MEASUR

For the people of Hewlett-Packard

May-June 1986

Great escapes! Page 11

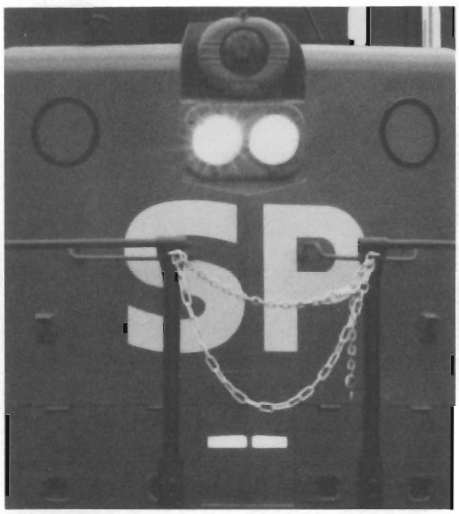
HP makes an oil-out effort

From Vietnam to HP: A moving life story

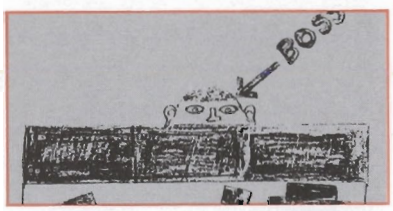
How do our minority numbers stack up?

THE INSIDE STORIES

page 9



page 19



page 21

FEATURES

DEPARTMENTS

MEASURE

Editor: Brad Whitworth

Associate editor: Betty Gerard

Contributors: John Monahan

Managing editor: Jean Burke

Art director: Annette Yatovitz

Circulation: Kathleen Gogarty

Measure is published six times a year for employees and associates of Hewlett-Packard Company. Produced by Corporate Public Relations, Internal Communication Department. Address correspondence to *Measure*, Hewlett-Packard Company 20BR, PO Box 10301, Palo Alto, California, 94303-0890 USA. Report changes of address to your local personnel department.

Hewlett-Packard Company is an international manufacturer of measurement and computation products and systems used in industry, business, engineering, science, medicine and education. HP employs more than 84,000 people worldwide.

OIL

TONY SCHANUEL

As prices for crude plummet, oil companies look to technology ... and HP ... to improve productivity.

When Conoco's Tip Murrell flies to an offshore oil platform, an HP-75C travels with him. Loaded in the handheld computer is a custom-designed chip with software that quickly lets him decide whether a newly drilled hole in the ocean floor will be a producing oil well.

In an industry where an offshore drilling rig can cost as much as $100,000 a day, even a few minutes saved in interpreting test results means money in the bank. Money in the bank is becoming a scarce commodity for oil companies. Faced with a worldwide glut of oil, they've watched with dismay as the price of a barrel of crude oil has plummeted from a high of about $40 on the open

market to a low near $10.

As prices drop, oil companies place a premium on reducing costs, increasing efficiency and improving productivity. "This may be a boon to HP," says Clark Straw, area general manager for HP's sales territory that spans the southern halves of Texas, Louisiana and Mississippi. About one-fourth of HP's sales in the area come from the oil, natural gas and petroservices industries.

"Our business continues to look reasonably good. We are, in fact, helping the industry find new ways to be more productive through automation," says Clark.

Case in point: Houston, Texas. This is a city that oil built. Chrome skyscrapers dominate the skyline—monuments to the oil money that built the headquarters of such firms as Shell, Tenneco, Pennzoil, Transco and Exxon. Refineries and petrochemical plants (originally developed to handle the crude oil from Spindletop, the massive oil field in southeast Texas) line the shores of Houston's ship channel along its 50-mile route to the Gulf of Mexico.

While consumers around the world applaud the cheaper oil, businessmen in Houston face a big headache: companies bailing out. The city's Sunny South Oil & Gas sold its reserves last year. The firm once had 100 employees and $120 million per year in revenues, but has since decided it's not worth drilling marginally profitable wells.

Even the major oil companies in Houston have felt the pinch. Most have curtailed hiring; many have had layoffs. Virtually all are actively looking to technology and automation to increase their productivity today.

Virtually all oil companies are looking to technology and automation to increase their productivity today.

At Shell Oil's downtown headquarters, David Dodd oversees a room filled with HP gear. Shell's manager of computer control engineering helps design computer systems for the company's production people in the field. From a terminal in that Houston computer room, engineers can call up a well in California to find out how much oil it's producing.

"There are two major ways to improve the company's competitive position," says David. "First you must go look for oil in places where you haven't looked before. And second, you've got to get the most out of what you've got."

Shell has a reputation for using technology to do both. The company was the first to develop a floating platform for offshore drilling. It was the first to use steam injection to coax more oil out of an old field (see story on page six). And it was the first to employ carbon dioxide injection for the same purpose.

Shell also uses an HP 1000 computer system in a van to check the health of many of its 6,200 producing wells in California's San Joaquin Valley. The van drives to the oil field and runs a battery of tests to determine the well's efficiency. The on-board HP computer system analyzes the results.

On the tenth floor of Exxon U.S.A.'s downtown Houston headquarters, a handful of HP 3000 business computers float like an island of HP beige in a sea of IBM blue. But the HP computers play a key role for the world's largest petroleum company by running highly specialized software programs, including a payment system for vendors.

"Before we added the supplier payment system on the Series 68 computer, everyone in Exxon was cutting his own checks to pay vendors," explains Arnie Weksler, senior systems specialist in the headquarters computer services group. "Now that information is entered locally and consolidated in Houston on the HP 3000."

The HP 3000s also track materials, plant maintenance, employee health records and laboratory test information for a number of Exxon operations scattered across the U.S.

Exxon's HP gear isn't found only in the computer room. The company has

Go with the flow

"There are just two things you've got to remember in the oil business," explains Mark Friedman, district sales manager in HP's Houston, Texas, office. "Upstream and downstream."

The two terms define which activities are done to get oil out of the ground and which are done with the oil after it's out.

Upstream activities include:
- Exploration
- Drilling
- Production

Downstream activities include:
- Transportation
- Refining
- Marketing
- Distribution

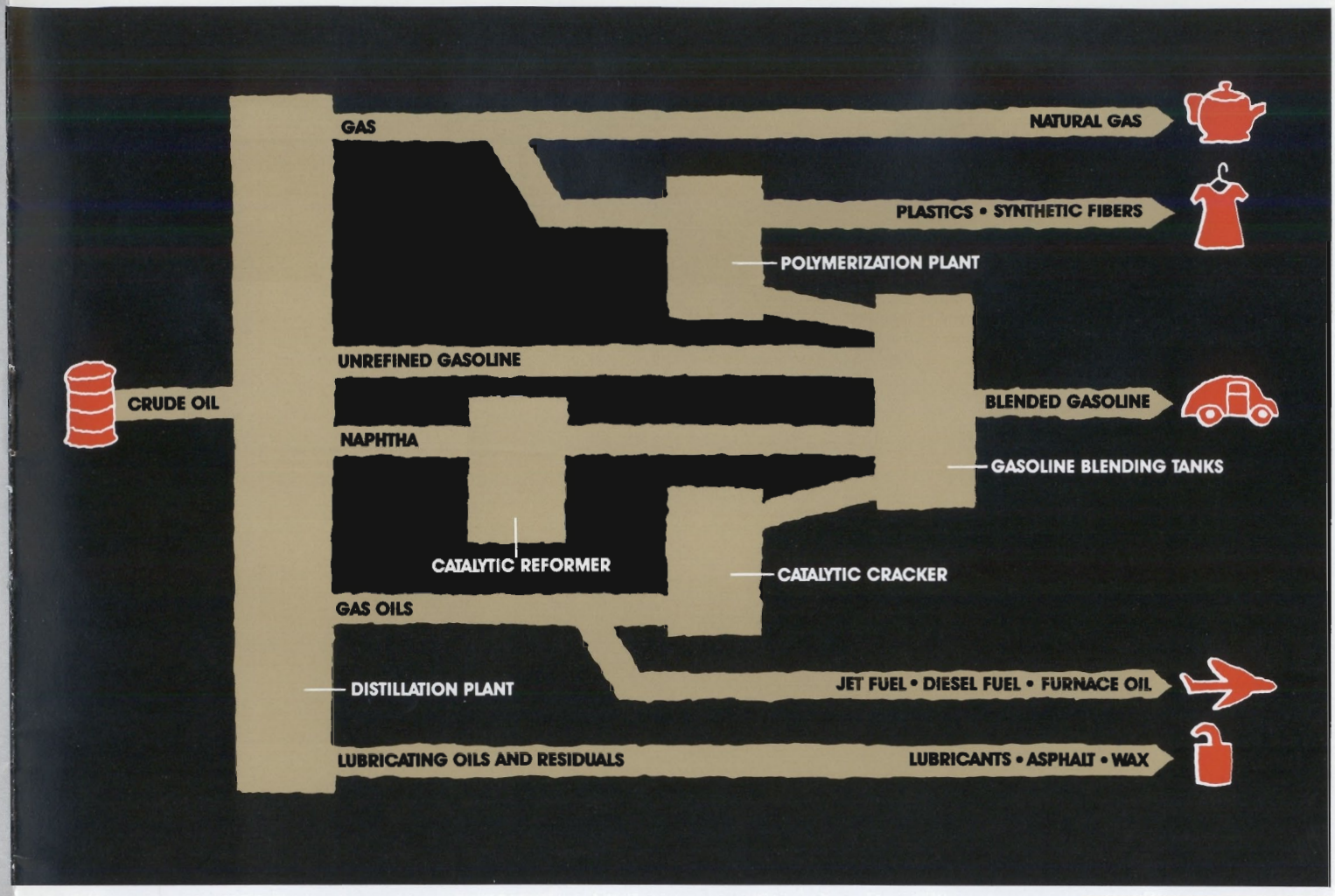
Hewlett-Packard's customers include both the smaller, "independent" firms (Mesa Petroleum, Texas Petroleum, etc.) that perform only some subset of these activities as well as the giant "integrated" corporations (Exxon, Shell, Conoco, etc.) that have the resources to "do it all."

Refining a crude substance

Long before we filled up our first gas tank in an automobile, people were putting petroleum products to work—largely for medicinal purposes.

In the mid-1800s, people scooped up crude oil from places where it oozed to the surface naturally. When small refineries came along, so did new uses for its products and byproducts. The first commercial petroleum product, refined in Pittsburgh by Samuel Kier, was advertised as a cure for cholera, corns, toothache and neuralgia. Actress Lillian Russell endorsed another—Carboline—"for the hair." It promised new growth on bald heads and a mustache within a few weeks.

Today's refineries apply heat and pressure to crude oil to separate it into its various chemical components. Only then can petroleum be marketed in a wide range of forms from natural gas to lubricating oil.



dubbed HP's LaserJet printer a part of its corporate standard workstation in its office automation program.

HP's helping hand in the industry isn't limited to computers. "We've got a number of customers with our gas chromatographs and mass spectrometers in their refineries and laboratories," says Peggy Gorski, analytical sales rep in HP's Houston office. "For example, it's important to monitor sulfur levels in polypropylene in petrochemical plants. And one researcher I know is using HP instruments to try to characterize oil based on carbon, hydrogen and oxygen levels found in core samples from drilling."

Shell Canada's Scotford Refinery in Fort Saskatchewan, Alberta, is a showcase for such analytical gear. The $1.4 billion complex is the first in the world to process crude from the Alberta oil sands. Ten HP gas chromatographs monitor the processes at the complex's two facilities: a refinery and a styrene plant.

HP computer systems play a different tracking role for offshore drilling platforms in the oil-rich North Sea off Norway. By law, oil companies are required to keep up-to-date rosters of everyone who's on a platform in the middle of the hostile sea. HP computers account for the crew (sometimes upwards of 100 people), beds, lifeboats and helicopter seats as crews, dignitaries and vendors shuttle to and from the rigs.

"Around the turn of the century, it was easy to find oil. You just put a shovel in the ground."

HP's reputation for reliability is one reason the company's computers and data acquisition systems were chosen for Santa Fe Drilling Company's North Sea semi-submersible drilling rig. Reliability is critical in the North Sea where 100-foot waves and 125-mph winds often make house calls for computer repairs a difficult feat.

HP gear monitors and controls 2,000 valves and pumps in the 14-story-high rig's saltwater piping system. The saltwater is used for ballast, firefighting and crew sanitation. The control system also monitors oil supplies for the rig's engines, the waste oil, engine cooling and bilge systems.

Santa Fe Drilling is accustomed to hostile environments for its drill sites. It built a mobile computer room, complete with an HP 3000 business system, to haul to a drilling camp on the shores of Venezuela's Lake Maracaibo. The center has an uninterruptible power supply, a backup generator, a powerful air conditioner and—for jungle use—drain lines with screws driven through the sides to stop snakes from slithering inside.

"We brainstormed about all the conceivable things that could come up," says designer Bob Brockett. "The goal was to have a mobile data center that would work as well in Alaska as in Saudi Arabia."

Oil companies today are scouring the earth's surface to find more oil fields. "Today all the major reserves have been found, and we have to work harder," says Neal Immega, senior geologist

at Shell's Bellaire Research Center. "Around the turn of the century, it was easy to find oil. You just put a shovel in the ground."

The industry has adapted rapidly, says Dr. Gerald Gardner, former professor in petroleum engineering at the University of Houston and now an engineer at Welex. "The days of pig-iron technology—pumps and bits and rigs and machinery—are about over."

Satellite images help geologists identify stratagraphic traps—places beneath the earth's surface where oil might be hiding. Supercomputers draw three-dimensional models of what's underground, eliminating what Gerald calls "the old way of punching 10 holes in the ground with hopes of hitting one gusher."

Hewlett-Packard's helping budding petroleum engineers at Texas A&M University learn more about emerging technologies. The company has donated an HP 2813 quartz pressure probe (see story at right) along with the surface equipment to measure bottom-hole pressure in a pair of 500-foot water wells that are drilled next to the petroleum engineering building.

But the economic reality of the oil business in the mid-'80s has had its effect on the campus, too. Enrollment in the school's petroleum engineering program has dropped to 678 from 1,750 four years ago. Professor Douglas Von Gonten predicts A&M could be turning out only 50 to 75 graduates each year by 1990 if the economic situation in the petroleum industry does not improve.

So while falling oil prices have helped consumers at the pump, there's little joy in the industry. But there is hope that the future will be brighter thanks to technological improvements from companies like Hewlett-Packard.

"Our futures are linked," says Conoco vice president Buck Curtis. "We have to use computers to make key decisions. And we're going to push you to come up with more ways to use your products to increase our productivity." **M** —*Brad Whitworth*

HEWLETT-PACKARD

HP 48000 RTU

Working the field

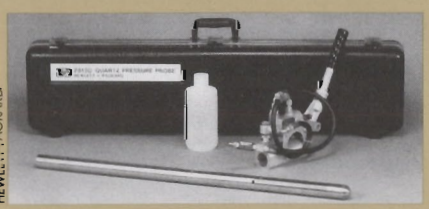
When HP's Panacom Operation in Waterloo, Canada, introduced the HP 48000 RTU (Remote Terminal Unit) on May 1 of this year, the product's engineers knew the oil industry would be a hot market.

"We'd identified at least a half dozen ways this smart box will benefit the oil industry," says Ian Kindred, former sales development manager (now working in Canada's region headquarters). Among the applications:

○ Replacing mechanical timers on pumps in the oil field. An RTU can monitor the loading on each pump and can detect a condition known as "pump off." That's when the well temporarily runs dry. If the pump isn't turned off until oil in the reservoir seeps back toward the well, the pump will be damaged. The HP 48000 RTU can be programmed to get the maximum amount of oil out of the ground without causing damage to the pump.

○ Controlling flow and pressure of water used in "enhanced recovery" fields. Oil companies can pump new life into dying oil fields by pumping millions of gallons of water (or steam or carbon dioxide) down into the oil-bearing rock formations. The water displaces part of the remaining oil and helps push it toward the well. It's important to monitor the injection process, according to Ian, because too much water pressure can cause the surrounding rock to fracture. If that happens, the oil seeps into the new cracks and away from the wells.

○ Automating the well-test process. The fluid that is pumped out of a well is either oil, natural gas, water, or some combination of the three. The mixture moves through a series of pipes to a well-test facility. Here an RTU will monitor the percentages of each substance before it heads off to a separator, storage tanks and then a pipeline. Since oil companies' revenues are based on the number of barrels of crude oil (a barrel is 42 gallons) they produce, it's important to constantly monitor the output of each well.



HEWLETT-PACKARD

HP 2813

Probing for profit

It looks like a silvery broomstick. In fact, it's a quartz pressure probe, a sensitive HP instrument that's lowered down an oil well to measure pressure and temperature of the surrounding reservoir of oil. At the bottom, the HP 2813 encounters harsh conditions including temperatures as high as 300 degrees Fahrenheit.

The HP probe supplies data to reservoir engineers, the cardiologists of the oil industry, who then use the information to determine the size and the potential profitability of a well.

The probe's quality established the company's reputation in the oil industry, says 35-year HP sales veteran Bo Byers, now district manager for government and education relations in Houston.

The probe is one of many tools used by well-logging companies—firms like Schlumberger and Gearhart that provide highly specialized services and supplies for the oil industry.

These firms gently lower sophisticated acoustical, electronic and nuclear measuring devices down a newly drilled well and slowly reel them back up. As the instruments climb, they measure the properties of the rock formations they pass. Inside a portable lab at the top of the well (permanently mounted on offshore platforms, but truck-mounted for land rigs) the data flow into computers and strip recorders to provide a record of what's down there.

Occasionally the $20,000 HP probes are lost when a wire line breaks and they plunge to the bottom of the well. "They can go through a lot of pressure probes in one year," says Bo with a smile.

Extra

ORDINARY PEOPLE

EVERETT DARCO

Saigon 1972—When Binh returned to the hospital from high school on Thursday, she saw that the bed of the wounded American soldier was empty. It should not have been empty because they had not finished their letter. But it was empty, just as a widow's bed is empty. In her high school she had friends who were already widows; the Vietnamese girls married the boys who became soldiers and then the girls became widows living in fear. But this boy from Idaho would leave no widow because he was not going to die.

Tuesday she had pledged this on paper to his parents. She had never met him before, but as she wrote his

letter, his vows became her vows and his assurances became her assurances, as happens at the age when love comes easy: "Dear Mom and Dad," they'd written, "I'm going to live. The next thing the doctors will do is operate on my lung. Then I'll go home. . . ."

It grew late and the letter was unfinished, and so the handsome boy from Idaho who was three years older than Binh told her to keep it and they would finish it Thursday. She came each Tuesday and Thursday to write letters for the soldiers. I will come at 2:30 in the afternoon, she had said. You speak English good, really, he had said.

> ***She understood the doctor had to be cold because he dealt with bodies every day. She could be like the doctor because her country had been at war every day of her 16 years.***

After she saw the empty bed she went looking in the hospital for the soldier. But she found only the doctor.

"Oh, you," the doctor said. "We forgot all about you."

"Where is he?" Binh said.

"Someone was supposed to tell you. He died in surgery."

Binh did not know what to do with the letter. The doctor said it would be okay if the parents never received it because they would assume their son had died in the field. Cold, Binh thought, but she understood the doctor had to be cold because he dealt with bodies every day. She could be like the doctor when it was necessary because her country had been at war every day of her 16 years. But there had been interludes when she had walked in the country and loved its simple people and for that reason she decided the boy's parents deserved to know of his hope for life and of his love for them. She scratched a note at the end of the letter begging his parents to understand that sending it was "no cruel joke."

"That damn letter," she says. She is crying.

One week after a memorial service for the dead young soldier, Binh's Vietnamese fiancé was drafted: The soldiers came to his school and plucked him out of class. He wrote her a letter saying he was fine. When she next saw him his hair was shaved. She told him they were through because she could not marry a soldier.

"I was not sentimental," she says. Quickly she finds her smile, just as a marine under sudden attack will instinctively locate his weapon.

Subic Bay 1975—Sometime on April 28, 1975, with the victor and the vanquished decided, Saigon radio played "White Christmas." The city was resigned, Binh says, its citizens "like zombies" as they awaited their Communist governors. The army had crumbled and there was no last-ditch battle; only outlying areas and government buildings came under direct attack. "White Christmas" may have seemed like sardonic humor to conclude the unhappy fall of a city at the end of an unmitigated war, but it was not intended to be a cruel joke.

Instead, the playing of the song was a prearranged signal from the Americans to proceed to Tan Son Nhut airport. The U.S. government would extricate Vietnamese who had worked for it—people the Communists would consider quislings. Because Binh's sister Nguyet had been employed at the U.S. embassy, the entire family, in-laws included, was in danger. Binh's 15 family members, with hundreds of other people, hid two days at an airport building until American transport planes could take them to the Philippines.

> ***"I know I'm a hopeless dreamer: I've had to dream of better days just to survive. I understand what Martin Luther King meant when he said he had a dream."***

On April 30th she was sitting inside an airplane hangar at the U.S. base at Subic Bay when an announcement came over a loudspeaker: The "battle" has been lost and "your life cannot be guaranteed if you go back (to Vietnam)." Binh had known there were no guarantees since the first time the Viet Cong fired rockets into her school. She knew it because there were hookers on the streets and soldiers who needed letters written and because she knew widows with children.

It was a country, she told herself, without "God's blessing and mercy," and as long as it was a country like that, Vietnam was hopeless. Yet she would not believe the battle was lost, just as the soldier from Idaho had not believed his battle was lost. Binh's fight was not political, it was spiritual—between her dreams and memories lay Vietnam, a place where simple fishermen lived on the river with their families. Here was the hope you needed to keep from going cold. Here was the Vietnam to which she vowed to return.

At dinner she saw an American put butter on his rice. She found it a "nauseating" practice. Three years later, at a restaurant in Loveland, Colorado, Binh met the American she eventually would wed.

America 1975-1986—Binh and Jack Rybacki have a five-year-old son named Preston. Jack is the director of Service America, an industrial food contractor in Denver, Colorado. Binh, 29, works as a mask designer—a person who completes the art work needed in the production of integrated circuits—for the Information Hardware Operation at HP in Fort Collins, Colorado. She's been with the company seven years.

In 1975 she arrived at Fort Chaffee, Arkansas, from Subic Bay. There were 2,000 other refugees there, she says, all completely dependent on help from the Red Cross, the United Way and other private agencies. Binh worked as a volunteer, but soon she was given a job in the camp at the rate of 75 cents an hour. She saved enough to buy each family member a pair of new sandals. Eventually, a relative found a job at HP in Loveland, Colorado, and the rest of the family followed him. On the bus from Arkansas, Binh made some money babysitting for exasperated

This is one of the photographs Binh (right) managed to bring with her when she left her home in Saigon. She's shown here in 1974 with her sister Nguyet, who worked for the U.S. embassy.

mothers with travel-weary children.

Binh has not forgotten the help her family received as refugees. Each year she volunteers for HP's United Way campaign. "The first time I heard of United Way, I realized the help they gave us came from Smiths and Jones who never even knew us. I work for the United Way now not because I'm kind and generous, but because I've been on the other side of the fence."

Similarly, she's an annual volunteer for the HP scholarship drive, in which employees' children can receive college scholarships. An American group—and to this day she is not sure which—gave her a four-year college scholarship in English literature when she lived in Vietnam. In return, she taught at an orphanage twice a week. "If you have a brain, you should have an opportunity," she says. "In my country, brains or not, if you don't have money, you don't go to college."

That's another strike against her homeland, and, therefore, another reason to return. "Other Vietnamese, the younger ones, say, 'Are you crazy? Why would you want to go back to those living conditions, where everyone is so poor?' I say *they* are the poor ones.

"You see, in the U.S. you can breathe all the air there is—you are free—and I'm thankful to be here. Vietnam has been choked and deformed, so there must come a time when you've got to say, 'Enough. I want to be part of the mending and fixing.'"

Binh is neither zealot nor savior, neither heroine nor saint. She's too pretty, for one thing. "Yes, I'm pretty," she says, "and I'm smart, too." When she says these things over lunch you really can't take them as conceit so much as self-esteem (mixed with a grain of salt, but no butter, please). And she's cheery. "People say to me, 'Why are you always so happy?' Well, it's because I have no secrets. It's because I'm enjoying life with no guns, no uniforms, and I don't have to attend so many damn funerals." Then she puts away her smile and shares from deeper down.

"I know I'm a hopeless dreamer; I've had to dream of better days just to survive. I understand what Martin Luther King meant when he said he had a dream. Real dreamers are lonely, but it's longing, not crying. I believe I will go back someday."

Vietnam revisited—For Binh the real Vietnam is not a hopeless place of killing. But how would you make a wounded young soldier believe such a thing? You show him compassion by writing his letter home. You listen to him tell you about Idaho—about the cold and green Snake River and the fields of black lava and the sharp cut of the Wasatch Range in the blue-glass sky. He tells you that young boys go with their fathers to fish the streams for trout. You might not understand Idaho but you share the feeling with him, and you might then tell something of the real Vietnam to make him believe you. . .if only there were time. . . .

Sometime before the boy from Idaho died, Binh was walking in the country. There was that feeling of nature alive and responsive, and she was part of it. She heard a river and, presently, came to a bridge. Below she saw the fishermen on their boats. She heard the women singing lullabies. Orange and enveloping, the evening sun ennobled the sky. Binh hoped that she would always carry the dream of a beautiful place called Vietnam with fishermen and boys who listen to their mothers' songs and not the call of cannon. **M**

—*John Monahan*

John is HP's public relations and communications manager in Fort Collins, Colorado.

YOURTURN

Measure readers share their views on matters of importance to employees.

Reinvesting dividends

Why doesn't HP have a stock dividend reinvestment program? The minuscule check I and thousands of others receive isn't worth HP's time to process. I think we could save tens of thousands of dollars this way, so why aren't we doing it?!

WILLIAM TAYLOR III
Jackson, Mississippi

The company has periodically examined the feasibility of offering its shareholders a dividend reinvestment program, but has concluded that the benefits to shareholders do not justify the cost. With HP's stock purchase price currently in the $40 range, and our dividend rate at 5½ cents per share, it would take most small shareholders years to accumulate enough dividends to purchase even one additional share. Larger shareholders typically do not participate in these programs.

When we last investigated dividend reinvestment alternatives in 1985, it was estimated that the annual cost to HP of maintaining a dividend reinvestment program would be $5 per participating shareholder, in addition to a $30,000 initial charge for establishing the program. The company would also continue to incur many of the quarterly expenses associated with dividend payments, such as handling fees and postage, as we would be required to send quarterly account statements to participants in place of dividend checks. In light of these factors, we cannot justify such a program at this time.

ANN BASKINS
Assistant Corporate Secretary
Palo Alto

Payback plan for time off?

Times have been tough for all of us. With business down, we have been forced to make sacrifices. But I think HP employees have continued to work hard with the hope that the "temporary measures" are in fact only temporary and all of us will return to full salary soon. Hopefully, it will not be long before the "goodies" return next to the coffee pots. We all have faith that better days will be ahead and HP's business will once again be as prosperous as it has been in the past. Perhaps then the company could recognize the sacrifice employees have made to pull us through, and repay those who worked at reduced salary or were required to take time off without pay.

This is not unprecedented—Corning Glass Works repaid over a three-year period the amount withheld from employees' paychecks after a similar downturn. Perhaps HP can consider the salary cuts a loan, to be returned to its employees in the form of a bonus as soon as the company can afford to do so.

PAUL MANNHEIMER
San Jose

How much is too much?

Betty Gerard did a good job of running the fine line between information and propaganda in the January-February article concerning HP's political posture. I truly appreciated the information.

An interesting point was brought up, about which I'm confused. At the end of the article it was mentioned that there will not be "general appeals to all employees to support an HP position. . . ." But this is exactly what happened here at Corvallis when General Manager Dan Terpack distributed a memo asking us to vote for a sales tax in Oregon. (A sales tax would have lowered HP taxes.)

What is the corporate policy on the distribution of political information? Do all employees have easy access to those channels?

GREGG FERRY
Corvallis

The line between information and propaganda is fine indeed. HP wants employees to be informed, interested and involved on their own behalf. It's also important that company political involvement be visible to all employees who are interested. On the other hand, we do not want to become a site for active campaigning by either employees or the company. (HP policy that the company "will not impose a political viewpoint on employees" is spelled out in the Personnel Policy and Guidelines.)

When HP is active on a high-priority issue that is up for a vote, we feel it is in everyone's interest that the company's position be known. HP people who are interested may then weigh this as they make up their minds according to their personal perspective on an issue and other available information. (Many HP people are bothered if we fail to let them know how they could choose to support the company.)

Take a second look at Dan Terpack's memo. It presented the course of action the company is taking but left the voting decision up to employees.

Regarding your second question, HP prohibits circulation of political material among employees at work to keep political differences from intruding into the working relationships of HP people.

BOB KIRKWOOD
Director,
Corporate Government Affairs
Palo Alto

Please send mail

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. Names will be withheld on request, but please sign your letter and give your location.

Great escapes

Picture yourself sailing on a Chinese junk through the busy Hong Kong harbor.

Consider taking a bite out of your vacation budget this year with a stay at Club Sandwich on Cape Cod. Bask in the beauty of Canada's Elbow Lake or do some serious fishing in the Scottish Highlands. If you plan far enough in advance, HP helps put the world at your doorstep. But for now, come along on a pictorial tour of the HP recreation facilities where HP employees and families play together.

TOM PIERSON

DAVE BARTRUFF

Escapes

A. Little Basin, 530 acres of redwoods and campgrounds, is eight miles from the Pacific Ocean in northern California. It's open year-round for picnicking, hiking, fishing, volleyball, horseshoes and shuffleboard.

B. Butterstone Loch in the Scottish Highlands is operated by the South Queensferry site. It has 120 acres of lake and 70 acres of land, and is a wildlife and botanical preserve. If fishing is your sport, this is the place for you.

C. Rural **Camp Akenac** in the Pocono Mountains of Pennsylvania is run by the New Jersey Division. It's located seven miles west of Dingmans Ferry on the Delaware River and is open from late May to early September for water sports, basketball, softball, handball, hiking, horseshoes and picnicking.

D. Club Sandwich in Massachusetts is located on beautiful Cape Cod, an hour and a half away from Boston and half hour away from Hyannis. This rec area is open year-round, and offers almost any kind of recreation from water skiing to volleyball.

E. You can enjoy the beauty of the Rocky Mountains at recreational facilities in Colorado. Greet the great outdoors at **Hermit Park** (pictured here) near Estes Park or **Sourdough Valley** near Pikes Peak. Hiking, camping and picnicking are favorite activities at each.

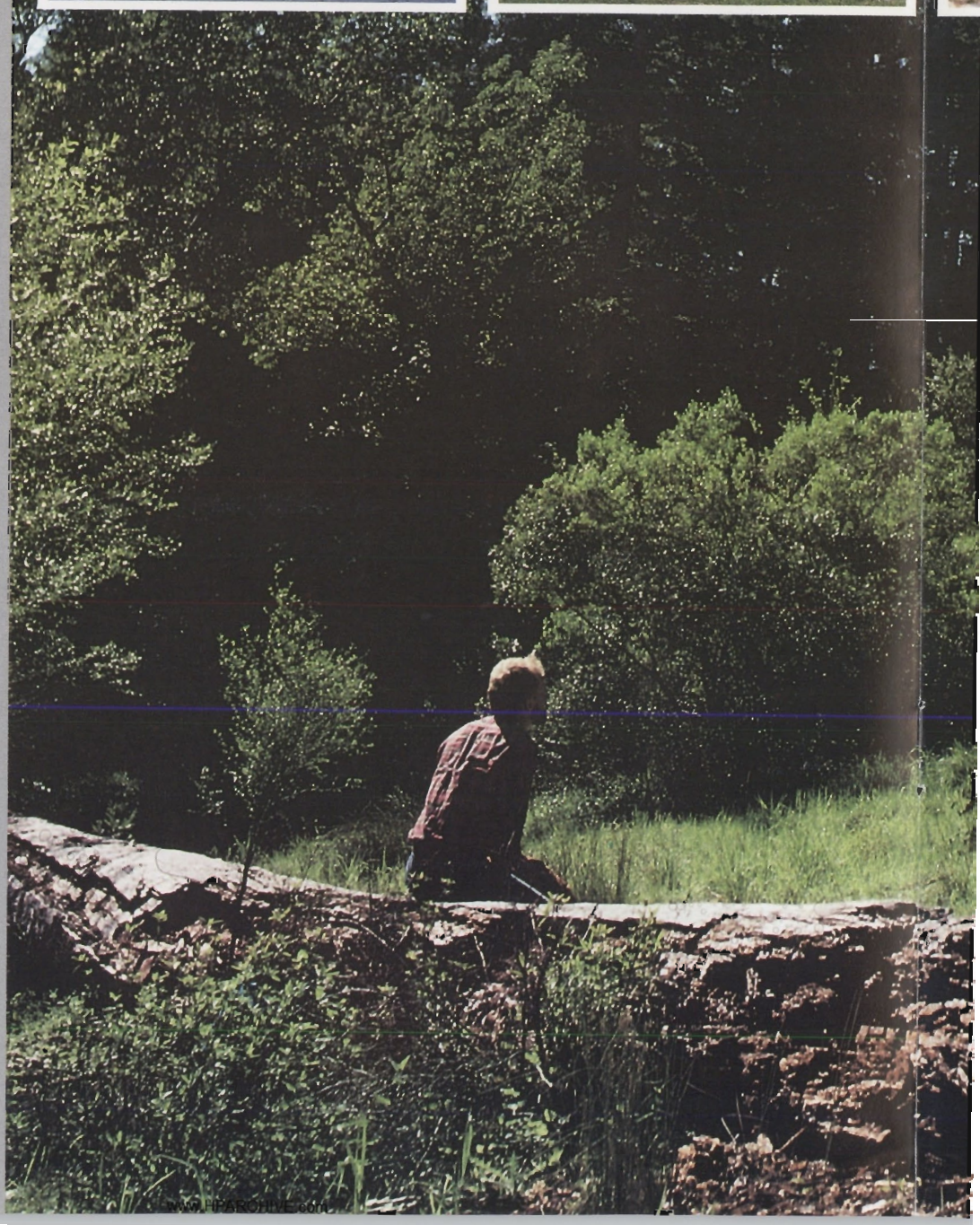
F. HP's ski-chalet complex in **Nesselwang**, a resort area in the German Alps, attracts snow skiers and serious hikers each year. Rent is moderate for one of the 12 chalets, which are operated by HP GmbH. Demand far exceeds the capacity of the Nesselwang chalets, and a "point system" has been established to determine how reservations are distributed.

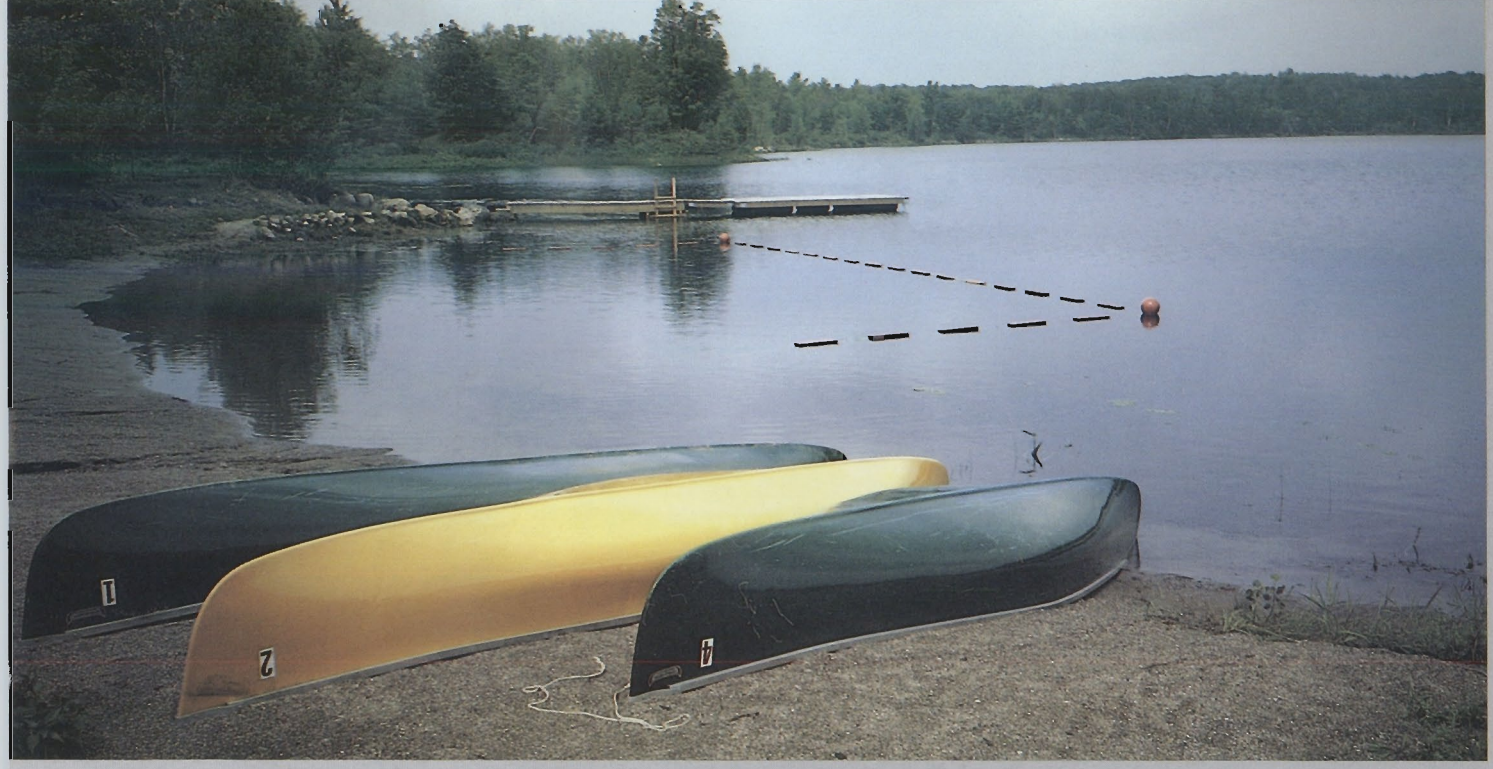
Special note: Until 1984, **HP Malaysia** operated a beach bungalow on Penang, but now runs a sports complex for employees, housing squash and badminton courts, indoor games and locker rooms. Outside the clubhouse, employees can choose from tennis, football, volleyball, netball and basketball.

HP Singapore quit using beach facilities on tropical island Sentosa in 1982 because employees wanted to choose their own resort areas in Singapore and nearby Malaysia, with HP reimbursing them in part.


B


C





HP's newest recreational facility is on *Elbow Lake*, near Kingston, Ontario, close to the U.S.-Canada border and the Thousand Islands tourist area. Its 1,100 acres include woods, two lakes, eight modern three-room cabins, kitchen facilities, camping and a nature center. Water sports, winter sports and hiking are the most popular activities.

LOCATIONS	Cabins	Camping	Swimming	Boating	Hiking	Eating/Picnic Facilities	Tennis	Fishing	Winter Sports	Pavilion/ Rec ha
Butterstone Loch Scottish Highlands	✓			✓	✓	✓		✓		
Camp Akenac Pocono Mountains, Pennsylvania	✓		✓	✓	✓	✓	✓	✓		✓
Club Sandwich Cape Cod, Massachusetts	✓		✓	✓	✓	✓	✓	✓	✓	✓
Elbow Lake Kingston, Ontario	✓	✓	✓	✓	✓	✓		✓	✓	✓
Hermit Park Estes Park, Colorado	✓	✓			✓	✓			✓	✓
Hong Kong Harbor Chinese Junk				✓		✓				
Little Basin, Santa Cruz Mountains Northern California		✓			✓	✓		✓		✓
Nesselwang German Alps	✓		✓		✓	✓		✓	✓	
Sourdough Valley Pikes Peak, Colorado	✓	✓			✓	✓			✓	✓

(For more information about visiting any of these HP recreational facilities, ask your local personnel rep.)

Looking at the numbers

SHARON HALL

Marketing secretary Maureen Stuart has some practical tips on getting a high-tech job for Lorraine Bermudez, clerical skills trainee at Good Will of Santa Clara County.

How is HP doing in hiring and promoting minorities in the U.S.? It's important to keep asking the question.

Last summer, rumblings out of Washington, D.C., raised questions about the future of federal affirmative action—the cornerstone of U.S. industry's efforts to see that minorities, women and other underrepresented groups get a fair shake in hiring and promotion.

The Department of Justice, which had suggested that setting goals for some groups is unfair to those that are left out, may have been surprised by the response.

Leave things as they are, said the National Association of Manufacturers and companies like Hewlett-Packard. (No formal proposal for changes has yet been made.) The AA goal-setting now required by federal regulations serves as a useful report card, pointing out weaknesses and making good things happen.

A letter from President John Young to general managers underscored that HP remains philosophically committed to the concepts of AA and equal employment opportunity. "Our company's success in the future depends upon your active support of affirmative action in all functional areas," he added. The principles apply company-wide: Harry Portwood was recently named worldwide EEO manager.

Here's a glimpse at some of HP's current AA activities, with special attention to how black, Hispanic, American Indian and Asian employees in the U.S. are faring. Let's begin with an outside perspective:

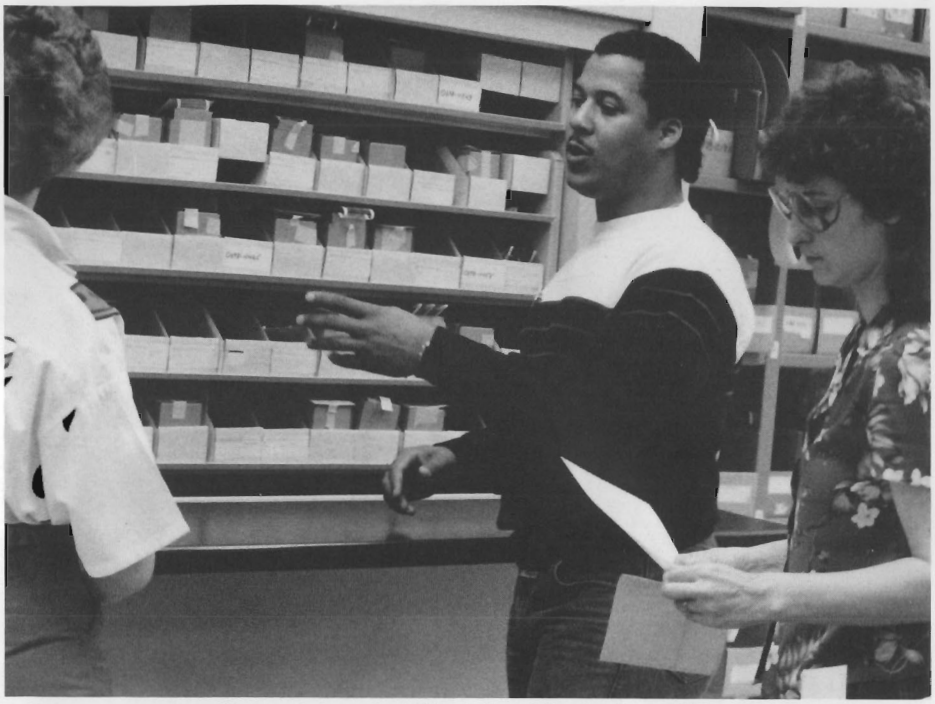
When Joe Franco of the Office of Federal Contract Compliance Programs (OFCCP) in San Jose, California, arrived at the Computer Systems Division last July, he had a number of standard questions to ask about its practices related to minorities and women.

OFCCP, part of the Department of Labor, is responsible for monitoring compliance with existing federal regulations related to affirmative action (AA) and equal employment opportunity (EEO). Decoded, EEO is the goal an employer is trying to achieve and AA is the process or specific steps taken to get there such as hiring procedures.

But this was not to be the routine on-site audit that OFCCP administers at random to government contractors. Such an audit typically involves several weeks of the most intense and challenging scrutiny.

Joe's current assignment was a little different. An HP sales office was going after a major government contract, for which the Computer Systems Division would be the chief supplier, so a pre-award AA review was required. HP has been excused from routine audits since 1982, when it became one of four companies to sign a national AA agreement with the OFCCP. Under the agreement, HP voluntarily provides a wealth of AA statistics far beyond the agency's usual requirements.

The pending big deal, however, triggered a special two-day audit by OFCCP. More HP divisions can expect similar OFCCP pre-contract audits as federal sales activity steps up.



LIZ WAVADA

Jeff Kemp supervises 12 people in material logistics at the Spokane Division. He became a supervisor a year after joining the company in 1980. At right, Diane Seeds.

On the first day, Joe Franco spent time with human resources manager Quinn Cramer and each of her staff. He asked detailed questions about personnel procedures:

Had the division made a genuine effort to meet its own AA goals this year and last? Let's see the list of new hires by department and job group. Who were all the minority and female applicants for these jobs? What did you do in the community to enlarge the pool of applicants? At the other end of the process, why did minority and women employees terminate and from which jobs? Meanwhile, who has been promoted in each job group? How do people move around the company? What training is available to them?

"Joe had us bring out all sorts of numbers and information," says Teresa Isaacs, who handles training. Since minorities make up 35 percent of the division's total employees, Teresa has led some special classes. Managers learn how to appreciate the subtleties of different cultural styles and to improve their career-coaching skills.

Checking it out

Joe spent the second day interviewing 16 employees he selected at random in order to check out what human resources had said was happening.

Cost accounting supervisor Haydee Dominguez, for instance, found Joe interested in her comparison of AA on the campus and as practiced at HP. When she taught a cross-cultural remedial workshop at her university she was concerned about the defeatist attitude of minority students, who felt stereotyped. She found a "night-and-day difference" in the self-respect of HP's minority employees.

Overall, Joe had high praise for the way AA and EEO are an everyday part of division activities. "HP's practices are institutionalized," he says. "People don't see it as compliance but as the way HP does things."

Along with generally high marks for CSY he pointed out two problem areas: The definition of an "applicant" needed clarification in order to keep more meaningful AA numbers. (A task force drawn from a number of divisions has since addressed this for all U.S. entities.) Also, a greater effort should be made to attract minority applicants for clerical jobs, an area where they were underrepresented at that time.

The division has since arranged that Maureen Stuart, the marketing manager's secretary, join an advisory board for Goodwill of Santa Clara County. Its office skills classes for disabled people include many minorities.

"Nobody would say it's fun to go through an audit," Quinn Cramer admits. "But there's a certain satisfaction in having a competent auditor like Joe Franco really put you through your paces."

Overall, about one of every six HP people in the U.S. is a "minority" as defined by the federal regulations. However, there are clearly many individual differences in the need for such special consideration. Intercontinental Operations, for instance, brings many high-level managers from Latin America and the Far East into headquarters assignments in Palo Alto, California, to draw on their expertise.

With long-established strength in math and science, Asians are receiving engineering degrees from U.S. colleges at a rate higher than their percentage in the total population. Only 2.2 percent by census count, Asians received 4.7 percent of the bachelor's degrees awarded in engineering in 1984 or 3,609 degrees—and HP is highly successful in hiring Asian engineers.

According to the Engineering Manpower Commission, 76,931 bachelor's degrees in engineering were awarded in the U.S. in 1984. Blacks and Hispanics were virtually tied in receiving 2.6 percent. Blacks, who make up 12 percent of the U.S. population, received 2,022 engineering degrees; Hispanics, 7.2 percent of the population, received 2,038 degrees. American Indians, a fractional .6 percent of the population, received 112 degrees or .002 percent.

On the record

Looking more broadly at all U.S. professionals, the company gained 346 minority professionals in the U.S. in 1985. This brings these groups up to 16 percent of all U.S. professionals—the feeder group for HP management.

At the middle-level of management (formerly salary curves 8,9,10 and 12), there were 346 black, Hispanic, American Indian and Asian managers representing 8.3 percent of U.S. middle managers last year. At the level of functional manager and above, there were 47 minorities or 5.2 percent. HP has recently had the bittersweet experience of seeing several black functional managers recruited for top jobs elsewhere.

Among those who have reached top levels of U.S. management are a number of operations managers with Asian backgrounds. No black or Hispanic managers have yet been named to the general manager or operation manager level.

Jeff Kemp, a supervisor for most of his five years at the Spokane Division,

is aware that his eastern Washington city has few blacks—and fewer still in management. "It would be helpful to have a role model I could look up to," he says. Still, HP has been "refreshing" for blacks in the area. The division decided against an attractive recreation site in Hayden Lake, Idaho, because it was near a racist group's headquarters.

Dolores Harris, who is black, was captain of her high school basketball team years ago. She has used her natural leadership ability to become a supervisor of IC fabrication at HP Labs in Palo Alto. "I needed a lot of coaching after I got the job," she says. "It's different working with people and being their supervisor." She names the experienced managers who gave her tips. "There are some things in dealing with problems that you just can't get out of a book," she says.

J.C. Dennis, marketing communications manager for the Information Systems and Networks sector, was a Hueblein marketing executive when he was recruited by HP in 1983. His responsibilities include the current "What If. . ." TV and print campaign. One of HP's most highly placed blacks in management, he believes all minorities and women in senior management positions have two responsibilities within HP: one for their functional responsibilities and another for their minority constituency.

Sylvia Gerst, who manages AA programs and operations in the U.S., says that three years of reporting company trends to the OFCCP have shown where we need to work for greater representation of minorities. She pegs these areas as upper-level and middle management, professionals, and upper-level techs in the field—where testing and repair grow steadily more complex. A demographic breakdown of Open Line results brought out some concerns of minorities, especially women, including how they will fit into a changing HP.

"We're at the ice-breaker stage now, making those numbers grow," Sylvia says. "The next phase is to increase the initiative of senior managers to have minorities and women in the pool of candidates for spots on the functional team." **M**

—Betty Gerard

MICHAEL MOUCHETTE

At the U. of New Mexico, Jim Williams talks with students Paul Kabotie and Frank Hernandez.

Going for that college degree

The gratifying thing about efforts by hundreds of HP people to encourage minority students to aim for college is that there's literally too much going on to keep track of it all.

San Diego Division's Joe Costa took a lead in forming the Beca Foundation, which adds the important ingredient of money. It provides three Hispanic high-school graduates with $1,000 each year they're in college. "We met a lot of outstanding kids," Joe says, "but need was the tie-breaker when we made our choice." Financial problems can be a high hurdle to entering and staying in college.

As part of its college recruiting, HP has designated 45 universities for special AA efforts. To qualify, each must graduate a combined total of 10 or more minority students annually in the fields of engineering, computer science and business. The AA coordinator on each team has $1,000 to help fund worthy projects for minority students, such as paying for a student delegate's trip to a professional society convention.

Recruiting teams help identify minority students for HP's SEED (Student Employment and Educational Development) Program, which brings in students to work summers after their freshman year. One-third of the 600-plus SEED slots are allocated to blacks, Hispanics and American Indians. The program, now in its third year, is beginning to harvest some permanent hires.

In the Southwest, HP is trying a vigorous pilot program to win more Hispanic and American Indian hires. Jim Williams has shifted from part-time recruiter to full-time coordinator for six universities in Arizona, New Mexico and Texas. Among them, these schools award one-fourth of all the country's bachelor's degrees in engineering received by Hispanics and one-fifth of those awarded to American Indians.

At the University of Arizona, for instance, Jim is working closely with the recruiting team to build contacts outside the usual channels. AA coordinator Kathy Espinoza-Howard from Stanford Park Division and Intercon's Roberto Valenzuela have helped organize a workshop to give minority students a realistic picture of the ways of the business world. "We'd probably never meet these students if we depended only on interviews set up through the placement department," Jim says.

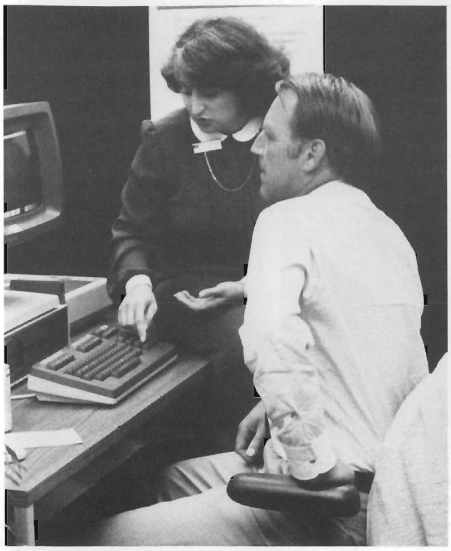
On the East Coast, Avondale Division's Mike Jenkins is the AA coordinator for Howard University and several other schools. The competition is keen among companies for graduates of highly rated Howard, which has a predominantly black enrollment. "I use our SEED program to its maximum extent," says Mike, "and make sure students meet our current HP loaned professor on campus." He works closely with the Valley Forge, Pennsylvania, sales office on recruitment.

He also maintains contact with an umbrella group for 116 predominantly black U.S. colleges. Using its efficient data base of graduating students, the Avondale Division just hired several black engineers.

HP Labs competes in a tight market for minority engineers with advanced degrees. In 1984, 24 blacks and 25 Hispanics received doctorates in engineering out of a total of 3,234 awarded in the U.S. (Another 267 doctorates went to Asians.) As part of a stepped-up HPL effort, Vice President Joel Birnbaum in April spent a day talking with Howard University students.

LETTER FROM JOHN YOUNG

HP's president explains all-out effort to improve software quality.



LEJEUNE WHITNEY

John at a product fair with Nancy Federman, section manager for productivity tools at Computer Systems Division.

In April I sent a memo to all general managers announcing another "stretch" objective on quality that I want to see us meet—a tenfold improvement in *software* quality over the coming five years. Why only five? Because we already have the tools in place, the market is moving rapidly, and we can't afford to be slow in our response. And while I also called for renewed dedication to our goals for hardware quality, in this message I'd like to focus on the software side of the equation.

HP's basic business purpose is to provide decision-makers with the information they need to work effectively. That goal makes software an integral and growing part of the value we supply. Operating systems and data communications products are central to our computing and network offerings. And applications are the link between customer needs and the capability of our hardware—whether that's an instrument, a computer, or a piece of medical or analytical equipment. Software makes performance possible.

There's an even more important reason we should focus on software quality. That's HP's reputation for excellence and our leadership position in the marketplace. Our ability to satisfy customers—to provide high-quality, cost-effective solutions—will determine how well we compete in the years ahead. Today, industry surveys show that we're right in the middle of the pack as judged by our customers when it comes to our reputation for software quality. That's not where we want to be.

Thousands of HP people are involved in software development. In fact, a recent survey of project managers showed that this represented fully three-fourths of their efforts. Yet too often, we've approached the task without the best tools and development techniques. Our efforts tend to be *ad hoc*. Our efforts need to be more systematic at the front end of a project where we define customer needs, set specific performance goals for each software product and determine the methods we'll use to achieve them.

As we've learned over the last six years of our hardware efforts, improving quality means that we can no longer do things in the same old way. We have to do two basic things to achieve software excellence. First, change our expectations of what's possible. That's why I've announced the tenfold quality improvement goal.

Sally Dudley, who heads the software efforts in Craig Walter's Corporate Quality department, describes the changed attitudes we need. Software, says Sally, doesn't have "bugs" because bugs are cute little insects that appear mysteriously and are fun to catch. Instead, Sally insists people call "bugs" what they really are—defects. And we intend to measure those defects using metrics such as the number of problems encountered during a product's first year after use and a monthly review of our ability to solve our customers' major problems. We intend to use those metrics to prevent defects in the design process—not just to catch them later on. The find-it-and-fix-it approach just won't get the results we need.

The second thing we must do is to get the skills and tools to do the software job right. During the past 18 months, under Chuck House's leadership as director of Corporate Engineering, Ilene Birkwood's software engineering training group has developed or offered more than 50 different courses aimed at improving our capabilities. The response has been tremendous, and more than 5,000 different HP people have taken at least one of them. Structured analysis, software life cycles, project management, relational databases, user interfaces, and artificial intelligence—these are just a few of the courses available, and I urge people to take them.

Let me leave you with these three simple calls to action. First, recognize the overriding importance of software quality to HP's success in the marketplace. Second, set aggressive goals for improving the quality of the software developed by your group and give it top visibility in each development area. And third, develop a program to use the growing body of tools and know-how that has been assembled and will continue to grow. We already know how to do a much better job, and we should make it our urgent business to do so. Customer satisfaction is the key goal for our business. We have the opportunity to clearly differentiate HP in the marketplace by pursuing an aggressive program in software quality.

Extra MEASURE

COURTESY OF SOUTHERN PACIFIC RAILROAD

Trainless training

When Southern Pacific locomotive engineers learn how to run a train, they do it with the help of a train simulator run by an HP 1000 computer and state-of-the-art software developed by Dynamic Sciences, Ltd.

The "locomotive" in the railroad's training center in Cerritos, California, has seen more mishaps in its day than any other, but no one criticizes its high accident rate.

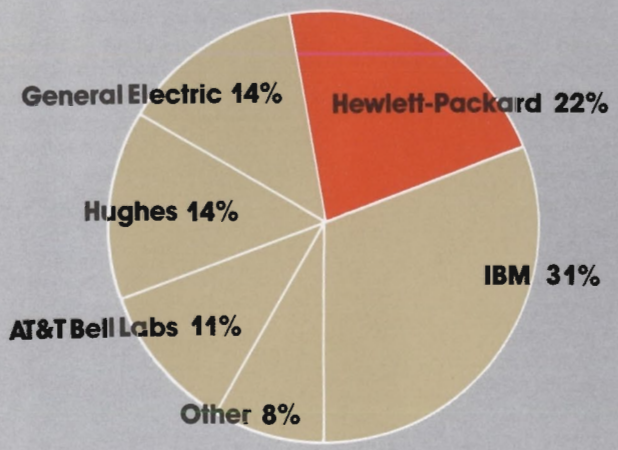
It's a replica of a locomotive cab, combining the magic of Hollywood with the thrill of a Disneyland ride. Using laser disc technology, it simulates the sights, sounds and working environment of a real locomotive operating in freight service.

The computer-controlled environment provides life-like lessons and invaluable experience.

WANTED: Jobs at HP

Hewlett-Packard ranked second as the place engineering students specializing in electrical/electronic engineering would like to work upon graduation. The survey was conducted for *Graduating Engineer* magazine and results were based on responses from 2,246 engineering students.

Of engineering students of all disciplines, 12 percent chose HP as the place they wanted to land a job after college.



Kudos for HP Germany

HP GmbH received an award for practicing excellent partnership between the company, management and employees.

The honor was granted by AGP (in German, that's Arbeitsgemeinshcaft zur Foerderung der Partnerschaft in der Wirtschaft; in English, it's the Association for the Promotion of Partnership Between Employers and Employees).

The award was based on HP's cash profit-sharing plan, the company objectives and the HP way, which promotes respect and caring among employees of the company.

Berthold Leibinger, president of the Stuttgart Chamber of Commerce (left), and Eberhard Knoblauch, general manager of HP GmbH (right), welcome Prime Minister Lothar Spaeth, keynote speaker at the AGP awards ceremony.

Extra MEASURE

GORDON BLANZ

A reason to celebrate

Norm Schrock thought he would retire quietly after 44 years with HP. But his fellow employees, along with Bill Hewlett and about 18 old friends from Corporate, thought differently. Norm's Palo Alto friends helped throw a party February 27 that included dinner, skits and a jazz band at the Colorado Springs Country Club.

A 44-year HP career means you joined the company when it had fewer than two dozen employees. Norm started in 1942, and since then developed the HP 465A distributed amplifier, FM broadcast monitors and many microwave instruments. When HP went through its first reorganization in 1958, Norm was one of the lab directors, in charge of oscilloscopes. He moved to Colorado Springs in 1964 as manager of Advanced R&D and was later the first Oscilloscope Division QA manager and then IC metallization engineer in the Colorado Springs Technical Center.

A friend to tennis in any language

A poster, designed to promote HP's close relationship with the tennis world, has been sent to sports and tennis media and to HP sales offices around the world.

Designer Judy Horst used an HP Touchscreen II and HP software called "Painter" (developed by Santa Clara Division's Tom Musolf) to create the poster.

The poster reflects HP's interational participation by translating the phrase, "The business of professional tennis plays on Hewlett-Packard computers," into eight languages.

ANNUAL MEETING

At the annual meeting on February 25, Hewlett-Packard Company shareholders:

- Elected George A. Keyworth II, chairman of the management consulting firm of Keyworth/Meyer International, to the HP board of directors.
- Approved three management proposals to amend the company's Articles of Incorporation to give the board greater flexibility in dealing with any unsolicited takeover proposal. The changes increased the authorized common stock and authorized a class of preferred stock; added a "fair price" provision; and eliminated the ability of shareholders to act by written consent in lieu of a meeting.
- Rejected a shareholder's proposal to prohibit sale or lease of HP computer products to the government of South Africa and its agencies.

CHART CHANGES

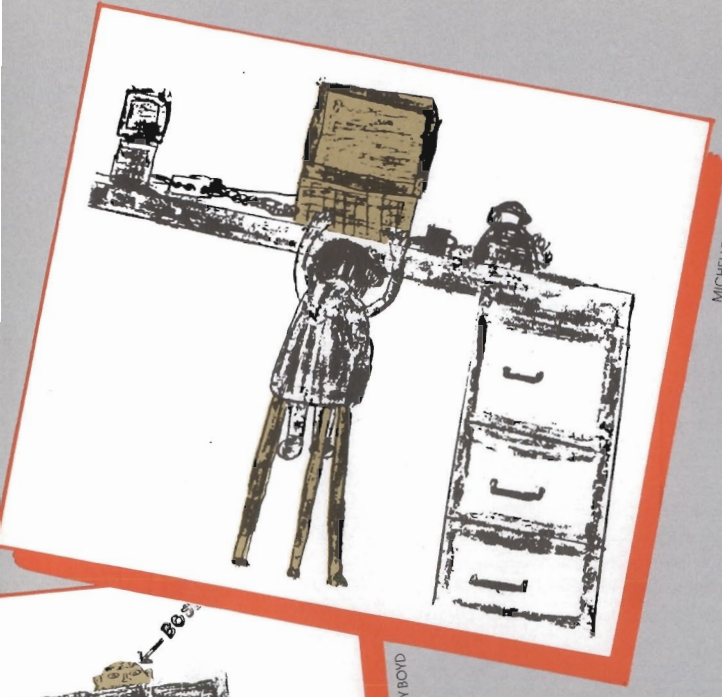
In the Design Systems Group's Workstation Business Unit, the Fort Collins Systems Division has been restructured. **Pete Hamilton** becomes general manager of a new division by the same name. Hardware and software R&D formerly part of the division have split off to form two new operations: the Technical Workstation Operation under **Jerry Nelson** and the Systems Software Operation under **Chris Christopher.**

A new Asian PC Operation under **Steve Ng** has been formed within the Personal Computer Group. Located in Taiwan, it is responsible for Asian language localization programs for the group's products.

NEW HATS

In the Information Systems and Networks sector, two groups have established business units for product-line responsibility across the corporation. In the Information Systems Group, **Doug Spreng** heads the Distributed Data Processing BU for HP 3000 operations and **Bob Frankenberg** heads the Office Systems BU (formerly Office Systems Program). In the Personal Computer Group, **Bob Puette** heads the Personal Office Computer BU.

Ray Cookingham to Corporate Controller. . . . **Webb McKinney** to GM, Office Productivity Division in Pinewood, England. . . . **Ophir Toledo** to GM of Microcomputadoras in Mexico, which will relocate its Mexico City activities to Guadalajara. **Jorge Martinez** to focus on corporate development activities for Mexico. . . . **Bob Waites** to operations manager, Fort Collins Engineering Operation. . . . **Don Hammond** to associate director, HP Labs. . . . **Jack Lee** to managing director and GM of HP Hong Kong. . . . **Victor Ang** adds area GM hat for Far East Region's newly formed ASEAN area.



MICHELLE YOKOYAMA

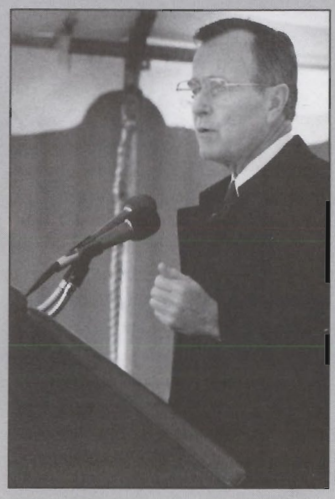
JOEY BOYD

Through the eyes of children

"What my Mom or Dad does at HP." That was the challenge Emily Ransdell, editor of the Corvallis site magazine, *Heartlander*, put to readers under age 12. The results, as you can see from these two winners, were sometimes humbling for their parents.

The first annual HP Family Art Contest winners were published in the January issue of *Heartlander* and each of the winning artists was treated to a special lunch with his or her parents in the HP cafeteria.

Having trouble reaching the computer terminal, above, is Tony Yokoyama, software design engineer as seen through the eyes of daughter Michelle, 8. And confronting The Boss, below, is Patrick Boyd, process engineer as seen by son Joey, age 11.



STEVE WELSH PHOTOGRAPHY

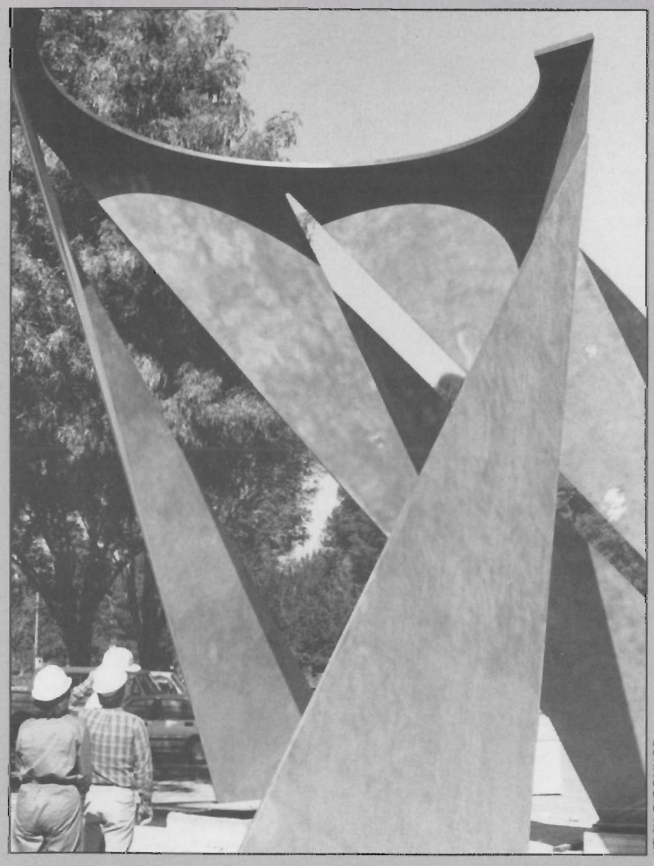
VIP visitor

U.S. Vice President George Bush visited the 2,000 employees of HP's Boise, Idaho, site for a coffee klatch in February.

During his visit, he also toured a printed-circuit assembly area and new automated warehouses, and saw a product fair with all Disc Memory Division disc drives and the Boise Division printers.

Praising HP, Bush told the gathered employees, "People who know this field say you are the very best."

A humorous aside to the visit resulted from stringent security measures mandated by the Secret Service. All employees who attended the coffee talk had to walk through a magnetrometer first. And every one of the 500 production workers, wearing electrostatic shoes, set off the alarm.



KEVIN O'CONNOR

Mountain View gets culture

HP commissioned artist Charles Ginnever to erect a work of art outside its new Mountain View, California, facility. The sculpture is in front of the old Mayfield Mall shopping center, which is now being renovated by the company.

The 26,000-pound, 24-foot-high sculpture is called "Homage to My Father." Charles' father was the treasurer of nearby San Mateo, California, for 35 years.

Charles describes the twisting, metallic piece as a bent parallelogram in what he calls his "spinal series" of art work.

Extra MEASURE

RICHARD JESSUP

HP Grenoble reaches new heights

When they're not trying to get to the bottom of work-related problems, four HP Grenoble employees like to get to the top of things.

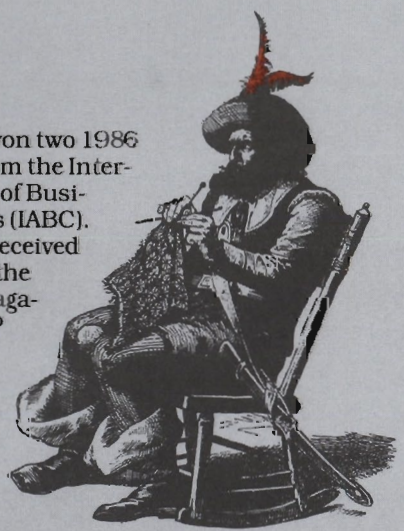
Jean-Francois Porret, Richard Jessup, Marc-Henry Bricquet and Claude Cornet received permission from the Nepal government to climb Mt. Makalu II (7,678 meters), the 32nd highest mountain in the world. It took two years of preparation before the HP adventurers and a small group of others were finally trekking through the Nepal valleys—with 40 porters and more than one ton of food and equipment—on their way into the Himalayan range.

In the last 200 meters of the ascent, they straddled a knife-edge ridge in 60 to 80 mph hour winds that kept the rope stretched above them.

"But you could see the top of the world from up there," says Richard, "with Mt. Everest only 20 miles away and four of the five highest mountains on the globe in sight. I guess that's why people climb mountains."

The trip took two months.

A feather in our cap



Measure magazine won two 1986 Gold Quill awards from the International Association of Business Communicators (IABC). The magazine itself received an award of merit in the one-to three-color magazine category. The HP Superman illustration on the cover of the May-June 1985 *Measure* won an award of excellence in the design category.

IABC's Gold Quill program is an annual worldwide competition honoring superior achievement in the field of organizational communication and public relations.

WORTH NOTING

HP has been accepted as a participant in the European Economic Community's RACE program to develop integrated communications networks for use throughout Europe. The Queensferry Telecommunications Division in Scotland will represent the company. . . . HP is one of 37 North American computer and communications vendors and information-systems users who have founded the Corporation for Open Systems to advance the adoption of international interconnect standards.

HP moves up to 58th place (from 60th last year) in the *Fortune* magazine ranking of the 500 largest U.S. industrials, based on 1985 sales.

NEW PRODUCTS

The Boise Division's LaserJet 500 PLUS printer has expanded paper handling capacity: two paper-input bins that can each hold 250 sheets and an output bin that holds up to 250 sheets. . . . The enhanced version of The Portable PLUS from the Portable Computer Division has a new display with improved contrast.

The Systems Software Operation in Fort Collins has introduced HP-GKS, a graphics library for HP 9000 Series 200, 300 and 500. (It's an implementation of Level 2b of the industry-standard Graphics Kernel System.) Applications developed with it can achieve up to 50,000 2D vectors per second while maintaining high performance. . . . HP is believed to be the first major vendor to offer customers a corporate site-licensing program for PC software. Aimed at major accounts, the program from the Personal Software Division will allow users to standardize the software running on the HP Vectra, HP Touchscreen and IBM PCs.

Introduced at the 1986 Pittsburgh Conference: The low-priced HP 8452A UV/VIS diode-array spectrophotometer from the Scientific Instruments Division brings the technology within reach of a lab on a tight budget. HP Genenchem brought out an automated microassay system controlled by an HP Vectra PC that has built-in accuracy and repeatability. A robotic arm can switch hands for various jobs. The Waldbronn Division's new HP 1046A programmable fluorescence detector will be used with life-sciences samples. It's compatible with HPLCs from other manufacturers as well. And the Avondale Division's HP 7690A portable bar-code system

HEWLETT-PACKARD

HP 7690A

makes it possible to automatically label and identify chemical samples on site as well as in the lab.

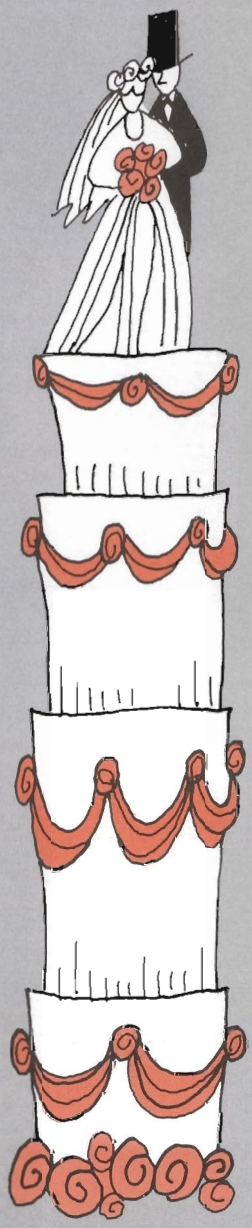
Emporium-Capwell gets hitched to ThinkJet

The HP ThinkJet printer, united with an IBM touch-screen personal computer, is making shopping for wedding presents at Emporium-Capwell department stores easier.

Each of the Emporium's 22 stores in Northern California is featuring the handsome duo in the bridal registry department, says operations administrator Silvana Farron.

When customers come to the store to purchase a gift for a registered couple, the computer takes them through menus by the touch of a heart image on the screen.

When the correct couple is identified, the ThinkJet prints out a preference list of gifts the bride and groom have selected as items they need for their household. It also shows the couple's name, address and the wedding date, as well as what gifts have already been purchased for them.

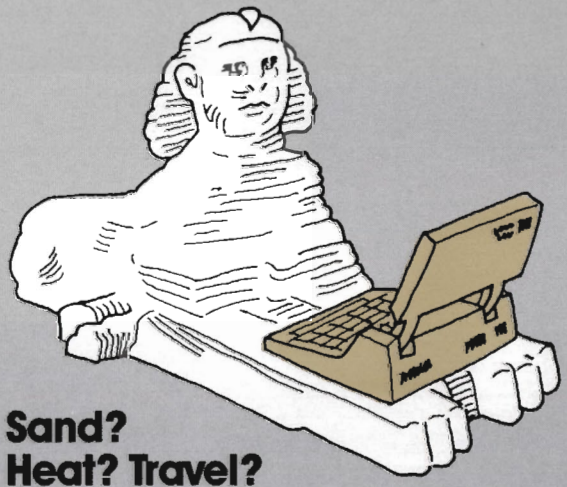


Helping the blind see

"I can see," says Juergen Sommer about his work, "that the bug is at the beginning of the program." But Juergen hasn't "seen" it. He felt it. The young man is a student of information technology at the University of Stuttgart. He is one of seven visually handicapped students who has been studying computers at Stuttgart the past year.

Last winter, HP donated three microcomputers, two Braille processors and a Braille printer to the university to equip computer work stations for the handicapped students. The company promised to provide a helping hand when the young people are ready to start their careers.

Klaus-Dieter Laidig, general manager of the Böblingen General Systems Division, says the company made the donation because "one of the seven objectives in this company is social responsibility."



Sand? Heat? Travel? No sweat for the PORTABLE

Ed Lane, a petroleum engineer for Monsanto, was one of a group sent on a project to the Egyptian oil fields and other Middle East countries. Each member was told to report with a portable computer and the group arrived with a significant cross-section of brands. After eight and a half months, Ed's HP PORTABLE 110 was the only computer still working. The bumping of travel and sand had caused all the others to fail. As a result, Ed ended up working around the clock and became the de facto project manager because he possessed the only reliable computer.

By the end of the project, the spreadsheet and word processing software in Ed's computer contained all of Monsanto's data for the entire $270 million project.

PARTING SHOT

People remember his winning ways

Mark Christine is one of those people who packs a lot of living into each day.

If HP employees in Palo Alto don't know him from his part-time work with the company as a carpenter, chances are they know him as:

○ a junior high school coach and shop teacher;
○ the balloon man and whistler who entertains children at local hospitals;
○ an unofficial counselor to both students and adults;
○ an entertainer for residents of local homes for elderly people;
○ or as a low-profile benefactor to students he wants to help.

When the 64-year-old philanthropist retires from HP, he hopes to turn his woodworking and balloon-shaping talents into paying operations to allow him to continue making the world around him a better place.

That is, when he's not pursuing his other personal hobbies such as hang gliding lessons and maybe even a crack at sky diving if he can summon the courage.

JOE MILENA, COURTESY OF PENINSULA TIMES TRIBUNE

Coach Mark Christine referees for students Bill Cover and Kalvin Manning.

MOVED LATELY? CHANGE OF ADDRESS SHOULD BE REPORTED TO YOUR PERSONNEL DEPARTMENT.

HEWLETT PACKARD
PO Box 10301
Palo Alto, California 94303-0890

Bulk Rate
U.S. Postage
Paid
Hewlett-Packard
Company

G2

KENNETH L MACY
403 MEADOW DRIVE
BOULDER CREEK, CA 95006