For the people of Hewlett-Packard January-February 1986

irecoach

HP 1000s fire up to save lives

Giving competition the boot in Italy

Shaping bills on the hill

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page 8



FEATURES

Having	a	say	in	politics

Hewlett-Packard has a new presence in Washington, D.C., lobbying for the benefit of the whole electronics industry.

Some don't like it hot

The Oakland, California, Fire Department gets emergency dispatching help from two HP 1000 computers. Cover photo by Cindy Charles.

HP's committed to Italia

The company is poised in Italy to become one of its dominant computer suppliers.

Takeover?

Corporate raiders, hostile takeovers—could it happen to HP?

Extraordinary People

Geoff Ainscow helped found Beyond War in 1982 because he believes nuclear war is the issue of our time.

DEPARTMENTS

YourTurn

Measure readers write about matters of interest to all employees.

Letter from John Young

HP's president provides an overview of the international trade situation.

ExtraMeasure

Mountain View employees trick customers; a nextgeneration product introduction in Colorado Springs; a look at Venezuela's model employee; updated version of the HP organization chart.



page 11

page 21

MEASURE

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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.

Kathleen Gogarty

3

11

15

16

7

18

19

Having a say in politics



all eyes in Washington, D.C., were on the House of Representatives' Ways and Means Committee.

Behind closed doors, committee members were arguing out the final version of 1985 tax reform legislation _with billions of

dollars in future taxation riding on word changes. Waiting with intense interest in the corridor during

the "markup" process were dozens of lobbyists, including Eben Tisdale, Hewlett-Packard's full-time Washington government affairs representative. At his side was HP tax attorney Dan Kostenbauder, brought in from California for six weeks to give instant analysis of how changes in the still-fluid tax law would affect HP in

Briefcases stacked against the wall, the lobbyists waited. They might well be there until after 10 p.m. in the hope that someone would emerge from the closed room with a question about the impact of a new proposal. Staying available to give a quick, knowledgeable answer when it counts is part of the lobbying game. It was not by chance that Hewlett-Packard had two

savvy people on the scene during the fall's hottest action in Congress. In the past two years Corporate Government Affairs has made sure HP has a direct voice in influencing such legislative decisions that will have a significant impact on HP's growing worldwide operations. Staying on top of the fast-moving action from Califor-

Having a say

nia was impractical. Says Bob Kirkwood, director of Corporate Government Affairs, "It became clear that to get our point across we needed yearround representation in Washington."

To provide that continuity, Bob brought in Eben in 1984. An experienced Washington hand, he had served seven years as executive director of the Scientific Apparatus Manufacturers Association (SAMA)—one of the industry groups in which HP is active.

Eben's headquarters are in an HP office in Rosslyn, Maryland, a short Metro ride from the Capitol across the Potomac River. He shares space with HP teams handling federal procurement and export administration activities.

The electronics industry as a whole is a newcomer to the Washington, D.C., scene—one reason it has paid one of the highest effective tax rates (33 percent) of any industrial sector. Tax legislation is high on the issues that HP is tracking. (Others are trade controls, procurement, environmental concerns and South Africa.) HP chooses its issues carefully, focusing on those that have the most significant impact on high technology and the company.

New lobbying clout

The tax reform bill that brought Eben and Dan to the dimly lit halls of the old Longworth Building is an example of HP's quiet new clout in Washington.

The lobbying that led up to these critical moments was typical: defining the issue, assessing with whom HP can work in industry and on Capitol Hill, and making sure all those in the decision-making process understand the practical aspects of legislation.

HP has moved a long way from the days when all its legislative efforts were funneled through trade associations. Those ties are still important, but today HP often takes the lead in putting together an ad hoc coalition to lobby vigorously on a particular issue.

"HP mixed it well on tax legislation," says Ted Heydinger of the Computer and Business Equipment Manufacturers Association (CBEMA).

"First you had Bob Kirkwood and Larry Langdon (director of Corporate Tax) playing key roles in setting up the



In Colorado Senator William Armstrong's office, Dan Kostenbauder explains to legislative assistant Cliff Northup how proposed tax measures will affect HP.

Ad Hoc Electronics Tax Group in 1983, anticipating an overhaul of the tax code. Its review of the impact of the current tax system on group members became the base line for evaluating any new tax proposals.

"Then in 1984, Kirkwood and John Young put together a powerful single-issue coalition to work for renewal of the R&D tax credit, due to expire December 1985." The Coalition for the Advancement of Industrial Technology (CAIT) pulls together 59 companies, 19 universities and 11 associations. It has the budget for full-time staffing and research projects. At the same time, HP's Washington office pulled together another coalition for non-R&D issues.

In addition, HP as a company worked Capitol Hill. "You talked to friendly Congressmen from districts where you have facilities, and canvassed members of the tax-writing committees," Heydinger points out. "And it was great to have one of your tax experts on hand to help staffers translate concepts into hard numbers."

Trade association people give HP high marks for spending time on tax matters to benefit the whole electronics industry.

But even the most skillful lobbying is a "win-some, lose-some" proposition.

The legislative process has many twists and turns. The R&D tax credit so important to HP, for instance, became tangled up in a larger, more controversial package of tax-reform legislation. An alarming new provision surfaced to include R&D expenses in a proposed corporate minimum tax—particularly severe for the electronics industry which must constantly bring out new products.

"Everyone realized that including R&D in the minimum tax was a disastrous body blow to our industry," says Ken Hagerty of the American Electronics Association (AEA). "We could argue against the concept, but it was HP's willingness to say publicly that it would cost your company \$100 million the first year that really made sense." The proposal was defeated in committee.

HP and high tech didn't win all their points, of course, but on balance the company could endorse the bill that came out of Ways and Means. It was subsequently passed by the full House after a procedural struggle on whether to bring it to a vote. Now action shifts to Senate side, and HP will follow the legislation closely all the way.

The HP lobbying style is professional and low-key, airned at establishing a

good long-term relationship. Working contacts are with staff people who work for individual members of Congress or for committees. It's up to staffers to collect and synthesize the opposing viewpoints on a bill. Says Dalena Wright, executive assistant to Representative Norman Mineta of California, "One of the most critical things you want to know is how a bill affects people back home. If we're naive about the actual impact, that's bad."

Lobbyists are the workhorses who can provide staffers with accurate answers: working up a summary, phoning a company expert, even developing a full legal brief. They must have a good feel for the strengths of various legislators and what they're politically comfortable with supporting.

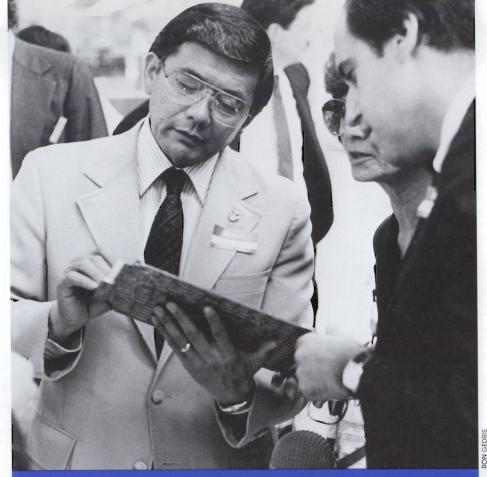
The pace in Washington can be killing. As pressure on an issue builds, time available for each conversation shrinks. Says a staffer for Senator Malcolm Wallop, who chairs a subcommittee of the Senate Finance Committee, "Sometimes I sit in the hall and lobbyists file by, each ticking off a few points."

He adds, "You develop a gut feeling about the lobbyists you can trust to have the right answers promptly time after time. In markup, Eben may have only 45 seconds to tell me, 'Here's what HP sees as bad or good.' But because he has access, that's enough."

"You have to operate much like a sales representative and be creative," Eben says. Recently 15 congressional aides involved with tax matters invited Dan Kostenbauder—who had been European tax manager in Geneva for two years—to talk for an hour about operating overseas under U.S. tax law. It was a non-political tutorial session that built contacts for HP.

In an environment where the unexpected is usually the rule, however, much of the action is beyond the lobbyist's ability to control. "You hang your ego on a hook," Eben says matter-of-factly. He characterizes his own approach as "organized but prepared to deal in a disorganized way."

The Washington office gets support from subject experts throughout HP who come in periodically to lobby. Two of those experts are from Corporate Government Affairs: Tom Christian-



Representative Norman Mineta of California, who represents Silicon Valley, looks over a printed circuit board during a tour of HP's Cupertino facility.

sen, who has followed trade issues for the company since 1965, and Glenn Affleck, who concentrates on environmental matters. Bill Schmick, of Federal Marketing's Washington, D.C., team, lobbies on procurement matters.

Art Young of Corporate Benefits is one of a number of people familiar with the hill. He's become a nationally known spokesman on health-care cost



Split ticket

When Tom Yeager of HP's Rockville, Maryland, sales office decided to run for the State Senate in 1982, he sat down with his regional sales manager Paul Guercio to talk about it. "We agreed that if I won, I wouldn't be able to continue as a district manager," Tom says, "but Paul encouraged me to go ahead and said there'd be a position for me within HP."

He's now a sales representative for measurement and computation products under Rob Kirkland, who has set up Tom's schedule to accommodate his public service.

During the legislative session in Annapolis the first three months of the year, Tom is in the HP office on a flexible basis during the week and maintains regular contact by phone.

The rest of the year Tom is based in Rockville. A 22-year HP employee with an engineering degree and M.B.A., he is unusual in a legislature dominated by lawyers. He believes working in an office 8 to 5 helps him keep in touch. "I certainly hear from my constituents who are co-workers," he says.

Having a say

containment—a topic so significant that the Medical Products Group has assigned Mark Tauscher of the Rockville, Maryland, sales office to follow legislative developments.

Shuttling between Palo Alto and Washington, D.C., are Mary Dee Beall and Peter Hanley of Government Affairs, both former staffers in Washington themselves. Mary Dee now manages grass-roots programs administered through GA liaisons at HP's U.S. facilities. She set up and manages the company's own political action committee. HP PAC, formed last fall as a vehicle for interested U.S. senior managers to make political contributions in federal races. Peter coordinates international programs.

"Working the hill" involves a lot of legwork and a minimum of glitz for HP people. "Some lobby ists are high-profile and flashy—they always want to buy you lunch," says Sue Eckert, staff consultant to the House Subcommittee on International Economic Policy and Trade. "I'm grateful and impressed that HP people like Tom Christiansen are aware of the time constraints we have."

She says, "Tom comes in, makes HP's position known, provides any material I need and then steps back to let the process happen."

Broadening the base

Hewlett-Packard's government relations activity centered on federal procurement before Government Affairs came into its own as a separate department in 1982. To leverage the efforts of its own small staff, GA taps other HP people to help at all levels.

One change has been new guidelines that encourage—not just tolerate—more local involvement by HP entities and individuals in the political process. This has triggered a regular flow of visits to HP from public office-holders.

Gary Fazzino, who gave up the position of Palo Alto city councilman to relocate to Seattle, Washington, as a regional government affairs manager in 1983, sees the decentralizing of activity to the state capitols and to Washington, D. C., as the key to increasing effectiveness.

He works with general managers in the Pacific Northwest to track issues



Senator Bob Packwood (left) of Oregon, hears from Fred Schwettmann, Integrated Circuit Group general manager, how wafers are made at HP's Corvallis site.

of local importance such as electricalpower planning and higher educational funding.

John Riggen, based in Colorado Springs, and LaJune Bush in Corporate Government Affairs manage the HP legislative agendas in Colorado and California respectively. John has set up issues committees of HP people to work with him on monitoring legislation related to all levels of education, industrial-waste management and environmental pollution. As part of her full schedule of legislative activity, LaJune chairs the AEA's tax committee which has been concentrating on unitary tax reform in California.

Outside the U.S., the government affairs function also has new muscle. In Geneva, Antonio Patron joined HP last July to handle European government affairs, focusing on Common Market activities and telecommunications issues. The GA function is also being staffed at the region level. HP Labs' Bristol Research Center in the U.K. has given HP new credibility for possible inclusion in major European Economic Community research projects.

Intercontinental Operations doesn't have to deal with a sophisticated centralized government like the E.E.C. headquarters in Brussels, Belgium. However, government affairs at the country level can also have its own complexities, says Lee Ting, manager of Intercon's corporate development and manufacturing. "In those countries where HP has set up joint ventures, the governments play a significant role in our business by setting the conditions and limitations for our operation."

With HP's political stands making more news these days, Government Affairs expects to step up letting HP people know what the company is doing in Washington.

That doesn't mean there will be general appeals to all employees to support an HP position with letters or calls on legislators—that's considered everyone's private decision. But increasingly there will be a role for some employees who do share the company's viewpoint to help in the lobbying effort.

"The secret to HP's political success in the future will be having lots of people taking a role in speaking out on issues," Kirkwood says. "It's neat to watch HP people become involved in the process for the first time—and find they can really have an impact in Washington." M—Betty Gerard

EMILY RA

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

The joy of printing

(The following letter was addressed to Dave Packard, not Measure, but we thought readers would enjoy the ebullient praise from a well-known New York enthusiast.—Ed.)

Mr. David Packard: It has been a long while. I write out of a burst of utter, irrepressible enthusiasm having just bought one of your HP LaserJets. I mean, it is the most beautiful work from the hands of man since the wheel. You should be very proud. I am. Bless you.

WILLIAM F. BUCKLEY JR. New York

Getting rid of the salt

I enjoyed your article titled "H₂O and the HP way" as it put into perspective our position relating to clean industry environmental concerns. However, one point needs to be clarified.

Referencing the Santa Rosa (Fountain Grove) site wastewater handling system, the article states that deionizing treatment removes organics and salts. I believe that salts only will be removed by deionization and the organics must be distilled or removed by absorption techniques.

Measure is becoming a more readable and informative publication.

Keep up the good work.

GARY KEEHNER North Hollywood

They paved paradise to put up a parking lot

As a member of the HP Cupertino Garden Club, I was delighted to receive your recent issue featuring HP gardens. The club has been a real benefit, especially to those of us with little or no space at home in the high-density housing in the Bay Area.

It may interest you to know that the Cupertino club has been ordered to vacate immediately so that the garden area can be turned into a parking lot. Many gardeners had already planted winter crops or hauled in tons of soil amendments.

In a company that spends a great deal of time in long-range planning, one would expect that reasonable notice could be given. I am extremely disappointed.

> MARK REED Cupertino

(Since Mark wrote to Measure, Cupertino gardeners received a 90-day extension to allow those employees who had planted winter crops to harvest them, thus protecting their investments of plants, seeds, soil amendments and time.

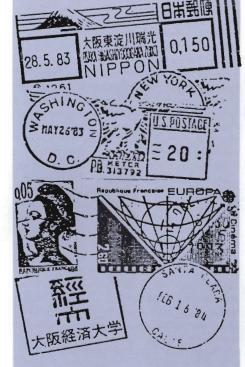
In addition, another Cupertino site is being investigated.—Ed.)

Problem-solving measures

I am taking these few minutes to commend you on your magazine.

Not only do I find it informative, but it has solved a problem for me. Since joining Hewlett-Packard (Canada) Ltd., friends and acquaintances have thought that I worked anywhere from a meat-packing plant to a car company. When I tried to explain how large and diversified HP really is, I am usually met with a blank stare and a doubtful, "Sure." Your magazine, strategically placed on the coffee table at home, has solved that problem and many now see what HP really is. Keep up the great work!

> LYNN ANDERSON Nova Scotia, Canada



Write on!

What public issues affect HP people and their jobs? Do you disagree with something you've read in Measure?

Send us your thoughts. We want to share your opinions and comments with more than 84,000 other employees.

If your letter is selected for publication, you'll receive a Measure T-shirt. (Be sure to send us a return mailing address and indicate your T-shirt size—unisex small, medium.

large or extra-large.)

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.





Dispatcher Ophelia Velasquez helps answer the more than 75,000 emergency phone calls the Oakland Fire Department receives each year.

The firefighters all stop to listen as the 911 call is broadcast through the station, punctuating the drizzly, winter afternoon.

It's a child's voice, a scared voice. "Hello? There's a fire in my house."

The dispatcher answering the emergency call receives an assist from a computer-aided dispatching system powered by two HP 1000s. In seconds, the child's address appears on the dispatcher's screen. A few more seconds and the computer recommends which equipment from which Oakland, California, fire station is available to be sent to the incident.

With a push of a button, the decision is made, the closest fire station is automatically notified by printout and by broadcast and help is on its way. The Oakland Fire Department has been answering emergency calls with the help of HP 1000s since July 1983.

"The people who programmed this thing," says Captain Bob Guzy, communications officer for the Oakland Fire Department, "managed to capture exactly what we've been doing for the last 150 years and make it logical. This was a feat because the decisions we

make about dispatching emergency equipment are not always logical. Our primary goal is get the fire engines out the door as quickly as possible 24 hours a day."

In Oakland, that's not always easy. The city operates 23 fire stations, 30 fire engines and emergency trucks, one fire boat and a variety of fourwheel drive vehicles and jeeps.

Oakland has 350,000 people and 74 square miles that includes hills, rural areas, mountains, the second largest port in the United States, light and heavy industrial and manufacturing areas, a major airport, high-rise buildings, a huge convention center, a coliseum and a rapid transit system.

This hodgepodge of geophysical characteristics gives the city a most comprehensive potential for fire, says Captain Guzy.

The HP 1000s, working with Wismer and Becker computer-aided dispatching software and terminals, helped dispatch responses to 28,000 emergency fire and medical calls during 1984. An additional 50,000 calls during '84 were of a non-emergency nature. Guzy says 911 rings an average of 100 to 110



Firefighter Willie Dixon checks the equipment on one of Oakland's fire engines.

When a 911 call comes in to the switchboard, Oakland firelighter Charles Gardner (left) is ready to respond immediately to the call for help.

PHOTOS BY CINDY CHARLES



Charles Gardner operates the "snorkel" that lifts firefighters as high as 85 feet in the air at emergency scenes.

times a day, but that number can skyrocket on holidays, especially the Fourth of July and New Year's Eve. The busiest shift is from 4 p.m. to midnight on weekends and holidays.

And fire departments aren't just for fires anymore. In Oakland, firefighters answer calls concerning chemical and hazardous material spills and problems, as well as personal injury and medical calls. All firefighters are trained in cardiopulmonary resuscitation and first aid.

Dispatching the responses to these calls can get stressful, Guzy says, "but it's probably not as bad as you think, especially with the dispatching system. Disaster is our way of life. Fires aren't disasters to us; they're normal. Stress in these situations comes from within, and for that reason, we try to keep things very loose in the 911 dispatching center. The importance of what those people are doing is what makes it stressful, and you should watch the tension mount when you find out a four-year-old kid is trapped in a house that's on fire." M —Jean Burke



Communications supervisor Cynthia Casey maintains the HP 1000s that power the Oakland Fire Department emergency dispatching system.

10 MEASURE

HP's committed to

In the Italian culture, commitment (or *impegno*, as the Italians call it) is a noble quality.

So much so that in his literary masterpiece *The Inferno*, Italian poet Dante Alighieri placed opportunists in hell because "they were neither for good or for evil but for themselves."

Roberto Albanesi, managing director of Hewlett-Packard Italiana, knows just how important commitment is to conducting business successfully in Italy.

"In this country, the big shots only want to do business with other big shots who they know will be around for some time," he says.

As a result, HP Italiana is forging alliances with local firms and expanding its operations to show it is committed to this fast-growing market and poised to become one of its dominant suppliers.

Looking at HP's presence in Italy over the years, one should have little doubt of HP's commitment to the market. In 1964, the company was one of the first U.S. instrumentation firms to establish operations in Italy.

"That market was really opening up in Italy at the time," Roberto says. HP earned a reputation as *the* supplier of the Italian instrumentation market.

When HP introduced its first computer in Italy in the early 1970s, "it was considered a peripheral to our instru-

mentation line, "says Roberto. The firm's customers were primarily those public ministries and universities in Northern Italy that used HP products for applications in the public telephone business (the government telecommunications activities in Rome are more military in nature).

During the '70s, HP's computer business in Italy evolved, placing HP in competition with home-grown Olivetti.

"The Olivetti 101 was competitor to our HP 9100 desktop computer," says Roberto. "But Olivetti's computer was marketed for generic applications and the HP 9100 was strongly oriented toward scientific applications. The engineer was the ideal user of our machine. The only place we met Olivetti head-tohead was in the university market."

In the late 1970s the computer market in Italy lagged behind the U.S. in concepts such as distributed data processing and value-added marketing.

Today, the Italian data processing market has matured into one of the more dynamic in Europe and HP's operations have matured as well. Last fall, Italy became a sales region of its own. Previously, it had been clustered with Spain, Switzerland, Austria, Africa and the Middle East. But "the complexity and dimensions of the Italian market are so different from the others, it needed to be on its own," says Roberto.

The change has benefited Hewlett-Packard Italiana.

"Already, we are showing the fastest growth rate (20 percent in U.S. dollars) of any of the European regions," he says. "We consider 1985 to be our best year ever." HP Italiana is today the fourth largest computer supplier in the country.

HP's success hasn't been limited to computers. At STET, the Italian government telecommunications and electronics agency, for example, "it's much easier to list what they don't have of ours than what they do," says Arnaldo Nicoli, major accounts program manager.

Another good customer is the business group Fiat, best known for its automobiles but engaged in a broad variety of businesses. Fiat uses HP

January-February 1986



Touchscreen personal computers to manage general administrative tasks, and HP 1000 computer systems for computation and dedicated solutions.

Other major customers are ENI, the state petroleum company; ENEL, the government agency that manages electric utilities; Elettronica, a private electronics supplier to the military; and EFIM, the state agency that owns manufacturing companies, such as AGUSTA (helicopters).

"We have a higher proportion of government-owned or controlled customers than do other HP operations in Europe," Arnaldo says. "We are targeting private firms, too, but it's very difficult because they have well-established vendors and sometimes prefer a centralized solution not using HP's networking."

To reach those private firms (mostly industrial), HP is counting on support from third parties such as dealers and original equipment manufacturers (OEMs). Third parties contribute nearly a third of HP Italiana's total sales, the highest percentage of HP in Europe and double the contribution of third-party channels in the U.S., says Antonio Brogi, third-party program manager.

"We rely heavily on third-party channels to cover this market because it is so widespread," says Antonio.

"Unlike France, where 80 percent of the industrial firms are clustered in a 100-mile ring around Paris, the many industrial companies in Italy are spread evenly (60 percent in the north, 40 percent in the south)," says Antonio.

And although there are twice as many industrial companies in Italy as in the U.S., nearly a fifth of them are "mom- and-pop" operations with fewer than five employees.

One product that has done well for Hewlett-Packard in the past year is the HP Touchscreen personal computer.

While the Italian computer industry as a whole grew 65 percent last year, the PC business grew 68 percent," says Mario Meazza, marketing manager. "The Touchscreen gave us such a boost that we are now the third largest supplier of PCs in Italy."

The PC market in Italy is different



Journalists at an auto show in Milan use the HP 150, with a modem designed in a joint venture with Telettra, to send stories directly to their newspapers for typesetting.

from that in the U.S. in several ways, says Nicola Ciniero, district manager of the personal computing group.

"In large Italian companies, information retrieval is perceived as a sign of power," he says. "So our salespeople often must deal not only with the end user, but also the information systems manager and even the general manager.

"Also, PCs are not perceived as standalone items but as part of a network, which can make it more difficult to market. And there are very few networks established in Italy. Usually, companies are set up with a mainframe and a few terminals."

Despite these obstacles, there are some success stories. Telettra, the telecommunications subsidiary of Fiat, has undertaken an office automation project that includes six HP 3000s and more than 100 HP Touchscreens and terminals. The business group STET is using more than 400 HP Touchscreens in its office automation development.

"We gave The Portable personal computer to the data processing manager of ENI for a week," Nicola says. "The general manager took it with him on vacation and liked it so well that when he returned he posted a letter to the board of ENI's chemical division



advising them to get Portables."

Sales of Hewlett-Packard PCs doubled between 1984 and 1985, says Nicola, boosted by a locally manufactured software package called MIDA that performs accounting, stocking and invoicing functions for manufacturers.

In 1984, the Italian business magazine Espansione conducted a poll in which HP was ranked the third most respected computer supplier by Italian executives, and its customer support was ranked first by many.

"Being on top does not mean we can relax," says Giovanni Scruzzi, customer engineering manager. Like most of its big competitors, HP has a customer support team within 100 miles of 98 percent of its installations.

"In a survey we conducted, 97 percent of the respondents said our response was either very good or good," Giovanni says. "One customer wrote, 'I know that at 5 p.m. the HP technician won't drop the screwdriver to rush home."

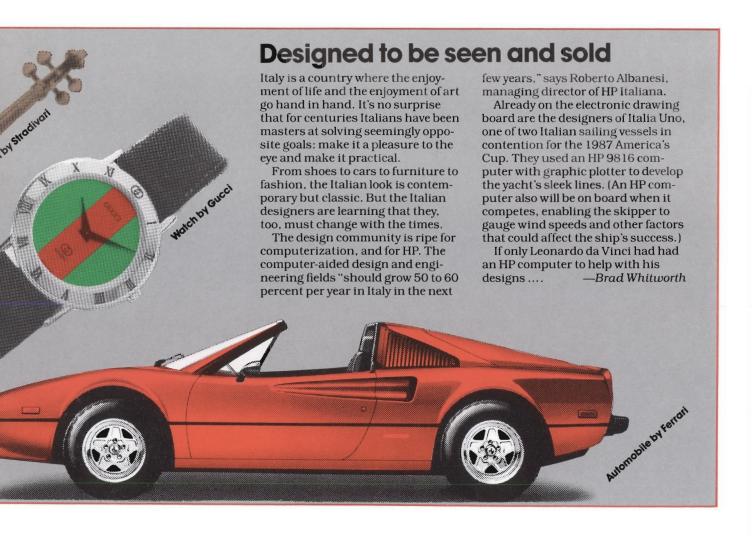
"Up until 1982, HP Italiana was in its first stage of development, that of a sophisticated trading company," Roberto says. "Now we are in the middle of our second stage—becoming a semi-industrial firm—as evidenced by our creation of a systems engineering center, an application center and several joint ventures with local firms."

In one joint venture, HP Italiana is reaching for the stars. The company is

providing transistors and diodes to the Italian firm Selenia for use in an Italian telecommunications satellite to be launched in 1988 and in the ground stations that will service and monitor it. Called ITALSAT, the satellite will use state-of-the-art digital telecommunication technologies for telephone and teleconference applications. HP components were selected because, "ours were the only ones available that provide the security and reliability Selenia was seeking," says Gian Luigi Ricci, an HP Italiana engineer on the project.

With such projects under way, HP Italiana is poised to enter its third stage of development, Roberto says.

"Our objectives are by 1990 to be among the 70 largest companies in





Italy [it is currently in the top 200], to have sales of \$600 million and to employ 2,000," he says.

Roberto Albanesi is confident HP ltaliana is up to the challenge.

"One thing in our favor is that Italy, unlike some European countries, is very free-wheeling economically," he says. "Italians want to buy the best, not just buy what is Italian.

"But buyers want to know that the supplier will be competent and continuous in their support—committed to the account. In the Italian buyer's mind, HP has performed very strongly in those categories thus far and we expect to continue to do so for some time to come." M—Jeff Herrington



HP Italiana's country headquarters building is in Cernusco Sul Naviglio, near Milan.



TAKEOVER?

Pick up a newspaper today and you're likely to read about companies gobbling up other companies at a frenzied pace. While some of these mergers are friendly, many are hostile, with the to-be-acquired firm battling to retain its independence.

Once was a time when a company the size of Hewlett-Packard had nothing to fear. And, with more than one-third of the outstanding HP stock owned by Bill Hewlett and Dave Packard, their family foundations, and company officers—any unsolicited suitor could easily be deterred.

The rules of the game, however, have been changing in recent years. More institutional investors, such as mutual fund managers, must maximize short-term return on their clients' investments to compete. Also, money is widely available to finance corporate acquisitions.

Corporate raiders are especially interested in companies with piles of cash, valuable real estate and well-funded pension plans. HP could be vulnerable for a number of reasons, including its lack of long-term debt and its \$1 billion in the bank at the end of the 1985 fiscal year.

"While there is little likelihood that HP will ever fall victim to a hostile takeover, we feel it's still prudent to seek shareholder approval of three measures at this time," explains Craig Nordlund, HP corporate secretary. "We want to minimize the chance that unfair tactics would be used against HP, hurting shareholders and the company."

All shareholders, including HP employees, will see three proposals related to corporate control in their proxy materials being mailed with the 1985 annual report in early January. These measures will be voted on at the annual meeting held in February.

Says Bill Hewlett, "Much of Hewlett-Packard's success can be directly related to our independence—our ability to make our own decisions and determine our own course—and especially to our way of doing business, our culture."

The three measures include: a fairprice provision, a motion to eliminate Is Hewlett-Packard a possible target for corporate raiders?
No, but the company's proposing three measures at the annual meeting to maintain control.

the ability of shareholders to take action by written consent, and an authorization for additional common stock and new "blank-ticket" preferred stock.

Fair price for all stockholders

A common practice in unfriendly takeovers is to offer shareholders a high price for their stock and force them to make a quick decision about selling their stock. Once the raider has acquired a controlling interest, he lowers the offering price for remaining shareholders. A fair-price provision, if approved, would require a suitor to offer the same price to all shareholders at all stages of the takeover attempt.

Eliminate action by written consent

Under HP's current charter, shareholders are permitted to act by written consent. By obtaining the written permission of a majority of shareholders, an action such as the election or removal of a director, or the amendment of the charter could take place without notice to the company or other shareholders. The proposed amendment would require all such action to be taken at a regular or special meeting of the shareholders. As a result, all shareholders would have an opportunity to speak and to hear the company's views on the proposal before any action is taken.

Authorize additional stock

HP's current charter authorizes 320 million shares of common stock, of

which 80 percent is now outstanding. By authorizing additional common stock and "blank-ticket" preferred stock, the board of directors would have the flexibility to use stock as a tool to thwart an unsolicited takeover. (The additional stock also will help HP finance future business opportunities.)

To make sure the protections of a fairprice provision and the elimination of action by written consent can't be wiped out by a small group during a takeover attempt, each of the proposals includes a provision requiring an 80 percent (supermajority) vote by stockholders on any amendment to change those provisions.

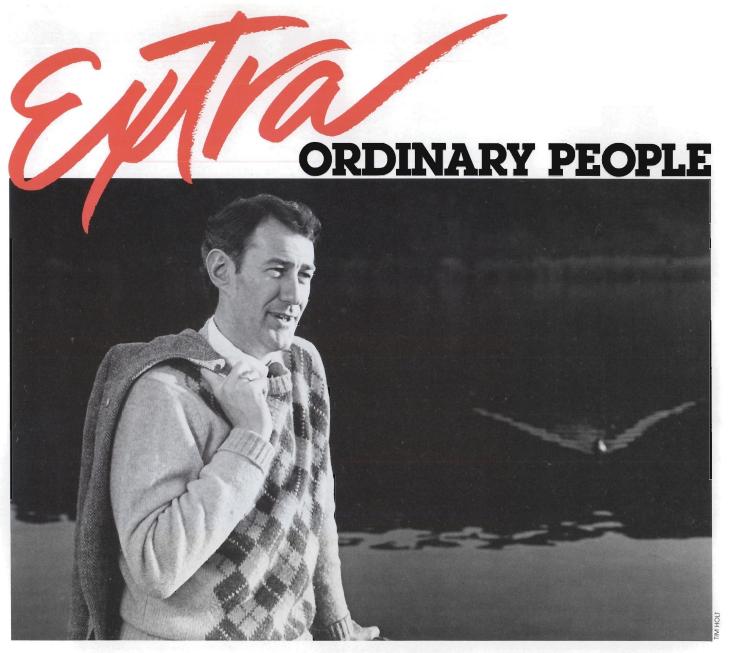
Will these measures make HP safe from all takeovers? "No," answers Craig. "Any raider with enough money and desire can take over any company, but these new proposals would provide a measure of protection to current shareholders by giving them and HP management the opportunity to react to a hostile takeover threat in a thoughtful and deliberate manner."

South African vote

Also up for vote is a proposal that asks HP to establish a corporate policy that neither the company nor its subsidiaries will sell, lease or service computers, computer parts or software to the government of South Africa and any of its agencies or instrumentalities.

HP's board of directors, in recommending a vote against the measure submitted by three church groups, points out that the company is already in compliance with existing U.S. government regulations. Those regulations restrict the sale of computers to the South African military, police, prison system or any other apartheid-enforcing agency. The church's proposal also would prohibit sale of HP computers to many other South African agencies such as hospitals, schools and the post office.

Identical proposals were defeated in 1982 and 1981. **M** —Brad Whitworth



eoff Ainscow, a wiry expatriate with dark curly hair, cuts a dashing figure as he strides along the garden path that surrounds his parent's home in Prestwich Village, England. The invitation that brings him back to Prestwich—a summons to his boyhood—reached him in California months ago.

His childhood home is eager to celebrate his return. And the odor of ripening currants causes him to reflect.

"Bury Grammar School in Manchester started at eight o'clock," says Geoff, now Data Systems Division's training manager.

"One morning, I remember stopping the school clock with a snowball from 50 yards. The glass fell to the ground the hour and minute hand just hung there. I thought I'd stopped time. Never would I have dreamed that 30 years later I would devote my life to the continuance of time for life on this planet.

"As a youngster, I became a keen observer of nature. I was taught as a Queen's Scout to make connections between seemingly unrelated things."

At the University of Loughborough Geoff received a B.S. degree in mechanical engineering. Though he failed his freshman exams, he retook them that same summer and passed.

"I resolved one lazy summer afternoon while studying thermodynamics that I'd never leave a tutorial again without having all my questions answered, no matter how long it took."

Geoff finished fourth in a class of 33. After completing a two-year apprenticeship in the machine-tool industry, he decided to leave England to look for

he decided to leave England to look for his future. "I always had a hankering for a little more—more sunshine, more tennis and more opportunity." In December 1967, Geoff, his wife, and young daughter boarded a Swedish cargo ship at London's Tilbury Docks. They embarked on a four-week journey that took them across the Atlantic, through the Panama Canal, up the coast of Mexico and under San Francisco's Golden Gate Bridge.

They left a town of machinery and red brick for the slick, glass-and-concrete buildings of California's Santa Clara Valley. "After three weeks in the States, I landed a job at HP's former Microwave

"I always had a hankering for a little more more sunshine, more tennis and more opportunity."

Division in Palo Alto," Geoff says. "I first joined the design team for a microwave sweeper and then managed the plastic molding shop that manufactured components for it.

"The molding shop soon ran three shifts a day, seven days a week. Around that time my son Jonathan was born and I recognized the importance of my contribution to his development. I decided to devote more time to my family."

His interests at HP began to gravitate

from parts to people.

"With careful questioning and observation, I found I could solve most technical problems," he says. "So the problems that involved people became the most challenging.

"I read the 'Global 2000' report—a study of the probable changes in the world's population, natural resources and the environment through the end of the century. I was called to action."

In 1979, Geoff was a loaned executive, taking a year off from his job as Employment Manager at Data Terminals Division to develop a residential energy conservation program for the City of Sunnyvale. He also planned a curbside recycling program which con-

tributed to Sunnyvale's choice that year as an all-America city.

"That's where I learned that one person does make a difference," Geoff says.

Volunteers, under Geoff's guidance, analyzed every household in Sunnyvale to determine its energy needs. HP computers tabulated data from hundreds of questionnaires and reported how much money each household could save if homeowners insulated the walls, attic and roof.

"I made presentations to schools on ways to conserve energy," Geoff says. "I would use puppets, steam engines, even Hershey's chocolate kisses to demonstrate how much energy the United States uses compared to the rest of the world."

In 1982, Geoff helped found the Beyond War movement. "It took a while for me to realize that we now face the possibility of extinction. But that possibility became clearer when I discovered that today the world's arsenals contain the explosive power of one million Hiroshimas. I had to communicate this

"It took a while for me to realize that we now face the possibility of extinction."

knowledge to people, but always with a sense of hope. For while our situation is critical, it is not hopeless.

"Beyond War is an opportunity to discuss, develop, and demonstrate a new way of thinking that can bring about a world beyond war.

"Gradually my sense of urgency, my sense of hope increased. I found myself taking on more and more responsibility. In the early days, teams of Beyond War volunteers left Palo Alto for 10-day trips to selected cities in 11 states. I led discussions about how we are dependent on one, interconnected life-support system and how the threat of nuclear weapons endangers us all. I went to Bakersfield, California, with this message and talked to teachers, parents and ministers. People were eager to express their concerns about

nuclear war. They talked and talked about it—grateful to work out ways to educate themselves and others."

Beyond War has gained wider acceptance since Geoff's days in Bakersfield; it has started to exert an influence on

"I feel as if I am a citizen of the world, working for the survival of life on this planet."

the global community. It now has 8,000 members and presents a yearly award "to honor the great efforts of human-kind as it moves to build a world beyond war."

In 1983, the Beyond War award went to the Catholic Bishops of the United States for their pastoral letter, "Challenge of Peace: God's Promise and Our Response."

The 1985 Beyond War Award went to the six heads of state who signed the Five Continent Peace Initiative. In a show of technology that fulfilled Marshall McLuhan's dream of a global village, the tribal chief, the Mayan Indian, the Brahmin, the Norseman, the Greek and the Spaniard were shown side by side on a large screen in Masonic Auditorium in San Francisco. From their capital cities, they exchanged greetings and the hopes of their people for a world at peace.

And for Geoff Ainscow and Beyond War, "the medium became the message."

"It is a tremendous step," Geoff reflects, "when six world leaders come together in cooperation for the benefit of all people. When I first emigrated to this country, I intended to become an American citizen, but now I feel as if I am a citizen of the world, working for the survival of life on this planet and a full lifetime for all future children." **M**

—Tom Ulrich

LETTER FROM JOHN YOUNG

HP's president diagnoses the health of the world's complex trading system.

The subject I'm addressing here the viability of the world's international trading system—isn't the kind of issue we tend to think about in our day-to-day activities. International trade was certainly the farthest thing from my mind when I joined HP in 1958. At that time, less than 5 percent of our business was international. The business challenge seemed pretty simple then. If we built a better mousetrap, the world was ours to conquer. We were just beginning to think about the possibility that the arena in which we'd be competing would be just thatthe world.

Fortunately for us all, Bill Hewlett had the foresight to envision the importance of international markets. At his urging, HP set up sales and manufacturing operations first in Europe (we celebrated our 25th anniversary in Böblingen, West Germany, last year) and then in the Pacific Rim. Those early initiatives on our part bore fruit. Today, almost half of HP's sales come from outside the United States.

Since 1970, the total dollar volume of world trade has grown sevenfold. It's a vast arena of opportunity for companies like HP. But many of the factors that influence our success—the workings of the international trading system—lie outside our direct control. So like many other business leaders, I've had to learn about the complexities and challenges of a huge and highly interdependent world economy.

Does the system work?

HP's ability to compete fairly—that is, on the basis of price, quality, and performance—requires an international trading system that works. I'm not so sure that's what exists today. My most fundamental concern is this: While the volume of world trade has grown dramatically, the portion of it covered by internationally agreed-upon rules has shrunk. The General Agreement on Tariffs and Trade (GATT) is the cornerstone of the international trading system. GATT provides both a set of rules for the fair conduct of trade and a forum where countries can negotiate trade rules and settle disputes.

With that definition in mind, you can see why I'm concerned that GATT cov-

ers only about half of the total amount of trade and only 15 percent of the trade restrictions that exist. There's no coverage for trade in services or investments. There's little provision for agriculture or state-owned industries. So, not only is GATT's coverage limited, but many of the newly-industrialized nations have only the weakest commitment to the rules.

Trade restrictions that affect an international company like HP include both tariffs and what are called "nontariff barriers." Tariffs are the import duties charged when goods enter a country. Tariffs are quite visible, and their effect on HP prices is quite easily understood. In some companies, tariffs on HP equipment affect our price-competitiveness, and we are pressing to have those tariffs discussed during the next round of trade negotiations.

Non-tariff barriers are more subtle and thus more difficult to prove and negotiate. They include activities such as government procurement procedures that discriminate against foreign firms, standards that place non-domestic suppliers at a disadvantage, import license requirements that cause intolerable delays to our customers, investment restrictions on foreign firms, insufficient protection for proprietary software, and restrictions in the telecommunications market.

Agreeing on the rules

Competition can be free and fair only when there are agreed-upon rules that govern the players' behavior. So we must strengthen the international trading system by increasing the amount of trade it covers and the number of countries who are committed to its rules. President Reagan has recently called for a new round of negotiations on GATT, and leaders in other nations have voiced their support for this move.

HP people have a contribution to make in this process. Identifying nontariff barriers is the first step in negotiating their removal. We have recently completed a study of the non-tariff barriers HP faces. While it was easy to identify them generally, it was more difficult to cite specific HP examples of their effects. That's why I urge those of you who encounter such activities to docu-

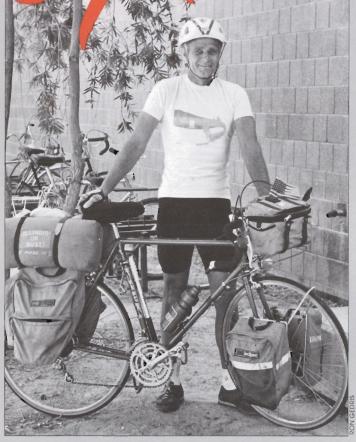
ment their effects on our competitiveness and inform the HP management team responsible for directing our efforts (in the U.S., the Government Affairs department, and in Intercontinental and Europe, the Corporate Development staff).

If we were to succeed in strengthening the international trading system, would that solve all the problems companies such as HP face? Unfortunately, it's not so simple. Different countries' domestic policies also affect trade flows. The huge U.S. federal deficit has had a major impact on the strength of the dollar, and this has had a major effect on HP's price competitiveness. The debt problems faced by some of our trading partners—or their reluctance to encourage domestic consumption—also affect our ability to sell internationally.

So free trade is just a myth—if by that we mean the invisible hand of the marketplace guiding our actions. Rather, trade is a complex process that must be managed systematically to make it work. The recent agreement by the Group of Five (the finance ministers of the U.S., Japan, France, the United Kingdom, and West Germany) to lower the value of the dollar is the first recognition that floating exchange rates don't respond just to trade flows and that trading partners need to coordinate their domestic policies if the trading system is to work.

And it has to work as freely and fairly as possible. Anyone who's ever studied the downward spiral of the 1930s knows the hazards of trade's collapse. That's why business leaders have to learn to think like statesmen. It's not a role I envisioned when I joined HP more than a quarter of a century ago, but it's one I accept because I want this company to succeed throughout the world in the years ahead.

John



Illinois or bust!

Jim Fouts, of Cupertino's Data Systems Division, rode his bicycle 2,500 miles from California to Lawrenceville, Illinois, in 1985 to get one of Mom's dinners.

The 57-year-old spent 35 days on the road, averaging about 75 miles a day. He met his brother, Keith, in Denver and they rode together from that point.

Jim says he was selfcontained during the bike trip: tent, sleeping bag, stove, pots, pans, lantern, clothes, camera, recorder, computer, first-aid kit, tools, tires, tubes, some food, extra water containers and dog repellent.

His bike and baggage weighed 80 pounds.

He survived leg cramps, U.S. 50 through Nevada, 100 degree-plus temperatures, cracked and bleeding lips, a five and a half hour

climb up Loveland Pass (elevation, 12,000 feet) along the Continental Divide in Colorado, and seven days of storms and headwinds in Kansas.

But it was worth it when he and his brother arrived in Lawrenceville and were greeted as celebrities by old classmates, family, friends, reporters and the mayor. They received a police escort to their mother's house.

Jim says the reason he made the bike odyssey was to say thanks for the good health he's had for 57 years, and for "an inherited trait that has never let me be satisfied with the status quo."



Mapmaker, mapmaker, make me a map

People are just beginning to learn that they need maps in their business reports and presentations, says Paula Dieli, product manager in Santa Clara's Personal Software Division.

To illustrate why this is true, she begins with a page crammed with numbers strung in columns of black and grey, showing beer consumption patterns in the United States. Using HP Map, a new software product for HP 3000 users, she can quickly transform the columns of numbers into the easy-to-read, presentation-quality map shown at right.

With a choice of 64 colors, users can produce a variety of maps, highlighting locations throughout the world.

Paula says HP Map comes with a library of 150 commonly-used maps to which users can add the information they wish to illustrate. A library of symbols to be used as location markers is also included.

HP Map can be used to create zone maps or dot maps which can be printed on any size paper or on transparencies.

Who's Drinking the Beer





Miami device

They've got good timing at the Naval Observatory in Miami.

That's their business.
The observatory's main charge is time keeping and time monitoring for the U.S. Department of Defense and it uses eight HP cesium beam clocks to accomplish it.

The station shares time with other nations involved in time research and keeps the U.S. military's clocks synchronized.

The Naval Observatory
Time Service Substation is
located in southwest Dade
County, outside Miami,
Florida. It was established
in 1949 as a backup for
the main time station in
Washington, D.C.

Miami was chosen in the '40s because the clear night sky made it possible to photograph a certain cluster of stars as it passed above a telescope. It was possible to measure a time interval from the changing positions of the stars over several nights. The time interval was used to measure clock error. Back then, the stars were more accurate than any other system.

The introduction of atomic time standards changed that. Hydrogen and ammonia clocks were so accurate that star field correlation was unnecessary.

HP developed the first portable cesium beam time standard clocks and its newer designs are the basic instruments for time keeping in most nations.

—Lewis T. Fineman





BOTTOM

Hewlett-Packard reported an 8 percent increase in net revenue and a 10 percent decrease in net earnings, excluding the benefit of a one-time 1984 tax law change, for its 1985 fiscal year ended October 31. Fourth quarter net revenue was virtually flat compared with the year-ago quarter and net earnings decreased 23 percent.

FY85 revenue totaled \$6.505 billion, compared with \$6.044 billion for FY84. Net earnings for the year were \$489 million or \$1.91 per share compared with \$547 million or \$2.13 per share a year ago. (The 1984 amounts do not reflect a one-time benefit of \$118 million or 46 cents per share from a tax law change related to the company's Domestic International Sales Corporation.) Orders for the year were \$6.395 billion, up 1 percent from total orders of \$6.350 billion in FY84.

For the fourth quarter, net revenue totaled \$1.685 billion, compared with \$1.688 billion in the same quarter in 1984. Net earnings amounted to \$127 million, equal to 50 cents per share on approximately 257 million shares of common stock outstanding, compared with the year-ago quarter's net earnings of \$167 million or 65 cents per share. Incoming orders were \$1.595 billion, up 1 percent from \$1.579 in the fourth quarter of FY84.

HP is continuing a modified expense-control program into 1986.

NEW HATS

Jean Baillod has been named European corporate development director and Laszlo Szegedi is the new general manager of the South East Europe Region (SER). The role of Franz Nawratil as director of marketing and sales for Europe has been broadened to include responsibility for aligning all product group programs with field sales, support and marketing activities throughout Europe. Reporting to him are region sales managers in France, Germany and the U.K.; GMs of South East Europe, Northern and Italian regions. In SER, Nick Nebehay is now GM for the Middle East and Africa organization. Zissis Thanos is GM of HP Hellas, which sells in Greece.

Paul Goldman to operations manager, Health Care Productivity Operation in the Medical Group. . . . **Bob Olson** to operations manager, Support Materials Roseville.

HIJACKING TRAGEDY

Two HP employees were among those killed in the hijacking and subsequent burning of an Egyptian Air Lines aircraft in Malta in November. **Philippe De Laet** and **Paul Aslanidis**, who both worked for HP Athens, were en route to Dubai to take part in a computer trade show. In their memory, HP Athens was closed November 28.

A nextgeneration product

When Katherine Lynne Muterspaugh was born last year, her HP engineer parents, Milo and Helen, chose an unusual way to announce her arrival. Milo is an engineer in logic sytems in Colorado Springs, and Helen is an engineer with the Colorado Springs Division. Helen wrote her first child's birth announcement as follows:

New generation from Muterspaugh, INC.

With over 80 years of design experience, Muterspaugh, INC. is proud to announce a new addition to its line. The new model is highly portable, weighing in at 8 pounds, 14 ounces, and features a small footprint with an overall length of 22.5 inches.

It contains unlimited ROM and RAM that took over nine months to develop. At present, the resident language is gibber-





rish, but its microprocessor will support higher level languages. The unit comes complete with audio capabilities and two extendable arms featuring digital manipulation.

Muterspaugh, INC. is very proud of its new addition, code-named Katherine Lynne, and you are cordially invited over for a "hands- on" demonstration.

A model employee

When the HP 150 was being promoted in Venezuela last year, employee Rosendo Manuel Rodriguez Diaz was chosen to grace the ads and his photograph appeared in all the Venezuelan newspapers.

When Rosendo isn't posing for the camera to sell personal computers, he works as an operations supervisor in the information systems department.



Tricky business

It's their job in the Product Support Division (PRSD) in Mountain View to think up ways to trick HP customers.

Yes, they purposely install bugs in computer systems and often make customers completely dismantle their equipment. Says instructor George Sweet, "Doing this lets them see these are very forgiving machines. When our students get home, they've already torn apart the machine once to look for problems—they know they can do it again if they have to."

The Customer Service Training staff, part of PRSD, provides computer hardware training for customers for everything from desktops, PCs, system computers to peripherals. They provide training only for those customers who choose self-maintenance over a service contract.

Wei Huang, PRSD marketing engineer, says students come to Mountain View and Cupertino classrooms in large numbers from all over the world. Through April of 1985, he said, the faculty had trained 3,500 people.

In 1985, customers attended from India, Nigeria and the People's Republic of China. In the past, PRSD has trained people from Korea, Singapore and Taiwan. The faculty has traveled to Japan, Australia, Singapore, China, Canada and South America to provide on-site training. Customer instruction in Europe is provided by a customer service training staff in Grenoble.

Instructor Bob Preston says constant refinements and improvements make it easier for customers to make repairs on HP equipment, and he looks toward the day when HP will be able to offer remote diagnostics to all customers.

ENTRA MEASURE



Pick it up and dust it off

When an HP 9810 desktop calculator showed up for the first maintenance in its 15-year existence, HP customer engineers in Johannesburg, South Africa, were so interested in the "museum piece" they offered to fix it for free. Most of them

had never seen one like it.

The HP 9810's problem? A dirty magnetic card reader, not surprising after years of hard work in dusty Umtata.

B.I. van Zyl, a land surveyor, bought the computer for his business, back when the HP 9810 was one of the first of its kind sold by HP in South Africa. He recently bought a new HP 150 personal computer and plotter for his surveying, so the HP 9810 now will be used only for back-up.

When the HP 9810 was introduced in July 1971, it had six times the memory capacity of similar units. It was the first desktop calculator to use plug-in function blocks to expand its capabilities.



Sometimes a good idea turns out all wet

When the Microwave Semiconductor Division had a rugged new slot-reader family and bar-code wand to introduce, the division decided to make a real splash at Scan-Tech, the trade show for automatic identification devices held recently in Baltimore, Maryland.

To show how well sealed they were for outdoor or wet environments, the products were displayed underwater in a three-tiered fountain which featured a waterfall and live fish.

Extra-long bar-coded cards were on hand for people who didn't want to dunk their arms when they tried out the new HBCS-7000 slot reader. One wag asked if it could read a bar-coded fish? The answer was probably not—unless the fish could learn to swim through the narrow slot.

WORTH NOTING

Formally added to the Design Systems Group: the Salt Lake City Operation (formerly Cericor, Inc., which HP acquired in late 1985), now part of the CAE/CAD business unit. Operations manager is **Dave Bailey.**

Dr. Klaus von Klitzing of West Germany, 1985 Nobel laureate in physics, was earlier awarded the 1982 Hewlett-Packard Europhysics Award of the European Physical Society for the same body of work. He discovered that electrical resistance occurs in

extremely precise units. Dave Packard received the 1985 National Foreign Trade Council's Dollar Award for distinguished contribution to the advancement of American foreign trade and investment. . . . John Young was named 1985 Manufacturer of the year by the California Manufacturers Association. . . . HP France was named company of the year by the Adia Institute of Social and Economic Management. The award recognized its increasing contributions in business and socially worthwhile activities since 1979.

NEW PRODUCTS

The HP-94 handheld industrial computer from the Handheld Computer and Calculator Operations weighs less than two pounds and can be carried in one hand or attached to a clipboard. It's designed for factories, warehouses and delivery routes.



HP - 94

Cooperation across the Analytical Group has resulted in a set of new workstations based on the HP 9000 Series 300 technical desktop computer and a core set of chromatographic software tools. Debuting together: a mass-spectrometer workstation from the Scientific Instruments Division, a gas chromatograph workstation from the Avondale Division, and a liquid chromatograph workstation from the Waldbronn Division.

The Böblingen Medical Division has added transcutaneous blood-gas monitoring to the HP 78834A neonatal monitor (the feature is available now only in Europe).

The Colorado Networks
Operation's new HP
59955A used for emulation of an IBM 3278 display station is upgraded to
run on the HP 9000 Series
200 and 300 engineering
workstations with the Pascal 3. I operating system.
File transfer has been
added. . . . Among a host
of new products from the
Optoelectronics Division:
the HCTL-1000 motor controller microprocessor.

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CORPORATE ENGINEERING

Chuck House Director

INFORMATION TECHNOLOGY GROUP

George Bodway General Manager

INTEGRATED CIRCUIT GROUP

Fred Schwettmann General Manager

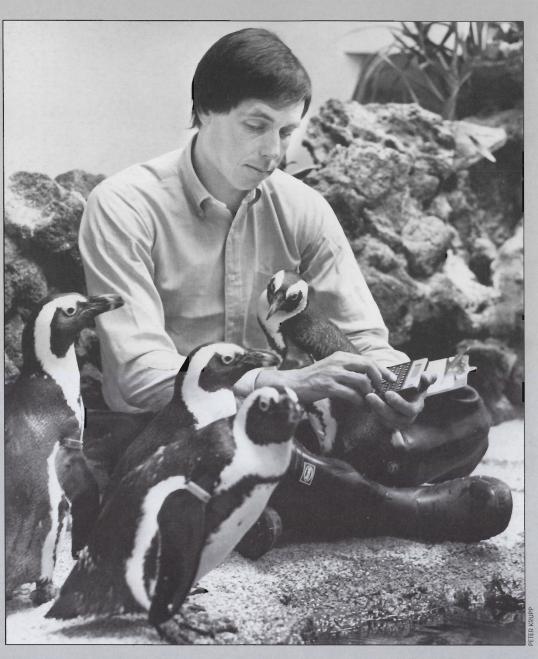
Calculating birds

The pecking order is clear among these penguins at San Francisco's Steinhart Aquarium.

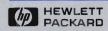
Lap-held Ursula helps make the problem black and white for Dr. John McCosker, director of the aquarium and avid user and promoter of the HP 15C handheld calculator.

Dr. McCosker uses his 15C at the aquarium for quick calculations. When not consorting with his penguin friends, he is considered a world authority on the habits of the great white shark.

This photo is from a series shot at the aquarium by Corvallis photographer Peter Krupp for a HP 15C promotion. The only photographs that didn't turn out, Krupp says, were those shot in the crocodile pit. "Those were a little shaky."



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