list of awards, honorary degrees and trusteeships is extensive.

When his schedule permits, Bill enjoys a more typical retirement activity: a round of golf. "My scores are slowly improving," admits the engineer who holds the patent on HP's resistance-controlled oscillator, "but the standard deviation is still quite large."

Sur on the rugged California coast south of nearby Monterey. Dave can often be found, dressed in work clothes, driving a tractor through the orchard or working on his new power generator at Big Sur.

"When it's done, I'll be producing about 25 kilowatts of electricity from water power," says Dave. "That's enough for all our domestic needs and enough to make me independent of PG&E (the local power utility)."

His innovative, do-it-myself attitude has its roots in the early days of Hewlett-Packard. "When we first got started there weren't many subcontractors in the Palo Alto area, so we had to learn to do things ourselves." HP's own die-casting and plastic-molding operations are

proof of that learning process.

His eagerness to do much of the work himself is also evident in many of the projects at the aquarium. "We decided to learn how to build the exhibits ourselves, so one of our first steps was to find out how to manufacture artificial rocks." The process involves locating an interesting stone formation, making a pliable latex mold in the field and returning to the workshop to turn it into a fiberglass and cement panel.

Whatever the project, Dave Packard has the energy to get it done.



Bill uses an HP distance meter for surveying on ranch property near San Jose, California.

CHARLES O'REAR © 1982 NATIONAL GEOGRAPHIC SOCIETY

THE OTHER HEWLETT-PACKARD PARTNERSHIP

The HP brand can be found on more than computers, instruments and calculators. It's also on cattle from the San Felipe Ranch operation... a Bill Hewlett and Dave Packard partnership that dates back to 1954.

It started as a 6,300-acre ranch southeast of San Jose to raise a small herd of purebred polled Herefords. "It began as more of a hobby or a diversion for us," says Bill. It's since grown into a large commercial cow-and-calf operation with 50 employees and thousands of head of cattle on California and eastern Idaho property that totals more than 64,000 acres.

"It takes a fair amount of time and attention to keep things running smoothly," says Dave. "While Bill and I leave the day-to-day operations to the staff, we are involved when it comes to budgets, planning and reviews."

Ernie Brionza agrees. The ranch's business and tax manager says, "It's run just as tightly as the 'other' HP, with monthly operating statements, annual budget reviews and the works."

While the popular conception of a ranching operation has been glamorized by J.R. Ewing's Southfork Ranch on the television show "Dallas," Dave brings things quickly into perspective. "This is a working ranch. They still round up cattle on horseback and use branding irons to mark the herd." But both families also use the properties for vacations, family outings and hunting trips.

The ranch today comprises four pieces of property collectively known as the San Felipe Ranch. There are 13,000 acres of grassy valley in Idaho (with leased grazing rights on another 100,000 acres of government land in Idaho and Montana); 7,000 acres in California's fertile Central Valley and a nearby 19,000 acres in the rolling foothills close to Merced; and 25,000 acres (including the original ranch property) near San Jose.

Veteran HP employees can remember the first "Day at the Ranch" held at San Felipe in 1955. At the end of the day a handful of HP employees and their families gathered around the bonfire where Dave Packard led the singing and played his accordion.

The days of the ranch outings are long gone due to the explosive growth Hewlett-Packard Company has seen in the last 43 years. And, much like its electronic cousin, the other Hewlett-Packard partnership has grown impressively from its modest beginnings. **M**



White globe lily



Rock star



Steer's head

Bill Hewlett is an accomplished botanist and photographer. His six-volume collection of wildflower photos are catalogued by genus and species.

PHOTOS BY BILL HEWLETT

CLOSEUP

Zooms in on the ever-changing world of HP people, products and places.



EL PALO ALTO



BRAD WHITWORTH

CAN'T SEE THE FOREST FOR THE...

... two monkey puzzle trees. The two trees dominate the landscape at HP's new 110,000-square-foot computer-software research and development center in Pinewood, England.

The monkey puzzle tree is native to Chile and was introduced into Britain in 1796. Since trees in the family Araucariaceae sometimes produce exclusively male cones or female cones, hopes around Pinewood are for lots of baby trees in the years ahead.

... Tall Tree Tribute given to Hewlett-Packard by the Palo Alto Chamber of Commerce for community service. The chamber praised HP's charitable contributions (which totaled more than \$700,000 in Palo Alto last year), its affirmative action programs, flexible working hours and volunteer involvement in the community. (The words "palo alto" mean "tall tree" in Spanish.)



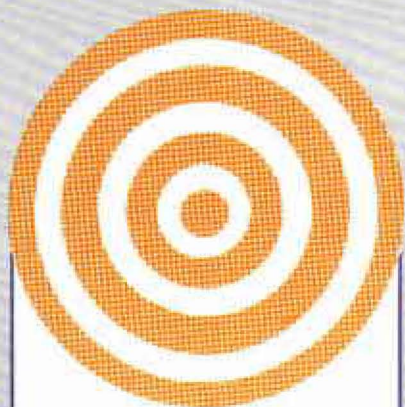
RICHARD JESSUP

A BREATHTAKING EXPERIENCE

The 10,000-foot mountain peaks around HP's division in Grenoble, France, are enough to challenge even the best mountain climbers and skiers.

But HP's Jean-François Porret, Jean Voboril, Richard Jessup and Daniel Menier decided to challenge the 20,000-foot heights of the Himalayan range.

The group spent nine days preparing for their final climb by hiking in the Annapurna range in Nepal. Then they scaled the snow-covered Thorung Peak and, when they got to the top, skied down. "To our knowledge, it hadn't been skied before," said Richard. "Oxygen isn't needed at those altitudes, but the pace is exceedingly slow as you climb. Even going downhill, we had to stop at every turn to catch our breath."



ON TARGET

When the National Rifle Association held its regional high-power rifle competition in Colorado, Desktop Computer Division's Bart Bobbitt and his son came up with a winning combination: an HP 9845B desktop and a special program to tabulate scores for the competition.

Rick, a senior at Loveland High School, was looking for a computer programming challenge for a summer class he was taking. Bart, a service engineer who's also an avid high-power rifle competitor, suggested the 9845B and the competition.

Rick's 30 hours of programming really hit the mark. Aggregate scores were ready for posting minutes after individual matches—a job that usually took one hour. And the final awards ceremony took place an hour earlier than in the past.



GOTTFRIED PLANCK

HP STEELS THE AWARD

The European Steel Association presented its 1981 award to Hewlett-Packard for the Waldbronn, Germany, building. "The building represents an exemplary answer to the urgent demands for a cautious combination of economically necessary industrial buildings and protected landscapes," said the committee. "The lightness and free form of the vast building was obtained through the use of steel construction."

HP's Waldbronn facility is in the foothills of the Black Forest and opened its doors in July 1978.



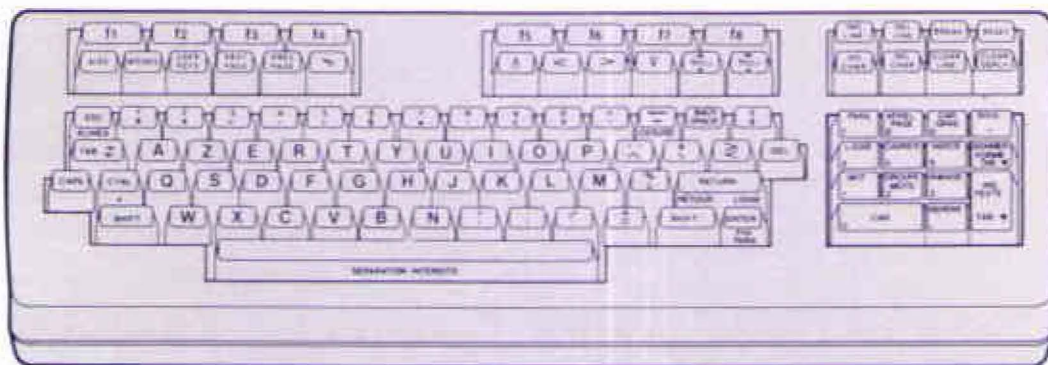
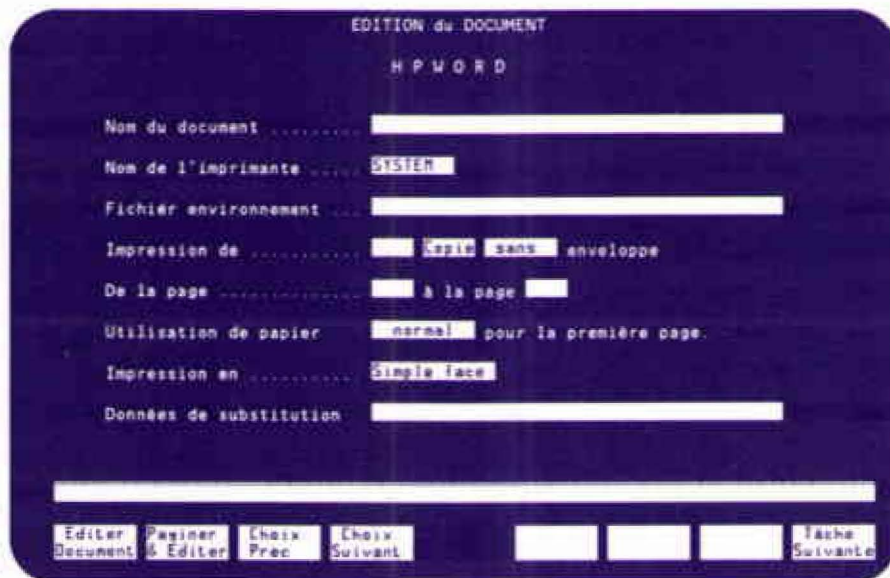
FRED EMMERT

A FISHY STORY

Fourteen kids will remember their deep-sea fishing trip off the California coast for a long time. They all caught the limit of 15 rock fish, and these are two of the five salmon caught that cloudy Sunday.

All 14 children were from Friends Outside, a United Way agency that provides assistance to the families of prisoners. Their escorts for the outing were HP employees who belong to the HP Sportfishers Club in the Bay Area.

Besides the fish, lunch, and all the ice cream they could eat, the kids took home a complete freshwater fishing outfit for the next adventure.



EST-CE QUE VOTRE ORDINATEUR PARLE FRANÇAIS?

(DOES YOUR COMPUTER SPEAK FRENCH?)

Or German? Or Italian?

Does it really solve the special problems that are unique to Australia? Or the Netherlands?

Does its software meet the needs peculiar to a manufacturing environment?

Customers have been asking those questions of Hewlett-Packard with increasing frequency. "It's to the point that having software for the local market can determine whether or not people buy hardware from HP," says Marc Brun, manager of HP's application center in Grenoble, France.

The Grenoble center (along with those in Germany, Australia, Italy and the United Kingdom) got its start in November 1981 to provide a closer tie be-

tween the company and its local computer customers. Since then HP has started to open a center in the Netherlands, has signed an agreement to start a center in Taiwan, and has plans on the drawing board for several more internationally.

The application centers form the nucleus of HP's new Application Marketing Division (AMD), part of the Computer Marketing Group. Centers will also be established during the 1983 fiscal year in many North American markets, fitting into the existing field computer area organizations (see March-April 1982 *Measure*). The six existing Information Resources Operation field centers will be incorporated into local application centers.

The area application center, in its mature form, will provide a complete range of services—field marketing, consulting, training, project management, customization and post-sales support—for HP's major application products.

"It's one thing to sell a copier, typewriter or calculator—hardware that performs essentially the same way for everyone," says AMD's general manager, Bob Bond. "It's quite another job to sell a financial or distribution application package that must work in the heart of a customer's business."

"These application centers serve to bring our technical expertise geographically closer to our customers," says Bob. "We're really a field organization

with a strong connection to the factory."

At application centers outside the U.S., much of the emphasis is on localizing existing HP software. Factory products (such as HPWORD, Production Management/3000 and Materials Management/3000) are modified for local use in a three-step operation.

First comes tailoring the program to overcome differences in cultural and business practices. A general accounting program for a U.S. company would not resemble the same package for an English firm. Taxes, depreciation and even terminology would differ greatly, although both would have English language screens.

The next step is to alter the language, where appropriate. "We've seen a lot of French customers at trade shows who simply pass by your booth if they see English labels appear on your terminal," says Marc. "The words 'clear display' aren't clear to them."

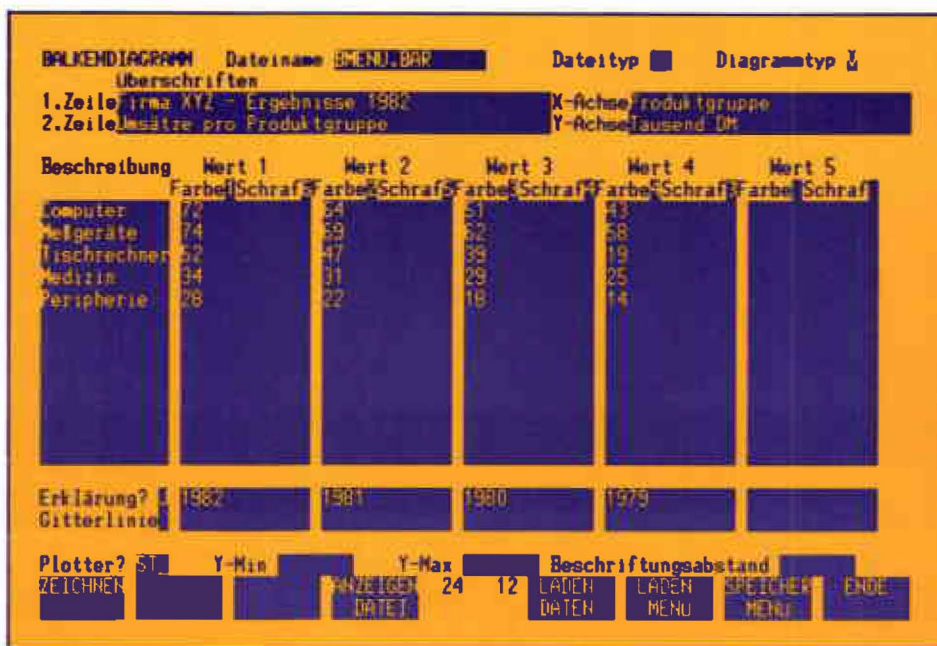
The first two steps (typically accounting for about one-fourth of the localization effort) are simpler and less time-consuming than the last. The biggest chunk of the work is spent producing manuals and other documentation.

"When we produced the German version of Materials Management/3000 it took us a year and a half to write the manual," says Jochen Leonhard of the marketing group in the Böblingen, Germany, application center. "Since then we've been able to speed up the process considerably by using our own word processing and by printing the manuals on the HP laser printer."

Graham Barnes, who heads the seven-person staff at the U.K. center at Pinewood, compares his operation to a division in many respects.

"The application center is much like an HP division, solving customer needs in technical and business computer areas," Graham explains. "But where a factory organization usually has a worldwide marketing responsibility, the products we're working on are designed to meet local needs."

When the first set of application centers got off the ground in Europe, Bob Lewin helped them get started. He was systems engineering manager in Geneva at the time and is now part of Bob Bond's AMD management team in



The German version of GRAPH/125 is complete down to the umlauts (two dots) over the vowels. The software was modified at the center in Böblingen.

Cupertino, California.

"I've seen an ever-increasing cooperation between the centers and the originating software divisions," says Bob Lewin. "No modifications, other than language, would be made to a product without discussions and agreement with the software division. Often the division people may want to include such modifications in future products."

And divisions are making it easier to modify their software from the start. "Since the European market is about 33 percent of the company's total market, it's in the best interest of the product division to design software which can be modified easily by us," says Jochen. "The products which are most easily modified will move to market most quickly."

"The application center is much like an HP division, solving customer needs in technical and business computer areas."

The centers also provide HP's support team with a crew of local experts who know the software products almost as well as the division people who originally wrote them. "When you local-

ize a product, you really acquire an in-depth knowledge of what it's supposed to do and how it can help customers," says Marc. "After you've taken it apart, you really know what makes it tick."

"That means there is now good local expertise, which wasn't always the case. A French support engineer can now call the application center and talk to a product expert in French, instead of trying to reach the division programmer who originally developed the program. We're really an extension of the factory organization."

As new products are developed at such spots as the Manufacturing Systems Operation and Financial Systems Operation, engineers there consult regularly with the centers' staffs.

"It's difficult for people thousands of miles away to know the climate of the local market," says Bob Lewin. "That's why we have people who live and work in the area making recommendations to the divisions about future products and applications."

Offering products in local languages is, in some cases, a government concern. French law requires marketing literature, operator manuals, service cards, and the like to be printed in French. "Putting the legal issue aside, it makes sense to localize products," says Bob. "With a very tight market for technically skilled people, it's likely that the people who will be trying to implement our products won't have a strong technical background and won't speak English. When our product is localized, it's less of an obstacle to implement."

Providing a localized solution helps HP gain a stronger foothold in markets

VOTRE ORDINATEUR

outside the U.S. "We want to establish HP as a German company in the eyes of our German customers," says Jochen. "We divide our competition into three broad categories: local German companies; IBM; and other U.S.-based companies like Digital, Wang and Data General.

"While German companies offer an advantage in providing 'real' German products and documentation, they lack the international breadth and experience that HP has.

"Since IBM has been competing in these international markets for more than 40 years, they've faced many of the problems already," says Jochen. "We're in at least the same position as most of our international competitors, perhaps slightly ahead."

In countries where HP doesn't have a manufacturing organization, the application center has changed community perception of the company. "We're no longer seen as 'just a sales company' in those countries," says Bob Lewin. "Our application center people are asked to speak at colleges and universities about job opportunities. It's certainly helped our recruiting effort, and it's opened some career opportunities for people in HP's European country

organizations."

The establishment of an area application center also adds a profit center where none existed before.

When a customer purchases a software product through the local sales organization, the application center and the originating division share the revenue.

The push to establish the centers came from HP's increasing efforts in the business computer field. The rules that apply to selling a computer to a technical person don't apply when you

"Establishing the application centers was the best marketing move the company has made to meet customers' needs."

try to put a terminal in the hands of an office worker who has little computer training.

"Products used to be designed following a set of international standards that applied primarily to data entry work," explains Marc. "Now that we're entering the commercial market we're dealing with secretaries, for example, who are used to typing on a particular keyboard. If you're going to improve their productivity, you've got to provide the keyboard they like and make certain the keys and the screen are written in the local language.

"Establishing the application centers was the best marketing move the company has made to meet customers' needs," says Marc.

"The market is ripe," says Graham. "Projections are that the application centers will be one of the fastest growing segments of HP's computer business in the next five years."

"HP's advertising promotes the concept of providing 'solutions' to our customers," says Bob Bond. "With the establishment of application centers in the field I think we've now got the mechanisms in place to provide the hardware, software and application support our customers need." **M**

INFORMATIONS RELATIVES AU DOCUMENT

HPWORD

Nom de l'opérateur _____

Nom du document _____

Auteur _____

Sujet _____

Créé par _____ le _____

Modifié par _____ le _____

Dernière impression le _____

N° page en cours _____ Nb de pages du document _____

Afficher Variable Editer Document Page en cours Première Page Copier Document Renommer Document Detruire Document Tâche Suivante

Translating the labels which will appear on the terminal screen accounts for only one-third of the localization effort. It takes more time to modify and translate manuals and training materials.

JOHN YOUNG

HP's president reviews several new books which discuss HP's management style.

Most Americans today are aware of our country's declining effectiveness in world markets and particularly how many of our basic industries are losing out to Japanese competition. American management practices that once were admired and copied by firms worldwide are now being cited as a major part of the problem.

This situation has spawned quite a collection of new management books, each trying to offer some new insight or solution to remedy this situation. I thought you might share my interest in just how prominently HP has figured in these books as an example of how to do it right.

There's a common theme cited by the authors. Hewlett-Packard's concern for people sets us apart and contributes greatly to the strength of the company.

Probably the best-selling book of the group is *Theory Z* by William Ouchi, U.C.L.A. professor. More than one million copies have been sold in two years with translation to six languages. The book compares the traditional Japanese company (Type J) with the classic American prototype (Type A). Ouchi points to the key differences in people management as being distinctive. He defines a Type Z company as a special American hybrid that combines some of the best characteristics of both traditional types. HP is the prominent Type Z company and our complete corporate objectives are included as Appendix A.

Both Raymond Dreyfach in his *Making It In Management the Japanese Way* and Richard Pasquale and Anthony Athos in *The Art of Japanese Management* analyze Japanese management through the Matsushita Corporation, well known for its brand names National, Panasonic and Technics. The founder is widely regarded as being responsible for most of Japan's management philosophy. Again, HP is cited as one of these few American models that combines the high regard for people with the other business fundamentals. So we see this is a characteristic of successful companies whatever their native country.

Author Alan Toffler, well known for his *Future Shock*, has a book out called *The Third Wave*. In his latest effort, he looks at new companies and ideas at



John Young briefs Air Products' James Graybill on HP's computer strategy at a breakfast for manufacturing company executives held recently in Palo Alto.

BRAD WHITWORTH

the cutting edge of change. He specifically notes HP's Colorado Springs plant as a model on how future work will be organized.

What will perhaps become one of the most influential books on management in quite some time is *In Search of Excellence* by Tom Peters and Bob Waterman. The book will be published in November, but I have an advance copy and we have been using some of the material in our management training classes through cooperation of the authors.

Like many good ideas, the thrust of this book is deceptively simple. The authors identify 15 companies as being excellent both by measured results (sales, profits, growth) and according to evaluation by their peers. HP is one of those companies, along with the likes of Boeing, Caterpillar Tractor, Procter & Gamble, Johnson & Johnson, IBM, 3M and others. Obviously these companies are in quite different business areas and have little in common from a product point of view. What is interesting is the authors' finding that these companies have a very common set of characteristics that bind them together and at the same time set them apart from the broad cut of American business.

The shared characteristics are too extensive to summarize fully here, but a few are worth noting. Once again each company's focus is on people as the key

to organizational results with management practices related in some way to improving employees' effectiveness.

Another characteristic is the emphasis on entrepreneurship and maintaining a small-scale organization within a large company—like HP's division structure.

A focus on hands-on management is also common among the companies. Absence of paperwork and a "let's-try-it-and-see-what-happens" attitude are preferred to bureaucratic staff studies.

In an organization like HP, where much of what we do changes frequently, such commonly held and fundamental values are extremely important. They provide a solid foundation for the future which seems to make variables such as product technology, organizational structure and competition much more manageable.

It's flattering for HP to be identified as one of America's leading companies. It should give all of us a little more pride in what we do, but perhaps more importantly, cause us to understand and preserve these values as we grow.

John

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NEWSCLIPS

Recaps the newsworthy events, changes and achievements within HP.

THIRD QUARTER

Hewlett-Packard Company reported an 18 percent increase in sales and a 32 percent increase in net earnings for the third quarter of the company's 1982 fiscal year ended July 31. For the first time, quarterly net earnings topped the \$100 million mark.

Sales for the third quarter totaled \$1.11 billion, compared with \$936 million for the corresponding quarter of FY81. Net earnings amounted to \$105 million, equal to 83 cents per share on 125 million shares of common stock outstanding (compared to net earnings of \$79 million, equal to 65 cents per share on 122 million shares for the same quarter in FY81 after restatement for the accrual of employees' compensated absences). Incoming orders for the quarter were \$1.04 billion, up 14 percent from orders of \$910 million booked in the same quarter of FY81.

CHART CHANGES

The Logic Systems Operation within the Colorado Springs Division will receive full division status on November 1 as part of the Electronic Measurements Group. Dave Dayton becomes GM. The Colorado Springs Division under John Rikken will be restructured as a single division with no operations. Two new divisions will be formed within the Computer Marketing Group. A new Application Marketing Division managed by Bob Bond will direct activities of application centers worldwide (see article, page 20), effective November 1. Bob Rogers has joined CMG to establish a new Personal Computer Distribution Division which will consolidate worldwide sales and field

marketing for personal computers and calculators. In the Technical Computer Group, the Engineering Systems Operation (now part of the Desktop Computer Division) changes to the Engineering Systems Division on November 1. GM will be Fred Wenninger. On the same date, two new operations will be created within the Information Networks Division as part of structural changes. Operations managers will be Bruce Woolpert, Office Systems Cupertino, and Wim Roelandts, Grenoble Network Operation. In the Computer Terminals Group, the Data Terminals and General Systems divisions have been combined into a new Personal Office Computer Division under Bob Puette as GM; Larry Mitchell is GM of a new Roseville Terminals Division.

NEW HATS

Steve Helland succeeds Max Schuller as operations manager for Personal Computation Singapore. New marketing managerial posts include Gil Reeser to the Microwave and Communication Instrument Group; Milt Liebhaber to the Components Group; Dick Watts to a newly combined marketing department at the Santa Clara Division; Rosalie Tobes to datacommunications marketing at the Information Networks Division; Erik Lessing to the new Logic Systems Division; Charlie Baker to the Colorado Springs Division; Nancy Valby to Computer Systems Division.

NOTEWORTHY

David Packard is the recipient of the 1982 John Fritz Medal, considered the highest award in the profession of engineering. Andover Division's HP 4700 PageWriter cardiograph won an I-R 100 award for 1982, given annually by *Industrial Research and Development Magazine* for 100 significant technological products. HP placed

sixth overall in the 1982 Chariot Cup national track championship finals in Palo Alto, California, in July. HP has obtained an option to purchase 300 acres near Fallbrook, Calif., as a possible expansion site for the San Diego Division.

NEW PRODUCTS

HP's first portable personal computer, the HP 75C, was introduced in August by the Corvallis Division. It weighs only 26 ounces and is small enough to fit in a briefcase, yet offers 16K bytes of random-access memory built in. Also new from Corvallis: the HP 10C, the lowest-priced (\$80 U.S.) slim-line programmable calculator ever offered by the company.

The new HP 2700 series of high-performance color graphics terminals from Data Terminals Division will off-load graphics calculations from a host computer and can display multiple views through as many as 255 "windows" on the screen.

Inexpensive price is the feature of two new introductions: a battery-operated HP-IL/HP-IB data-acquisition and control unit from Loveland Instrument Division, and the new HP 78351A patient monitor from the Böblingen Medical Division. The patient monitor can be pre-set to measure heart rate limits and other factors to allow virtually instant monitoring when turned on.

From the Network Measurements Division comes the new HP 8340A synthesized sweeper, which marries the capabilities of a wideband synthesizer with those of a wideband analog sweeper. It has an ultra-broad band covering 10 MHz to 27.5 GHz. The new HP 5987A gas-chromatograph/mass-spectrometer system from Scientific Instruments Division is believed to be the first to provide real-time component identification and probable structure analysis (which can be applied to compounds not in the existing database).