

MEASURE

For the people of Hewlett-Packard

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A peek inside the new Monterey Bay Aquarium

Editor:
Brad Whitworth

Art director:
Annette Yatovitz

Associate editors:
Betty Gerard
Joanne Engelhardt

Contributor:
Rob Bouzon

Circulation:
Kathleen Gogarty

MEASURE

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ON THE COVER

Measure first mentioned the Packard family's plans to convert an abandoned Monterey, California, cannery into an aquarium in our November-December 1980 issue. Today that dream is reality and staffer Joanne Engelhardt takes you on a tour of the aquarium. Free-lance photographer Sharon Hall shot our cover photo of an acrylic bubble that gives visitors a fish-eye's view of a giant kelp tank.

UPFRONT

Statewide HP committee helps clean the air in Colorado's Front Range.

When you think of smog, you automatically think of Los Angeles, right? Not if you're an HP employee in Colorado.

For the past few years, the city of Denver has been plagued by a growing smog problem of its own. Thermal inversions regularly trap a thick brown layer of pollutants in the otherwise clear skies over the Mile-High City. There's fear throughout the state that, gone unchecked, this problem may spread to nearby towns up and down the front range of the Rocky Mountains. The state has passed laws to limit the emissions coming from the tailpipes of gas-burning cars and pickup trucks.

State and local governments got a helping hand in compliance from the HP operations in Loveland, Greeley, Fort Collins, Englewood and Colorado Springs. A statewide poll of HP employees taken by an HP committee in the fall of 1983 had shown that clean air was their top concern.

The HP Quality of Life committee put together a program to test employees' cars in company parking lots two days a month to make sure the cars met the state's emissions law.

Employees park their cars in a special, roped-off section of the parking lot, leave the official paperwork on the car seat and take the key and the license number to the building lobby. The inspection job is finished while employees are at work, and the cost is less than at nearby service stations. Most vehicles not in compliance are adjusted on the spot with the owner's permission. On the first two days of

testing in Fort Collins, for example, 118 cars were checked.

Division newsletters and magazines covered the progress of the program. Local television crews in Colorado Springs taped a test day. Promotional signs were posted at plant gates on test days in Loveland and Greeley. The sales office in Englewood, a Denver suburb, distributed a one-page flyer to employees. Perhaps the most graphic reminder of the testing was in Loveland where a display showed a brown cloud that shrank as compliance increased.

"We've all seen the brown cloud in Denver and may think it can't happen in Fort Collins or Colorado Springs, but it's a matter of time," says John Riggen, statewide public affairs manager. "The effect on the quality of air from just our program at HP may be small, but we hope that other companies will follow our example."

There's some indication that others will follow in HP's footsteps. Kodak Colorado is one of several front-range companies to express interest in HP's program. There's also hope that HP facilities in other states may adopt similar programs.

The goal set by the committee is to have 100 percent of the cars and pickup trucks in the HP parking lots in Colorado in compliance with the law. At the end of the year, the committee had reached 90-plus percent and was deciding what its next project would be to improve the quality of life in Colorado. If the emissions-testing program is any indication, they'll probably be just as effective with the next. **M**



A mechanic from Pro-Tune checks HP employees' cars to make sure they meet Colorado's emission laws. The service is done during work hours in HP parking lots.

JIM HASL

It's more than just another fish tank



SHARON HALL

There's nothing like picking up and feeling a sea creature to get to know it well. The Monterey Bay Aquarium's touch tide pool was made with just this aim in mind. Here, big and little visitors alike learn a lot about the sea life that inhabits Monterey Bay.

"It's a typical Packard operation—he goes for quality."

That's the way Chuck Ernst, who works in HP's Television Network, describes the new Monterey Bay Aquarium in California.

The aquarium opened in October to much acclaim from visitors and marine biologists alike. Even Monterey residents love it, though they're not too happy with the traffic tie-ups it has generated.

Not really an HP project, the aquarium nonetheless has such close HP ties that many employees consider it a company affiliate.

The fact is that the Packard family foundation

contributed \$40 million over the past eight years to create the stellar marine attraction. Already the largest aquarium in the United States, it will soon earn the accolade of "best" as well, the Packards hope.

That may already be true. You can forget all the preconceptions you have about aquariums such as dark, dank and musty. This one is light and airy.

"Cannery Row is the gathered and scattered, tin and iron and rust and splintered wood, chipped pavement and weedy lots and junk heaps, sardine canneries of corrugated iron, honky tonks, restaurants and whore houses, and little crowded groceries, and laboratories and flophouses."

**Cannery Row c. 1945
by John Steinbeck**

But the physical appearance of the aquarium only begins to describe the place. Its marine inhabitants replicate the Monterey Bay that surrounds it—and despite gunnite concrete rocks and Fiberglas whales—it's such a convincing replica that even John Steinbeck's Doc Ricketts, who once studied Monterey's marine life from a lab not far from the aquarium, would be pleased.

The germ of the idea for the aquarium hatched nearly eight years ago when four marine biologists (one of them was Dave Packard's daughter, Nancy Barnett) shared their concerns about how to make more people aware of Monterey Bay's unique sea character.

Four years later, Howden Cannery, the last and largest sardine-packing house on Cannery Row, was all but demolished to build the aquarium. The surprise is that the new building doesn't look very new. Its boiler stacks and white stucco walls—and the original boiler that is visible at the aquarium entrance—give it a well-worn look.



Visitors walk the concrete-block corridors of the aquarium, oblivious to the 43-foot long Fiberglas replica of a killer whale overhead. Several more whales, dolphins and seals, complete with latex barnacles, are suspended from the steel-beam ceiling.

JOANNE ENGELHARDT

Both Dave and his younger daughter, Julie, have played prominent parts in making the aquarium a reality. Julie, who has a master's degree in marine biology, is the aquarium's director.

"I visited aquariums all over the U.S. and Canada and brought back the best ideas from each," she says.

Then she rounded up a corps of people with the right kinds of expertise to help her bring the aquarium to life—people like Dr. Steven Webster, who was at Stanford University's Hopkins Marine Institute and now is the aquarium's director of education.

Steven was one of the group who came up with the original concept of a regional aquarium in Monterey.

He says the project grew much larger than they ever dreamed. "At first we were thinking of a 50,000-square-foot aquarium; now it's more than three times that size," he marvels. (It's 177,000 square feet.)

On occasion, Dave Packard tapped another resource: HP people.

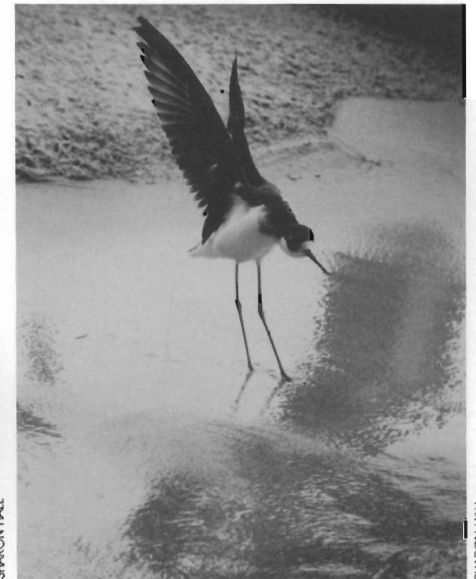
Bruce Wholey, HP's retired vice president of corporate services, and Eric Woods, corporate construction manager, were two of the first contacted.

"We had several visits from the aquarium architects," recalls Eric. "We shared how we designed HP plating shops, water systems and the like."

The architectural firm also listened to HP's recommendations on selecting



Julie Packard, vice president and director of the Monterey Bay Aquarium, expects the non-profit organization to become self-supporting soon. Floodlamps behind Julie light the three-story kelp tank for aquarium visitors when the sun sets over Monterey Bay.



An avocet shakes the water off its wings along the shore of the aviary. Waves come from a machine Dave Packard designed.

a contractor. "We suggested they not go out for bids, but set up a construction management system," says Bruce.

This means the contractor comes in during the design stage and can give valuable input early in the game.

Another early HP contributor was Chuck Ernst, who retires in February as video products marketing manager. "Dave brought some aquarium people here, and I helped them research their audiovisual needs," says Chuck. One of the more unusual requirements was to find equipment that worked underwater.

"We helped them evaluate HP's video equipment," he adds. "Later, I helped them order what they needed for audiovisual exhibits that are on display at the aquarium. Dave doesn't fool around. He wanted the aquarium to have access to the best, most reliable video hardware on the market." When it came time to think about whether the aquarium could use computers to monitor and measure marine life exhibits, Dave turned to Happy (that's his real name) Holden, who describes himself as a specialist in industrial automation. He recommended the HP Series 80 computer system with specially designed software that monitors

water pressure, flow volumes, temperature, salinity and pH balances. That proposal is now under consideration by the aquarium experts.

Considering that the aquarium is, after all, a Packard family project, it may come as a surprise that it is not a high-tech wonderland.

"We have an HP 3000 computer that does all the standard business jobs like accounts payable, accounts receivable, payroll and inventory," says Julie. "It's also being used for visitor surveys.

"But we don't have any underwater video games or exotic electronics," she adds. "We felt this should be a place where the sealife, not computer wizardry, has center stage."

Dave Packard has had a hand in some of the most innovative parts of the aquarium: the three somewhat similar machines that are used to recreate the effects of tides and ocean waves.

The wave-crash exhibit, for instance, provokes mixed reactions from aquarium visitors. That's because standing too near the tank may mean getting doused with equal amounts of foam and water when a wave comes crashing through unannounced.

Atop the giant (335,000-gallon) kelp

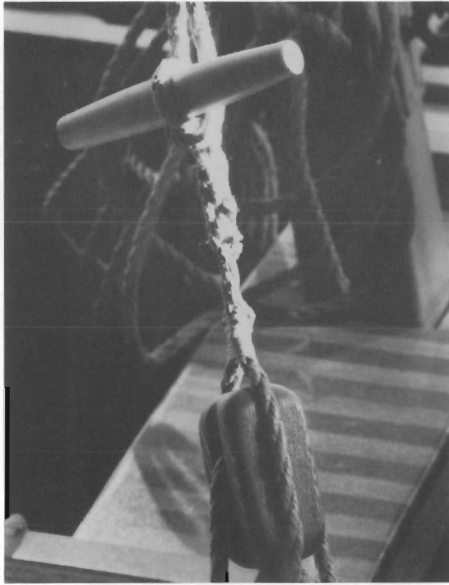
forest tank, a giant piston machine sends eight-inch waves across the tank every six seconds to create the surge that kelp needs to survive.

The machine, which Dave worked on with Derek Bayless, an aquarium exhibit design engineer, gently moves 300,000 gallons of water with only a three-horsepower motor.

The third of the wave machines also got started in Dave's home workshop. It is now at one end of an aviary which is screened in but otherwise open to the elements. The 90-foot-long display is a miniature of a sandy shoreline. Fish swim in the lagoon; stilts, avocets and baby ducks frolic on the water's edge; and waves break on the sand. The waves come from Dave's wave-producing machine hidden behind a wall.

Despite her father's efforts, Julie kiddingly chides Dave for being "the only person who didn't meet his deadline" before the aquarium opened.

Still to come from the Packard workshop: a tidal exhibit that will be a "rough representation of the ways the tides work," Dave explains. Another exhibit will borrow a bit from video games: Visitors will maneuver an underwater camera for a closeup of



Block and fackle used by local fishermen on narrow boats called feluccas is part of the aquarium's nautical theme.

SHARON HALL



On sunny days, aquarium visitors have a spectacular view of the Pacific Ocean from the aquarium. Exterior decks, walkways and large windows bring the natural beauty of Monterey Bay indoors to blend with the aquarium's exhibits.

SHARON HALL

an unsuspecting limpet or squid.

Not long before the aquarium was due to open, Dave asked Jim Hacker, HP's corporate security manager, to determine what kind of security program was needed.

"It's not your typical building," Jim says wryly. "Besides doing lock downs, door alarms and routine patrols, the aquarium security force checks the pressure of the tanks and makes sure everything is normal in the exhibits."

Jim helped the aquarium staff choose a temporary security service. It now has its own 12-person force.

"I'd never get tired of walking around that place," adds Jim. "It's fascinating to see the fish at different times of the day and night."

Another HP employee, John Borgsteadt, took it upon himself to establish an HP tradition at the aquarium. John, who's been with HP 36 years and now is a corporate manufacturing standards coordinator, has been a big supporter of the aquarium from its conception. He followed its progress through governmental red tape and afterward stopped by from time to time to see how things were progressing.

"One day I decided to treat the staff

to coffee and donuts," he recalls. Now every so often John shows up to join the aquarium folks for goodies on what they call "John Borgsteadt Day."

It's no accident, of course, that the aquarium has garnered mounds of publicity and enthusiastic crowds in such a short time.

One Monterey resident, Bob Svihus, who once taught high school biology and now is recreation director at Soledad State Prison, thinks the aquarium is "terrific. I've been there 14 or 15 times already. If I had time, I'd willingly be an aquarium guide."

Bob's attitude seems to be typical. The aquarium has a paid staff of about 40 which is bolstered by more than 500

volunteer guides and animal helpers.

The aquarium's 300 separate species of marine life in 83 tanks, the man-made (but lifelike) Monterey tidepool, the indoor and outdoor exhibits, the classrooms, lecture hall and auditorium (for the educational program that will start up this month)—all work together to achieve Dave's stated objective: "After viewing one habitat after another, we want people to take away with them a greater understanding of how forms of life live together and depend on each other for their existence."

That's pretty much the same philosophy that Doc Ricketts and his pal John Steinbeck lived by. **M**



L'un de mes clients d'Hydro-Québec me téléphonait chaque jour et me posait ses questions en français. A ce moment-là, je suivais encore des cours de français avec HP," déclare Judy Lew, coordonnatrice des ventes au bureau HP de Kirkland, près de Montréal. "Puis, un jour, il m'a téléphoné et m'a posé une question dans un anglais parfait. Pendant tout ce temps, il ne m'avait parlé qu'en français afin de m'aider à mieux apprendre cette langue.

"Je ne la parle toujours pas couramment, mais ça viendra."

Le certificat suspendu dans le hall d'entrée de l'établissement prouve que HP y est parvenu. Des responsables du gouvernement de la province évaluent régulièrement la capacité de la Compagnie de mener ses affaires en français, conformément à la loi de la province (voir les détails aux pages 8 et 9).

La standardiste Jackie Ellement répond à tous les appels de l'extérieur en disant d'une voix plaisante "Hewlett-Packard, bonjour!" Il y a 20 ans, on aurait répondu en anglais à tous ces appels.

On retrouve au-dessus des tables de réparation des affiches portant les mots *enregistreurs*, *appareils d'arpentage* et *micro-ondes*.

Les documents de vente placés dans le hall disent aux clients éventuels qu'ils devraient acheter de préférence HP *quand la performance se juge aux résultats*.

Les activités de HP sont le témoin fidèle des récents efforts de la majorité francophone de la province vers l'obtention d'un rôle plus important dans le commerce et l'industrie.

Les premières colonies dans le Canada du 17^e siècle étaient françaises—Québec et Montréal (où se trouvent actuellement les deux bureaux de ventes HP de la province). Les Français ont fait de la Nouvelle-France une colonie en 1663, mais leur rêve d'avoir un empire au Nouveau-Monde s'est évanoui quelque 100 années plus tard alors que les "vestes rouges" britanniques battaient les troupes françaises.

Aujourd'hui, le Canada est un pays indépendant prospère qui n'est ni français, ni britannique. Le français, qui est la langue maternelle du tiers de la population, et l'anglais sont les deux langues officielles du pays depuis la Confédération, en 1867. Elizabeth II d'Angleterre règne sur le Canada, sans toutefois en diriger les destinées.

Peut-être nulle part au Canada cette dualité est-elle aussi visible que dans la plus grande province du pays: le Québec.

One of my customers from Hydro-Québec would call me every day and ask all of his questions in French. At the time I was still taking French lessons through HP. I assumed he didn't speak a word of English," says Judy Lew, sales coordinator in HP's Kirkland office, a suburb of Montreal. "Then one day he called and asked a question in perfect English. All this time he'd been using only French because he wanted to help teach me.

"I'm still not fluent, but I'm getting there."

The certificate hanging in the front lobby of the office proves that HP has arrived. Officials from the provincial government regularly evaluate the company's ability to conduct its business in French according to provincial legislation (see boxes on pages 8 and 9).

Switchboard operator Jackie Ellement answers all incoming calls with a pleasant, "Hewlett-Packard, bonjour." Twenty years ago that same phone call would have been answered in English.

Signs hang above the bench repair areas for *enregistreurs* (recorders), *appareils d'arpentage* (distance-measuring devices) and *micro-ondes* (microwave).

Sales literature in the lobby tells potential customers that they should buy HP *quand la performance se juge aux résultats* (when performance must be measured by results).

HP's operations reflect the most recent efforts of the province's French-speaking majority to earn a more prominent role in business and industry.

The first settlements in 17th-century Canada were French—Québec City and Montreal (now home for HP's two sales offices in the province). The French

declared New France a colony in 1663, but their dream of an empire in the New World evaporated when British redcoats defeated the French forces 100 years later.

Today Canada flourishes as an independent country that is neither French nor British. French, the mother tongue for a third of the population, and English have been the country's two official languages since Confederation in 1867. England's Elizabeth II reigns, but does not rule, as Queen of Canada.

Perhaps nowhere in Canada is this duality more visible than in the largest province: Québec. More than 80 percent of Québec is francophone. That's the word used to describe Canadians for whom French was the first language learned and still spoken. (Anglophones are their English-speaking

A TALE OF TWO TONGUES

French explorer Jacques Cartier, who discovered the Gulf of St. Lawrence in 1534, is considered by most as the founder of Canada. But English sea-man John Cabot sighted Newfoundland 37 years earlier. After centuries of historical, political and cultural one-upmanship, the influences of the British and the French have shaped the Canada of today. The HP way of doing business in the province of Québec reflects the country's dual heritage.

Plus de 80 pour cent du Québec est francophone (terme utilisé pour désigner les Canadiens dont le français est la première langue apprise et toujours parlée. Les anglophones sont leurs contreparties de langue anglaise). Plus de 60 pour cent des Québécois ne parlent que français.

"Au début, le principe de conduire les affaires dans deux langues nous demandait beaucoup de temps, déclare John Roussos, directeur général de la succursale HP de Kirkland. Aujourd'hui, cela fait partie de la routine."

Mais cela n'a pas été chose facile à accomplir, plus particulièrement pour les anglophones. "J'ai suivi des cours de français commandités par la Compagnie à raison de deux heures par jour et ce, deux jours par semaine pendant deux ans," explique George Yule, un employé du service des douanes et du transport qui travaille pour HP depuis 18 ans. "Mais je reconnais que le français devrait être la première langue utilisée. Après tout, les anglophones sont minoritaires ici."

Depuis 1975, afin de supporter les exigences des clients, près de 100 employés de HP ont complété des cours de français subventionnés par la compagnie. "Plus vous essayez de parler français, plus cela devient facile," estime Lorne Bedard, chef du service d'assistance. "C'est une espèce de gêne que vous devez vaincre."

La plupart des clients de HP sont en mesure de lire et d'utiliser des manuels techniques anglais, "mais lorsqu'il s'agit de décrire les problèmes qu'ils éprouvent avec leurs ordinateurs ou instruments, ils préfèrent utiliser leur langue maternelle, déclare Guy Demonceaux, directeur des ventes de district pour la Division des instruments. C'est pourquoi il importe que chaque personne de notre bureau soit bilingue—non seulement à cause de la loi, mais aussi parce que c'est le meilleur moyen de donner satisfaction à nos clients."

Les choses ont considérablement changé depuis 1962 alors que HP ouvrait son premier bureau, le siège social de la Compagnie, près de la ville de Pointe-Claire. A cette époque, la majorité du personnel ne parlait qu'anglais. C'était fréquent, car la plupart des clients étaient des ingénieurs qui avaient reçu leur formation technique en anglais.

En 1976, les choses changent au Québec avec l'élection de René Lévesque et de son parti séparatiste, le "Parti Québécois," qui désirent donner l'indépendance à la province. Lévesque choque les Canadiens d'expression anglaise lors d'un discours où il déclare que la question n'est pas de savoir quand, mais bien comment le Québec parviendra à son indépendance.

counterparts.) Even more important, more than 60 percent of the Québécois speak only French.

"At first the process of doing business in two languages was terribly time-consuming," says John Roussos, branch general manager of HP's Kirkland office. "Today it's routine."

But it wasn't easy to accomplish, especially for anglophones. "I took company-sponsored French lessons two hours a day, two days a week for two years," says George Yule, an 18-year HP employee in the customs and traffic area. "But I recognize that French should be the first language. After all, anglophones are in the minority."

Since 1975, to meet the needs of customers, 100 HP

employees have been through French lessons at the company's expense. "The more you try speaking French, the easier it becomes," says Lorne Bedard, service support supervisor. "It's a kind of shyness you have to overcome."

Most HP customers can read English and use technical manuals, "but when it comes to describing problems with their computers or their instruments, they prefer using their native tongue," says Guy Demonceaux, district sales manager for instruments. "That's why it's important that everyone in our office is bilingual—not because it's the law, but because it's the best way to satisfy our customers."

Things have changed considerably since 1962 when HP opened its first office, the country's headquarters, in nearby Pointe Claire. At the time, most of the HP staff spoke only English. But that was OK because most customers were engineers who'd received their technical schooling in English.

Things changed in Québec with the 1976 election of René Lévesque and his separatist Parti Québécois which pledged to seek "sovereignty association" for the province. Lévesque shocked English-speaking Canadians with a speech in which he said the question was not when but *how* Québec would attain independence.

A number of companies saw the separatist movement as bad news for business. Many transferred bank accounts (and later, people) to Ontario. Vancouver and Calgary. Royal Bank moved its massive data center to Toronto, but elected to keep a slimmed-down headquarters staff in its home city of Montreal.

Although HP moved its headquarters from Montreal to Toronto, HP did expand its operations in Québec and built a new facility there, creating more than 100 new jobs since 1977. The move of the HP headquarters to Toronto was to better serve the majority of Canadian customers. Many key customers—McDonnell-Douglas, DeHavilland, Space Prod-

Bill No. 101

French is the official language of Québec.

Workers have a right to carry on their activities in French.

Consumers of goods and services have a right to be informed and served in French.

Employers must draw up written communications to their employees in French.

An employer is prohibited from making a hiring, transfer or promotion decision dependent upon the knowledge of a language other than French unless the nature of the duties requires the knowledge of that other language.

The following must be bilingual or in French only: inscriptions on products, directions for use, warranties, catalogues, brochures and folders, order forms, invoices and receipts.

Un certain nombre de compagnies voient d'un mauvais oeil pour leurs affaires le mouvement séparatiste. Plusieurs d'entre elles transfèrent leurs comptes bancaires (et plus tard, du personnel) vers l'Ontario, Vancouver et Calgary. La Banque Royale déménage son imposant centre de données à Toronto, tout en laissant un personnel administratif réduit à Montréal, la ville de fondation.

Même si HP a déménagé son siège social de Montréal à Toronto, HP a quand même étendu ses opérations au Québec et a même construit un nouvel édifice en créant ainsi plus de 100 nouveaux emplois depuis 1977. Le changement du siège social à Toronto était pour mieux servir la majorité de ses clients. McDonnell-Douglas, De-Havilland, Space Product Research Association, Northern Telecom—désignent l'Ontario comme étant le centre de la haute technologie du Canada. Aujourd'hui, le bureau de Montréal continue de jouer un rôle important à titre de siège social de toutes les activités de HP dans la partie est du pays: les provinces de l'Atlantique et du Québec.

En 1980, un vote populaire contre la séparation du Québec du reste du Canada redonne vie aux affaires dans la province. Le produit brut de la province est alors de 62 milliards de dollars, soit près du quart du P.N.B. du Canada. L'économie y est forte dans les domaines de la fabrication, des banques, des communications, du transport et des ressources naturelles.

"Maintenant que la transition vers des activités bilingues est chose faite," affirme John, "nous pouvons maintenant mieux servir nos clients et assumer nos responsabilités civiques en participant à des activités de la communauté."

Même si Elisabeth Deschênes, coordonnatrice des ventes HP au cours des trois dernières années, se réjouit de voir de plus en plus de gens conduire les affaires dans leur langue maternelle, ses impressions reflètent bien l'attitude pragmatique et réaliste qui définit aujourd'hui les affaires au Québec. "Il arrive même à René Lévesque de parler anglais ici et là. De toutes façons, nous rions et pleurons tous dans la même langue!" **M**

uct Research Association, Northern Telecom and others—were establishing Ontario as the high technology center of Canada. Today the Montreal office continues to play a key role as headquarters for all HP activities in the eastern part of the country: the Maritime provinces and Québec.

A 1980 vote against separation of Québec from the rest of Canada brought business back to life in the province. The gross provincial product is \$62 billion, nearly one-fourth of Canada's G.N.P. The economy is strong in manufacturing, banking, communication, transportation and natural resources.

"Now that we've made the transition from an English-only to a bilingual operation," says John, "we can serve our customers better and participate in the community as good corporate citizens."

While Elisabeth Deschenes, an HP sales coordinator for the last three years, is glad more people are doing business in her native tongue, her feelings reflect the pragmatic, realistic attitude that defines business in Québec today. "Even René Lévesque speaks English now and then. And face it, we all laugh and cry in the same language." **M**

Project de loi n° 101

Le français est la langue officielle du Québec.

Les travailleurs ont le droit d'exercer leurs activités en français.

Les consommateurs de biens ou de services ont le droit d'être informés et servis en français.

L'employeur rédige dans la langue officielle les communications qu'il adresse à son personnel.

Il est interdit à un employeur d'exiger pour l'accès à un emploi ou à un poste la connaissance d'une langue autre que la langue officielle, à moins que l'accomplissement de la tâche ne nécessite la connaissance de cette autre langue.

Toute inscription sur un produit, sur son contenant ou sur son emballage, sur un document ou objet accompagnant ce produit, y compris le mode d'emploi et les certificats de garantie, doit être rédigée en français.



Your schedule is packed. 9 a.m.: Meet with design engineers in Boise. 10 a.m.: Staff meeting in Cupertino. 11 a.m.: Discuss marketing plan with project managers in Fort Collins. Impossible? Not when you hold your meetings around

THE 1,200-MILE CONFERENCE TABLE

When you sit at the head of the table in Cupertino's Building 43, you feel as if the entire HP world is at your fingertips. To your right sits a powerful HP Touchscreen computer that controls satellite transmitters, television cameras and color monitors. When you touch the computer's screen, you establish voice and visual contact with fellow employees at one of two other locations: Boise, Idaho, or Fort Collins, Colorado. Captain Kirk of the Starship Enterprise never had it so good.

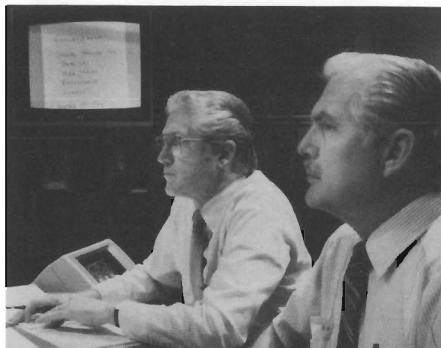
Despite the space-age gadgetry, HP's new interactive videoconferencing network has a down-to-earth goal: improving communication between HP sites at a reasonable cost.

"Our idea is to spend money to move information, rather than spending it to move people," says Ray Brooksby, part of the team that developed the three-site network. "If the telephone were

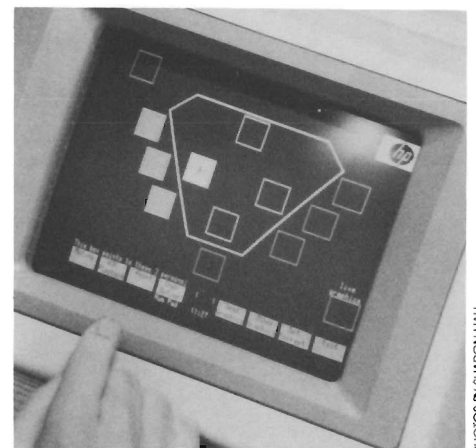
enough for all of our internal business dealings, we wouldn't have spent \$96 million for travel in FY83. But if just one trip in 10 can be eliminated by using the new network, we'll pay for a network of 20 rooms in less than two years."

Dick Hackborn, vice president of the Peripherals Group, is one of the biggest fans of the technology. "Travel savings are important, but the time savings are more valuable to me. From the Boise room I can have a face-to-face meeting with people in Colorado or the Bay Area at a moment's notice."

Plans are underway to extend the network to HP sites in Palo Alto, California; Andover, Massachusetts; and Bristol, England, in the coming year. Who knows, in the years ahead, you may be able to hold a meeting with co-workers in another galaxy. **M**



Corporate's Bill Taylor and Gene Doucette meet with Greeley's Judy Collins, Gary Johnson, Darrell Dougherty and Liz Murphy about a new telephone system. An agenda, scanned by an overhead camera, is visible on the second large screen and a smaller one to the right of the table.



Squares mean chairs to the Touchscreen computer. Bill touches the screen to tell the TV camera which people to scan.

PHOTOS BY SHARON HALL

HONG KONG

This crazy place!

The world's most unfettered marketplace puts HP sales people and strategies to a hard-bargaining test.



The free-wheeling soul of Hong Kong is expressed in its many teeming marketplaces. Bargaining is a way of life in this 404-square-mile dependency of the U.K.

“Congratulations. May you become rich!” That’s the way many Hong Kong people wish each other a happy New Year. No pulling punches. No wishy-washy stuff about happily prospering. The real thing: “rich!” And they mean it. An absolutely solid tradition of free-market economics, private enterprise and minimal taxation supports their sentiment.

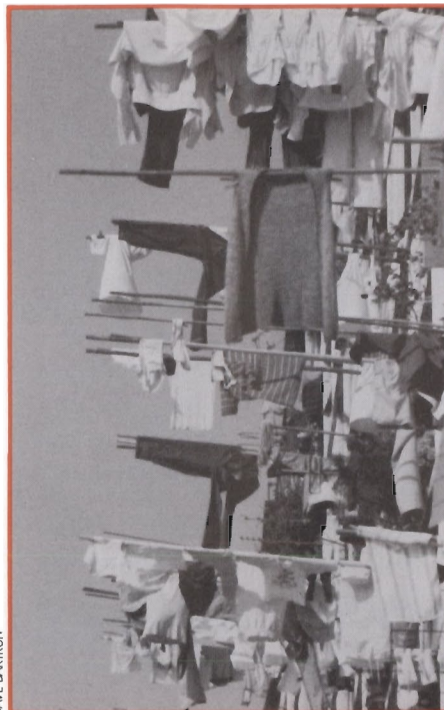
But getting “rich” is another matter, especially if you enter the game expecting to abide by Western standards of business practice. HP people in the Hong Kong sales office (Hewlett-Packard Hong Kong Ltd.) can offer plenty of testimony to that.

Computer sales manager Jack Lee, for example, has some inspirational tales to tell about the market he works and worries in: “Just look out there,” he says, nodding to a city view that shows hundreds of highrises and thousands of junks, all framed by sharp-rising hills, and all teeming with life. “At this very moment there are from 800 to 1,000 sales people in the city working very hard to sell computers produced by almost 200 different suppliers from all over the world.

“Prices for most machines are very low—under U.S.\$200. I could even take you to a large shopping mall filled with fake computers—counterfeits of popular brands—all very cheap but often quite good copies.”

Jack attributes this to more than just the *laissez-faire* economics of the British crown colony: “A lot of it comes from an ‘invade the mainland’ syndrome. Almost everyone sees Hong Kong as an economic springboard to the PRC (People’s Republic of China), and they want to get a firm hold here. The end result is some very aggressive marketing. Even for products or systems priced from \$100,000 on up, buyers will receive as many as 20 competitive bids. This crazy place! It’s like a dog fight in the streets every day. Not just in computers, but in everything from hotels to restaurants to soft drinks.”

Country manager Clive Ainsworth likens Hong Kong to the “Dewline” where competitive forces confront each other and conduct tests of strategy and resolve. “Here we see new technology much sooner than the U.S.,” says Clive. “It’s wide open. But it is also a fad mar-



Every day in downtown Hong Kong is like a gala parade, with colorful laundry serving as banners.

DAVE BACHTLUF



Clive Ainsworth, U.K.-born and educated electrical engineer, leads HP’s team in the Hong Kong market.

HP PHOTO

ket—fast, short-term, high-volume.

“Typically, Hong Kong manufacturers—and there are about 40,000 of them, mostly smaller shops—feel the need to get in and out of a market quickly. Make a profit and write off the investment, all in three years or so. Then move on to something else.

“That means that, as purchasers of equipment, they are more concerned with things like discounts and fast startup than with absolute quality. For HP the challenge is to come up with the right solutions to their needs.”

It turns out that the solution in a number of cases involves helping the customer “save face.” That’s important in Chinese culture, and buyers achieve it most often by negotiating discounts or special deals. Tourists catch the fever, too, and help make Hong Kong one of the bargain-hunting capitals of the world for just about any kind of merchandise you can imagine.

Clive recalls one HP sale where it was clear the customer favored the HP equipment but still wasn’t happy. HP offers no deals? No discounts? Sorry. Company policy. But maybe we can work something out to help you in your training needs. Done. Rules slightly bent. Face saved.

The other side of face saving is that a product has to be “in”—prestigious, reflecting on the good judgment and style of the buyer. It’s even rumored that some Hong Kong firms have purchased high-performance equipment mainly



for the sake of appearance. Given the business environment, that could be a useful thing to do.

Indeed, being a "name" and being known are vital in Hong Kong business. Jolia Law, marketing communications and public relations manager for the Far East Region, says that people will go to great lengths to buy products with a high-status name: "They'll save and shop for a long time looking for just the right buy.

"HP has a very good reputation here for instruments, just as it does with technical people around the world. But a study we did in 1983 showed we had a long way to go in gaining recognition as a computer supplier. We've been doing some very positive things about that—stronger ads with local angles, more TV advertising, a computer demo area, a larger sales staff, product shows and much more emphasis on press relations and publicity."

Jolia has an interesting challenge in this last endeavor. More than 100 newspapers are published each day in Hong Kong and its territories, with subject matter ranging all the way from stock-market reports to sensation mongering. Most of these are in Chinese language. The city is also a major publishing center for quite a few international and regional business publications. These include the *Far Eastern Economic Review*, *Asian Computer Monthly*, and the Asian editions of *Time* and *The Wall Street Journal*.

Four television channels—two in Chinese and two in English—compete vigorously for viewers and advertisers. Meanwhile, from every available vantage point about the city and harbor—including buses, trams, subway stations, ferries, stores, shops and major buildings—advertising clamors for attention.

Jolia notes that whenever HP or any other company announces a new high-tech product anywhere in the world, it's instant news in Hong Kong. "You can't confine or stage these press announcements on a local basis anymore because there's just too much global interest," she says. "The world has shrunk and news travels much faster. Once it's out, it's everywhere."

Hewlett-Packard's physical presence

HONG KONG TOURIST ASSOC.



Dragon dancers reflect Hong Kong's ties to China. Political union will resume in 1997 when U.K. lease ends.

HP PHOTO



Public transportation is the best way for these HP sales reps to get around densely packed Hong Kong.

HP PHOTO



The only junk in Hewlett-Packard! The craft serves Hong Kong employees as a recreation site. They say that sailing is one of the few ways in the territory to escape from the constant bustle and noise of the highly compact metropolis.

in Hong Kong is conveyed in a number of ways. First, of course, is the local sales office staffed by 110 people representing and supporting instrument and computer lines. Medical and analytical sales are handled through Schmidt & Co., an independent "rep" organization. Then there's the headquarters of the Far East Sales Region headed by Malcolm Kerr: Its sales and marketing responsibilities extend from Hong Kong to China, Korea, Singapore, Malaysia and Taiwan as well as distributor sales in India, Indonesia, Pakistan, Philippines and Thailand.

That presence would seem to indicate a high degree of confidence in the future of Hong Kong even as it prepares to become politically part of mainland China after its 99-year lease as a British colony runs out in 1997. Jal Karani, regional admin manager, says he is personally very bullish on the PRC-Hong Kong relationship. "China has been a sleeping giant that is waking up with a new outlook on the world. Not so ideological. More outward looking. More entrepreneurial."

"That doesn't surprise me," says Jal, a citizen of India who has worked for HP in Spain, Iran, Venezuela and Australia. "The Chinese people have been business people for at least 4,000 years. Trading and bartering are a way of life, stronger than any ideology. Just wait and see." **M**

Invites *Measure* readers to comment on matters of importance to HP employees.



Ellen Price checks alignment of raster.

THE EYES HAVE IT

Are you putting us on? I'm referring to the photo in your September-October issue where the young lady is closing one eye to check the alignment of the Touchscreen raster. We've certainly come a long way from the garage production line that Dave and Bill pioneered. I wonder if they calibrated their oscillators by wetting their fingers and touching the coils?

I'm sure your readers would like to know:

- Do the production persons on shifts 2 and 3 have the same accuracy?
- How does the gage lab calibrate their eyes?
- How will the tooling group from the division ever get over the embarrassment when they see this picture?
- How can we keep this secret from falling into the hands of our competitors?
- How can we keep copies of this magazine from falling into the hands of our customers?

A. REENIGNE
Boise

Dear A. Reenigne: (Could your name possibly be "engineer" spelled backward?)

We kid you not. Ellen Price is really checking the alignment of the raster on the HP Touchscreen computer. But she's being helped by a thick align-

ment plate mounted on the CRT.

If you promise not to tell anyone, we have to admit that we do have equipment to automatically check the raster. The only trouble is that the machine available for doing the job is three times slower and a lot less efficient than Ellen. But the industry—and we at the Personal Office Computer Division—are working hard on improving automation in that area.

In the meantime we'll rely on Ellen and the dozens of capable folks on the Touchscreen assembly line to continue lining up the raster with a steady eye.

WES STELTER
Sunnyvale

SQUASHING A RUMOR

I'd like to correct Azmat Siddiqi's assumption that our Pinewood Division's leisure amenities consist only of dartboards and squash courts.

We have a hard-court area on which we play tennis (three courts) in the summer, and five-a-side football and netball in the winter. Volleyball training is available in an adjacent grassed area and there is a barbecue area with four large barbecues with seating for more than 100 people.

Indoors we have two squash courts for the active ones and darts, bridge, video-TV for the less active. Also, there are quadrophonic music facilities which are used for discos and aerobics.

A number of sub-clubs use other community facilities—rifle, golf, sub-aqua, football, table tennis—to name but a few.

BILL SMITH
Pinewood

IF THE SHIRT FITS...

I think it's great that you are offering a T-shirt as an incentive to respond to articles in *Measure*.

However, I wear a ladies' large T-shirt. I notice that you only offer men's T-shirts. Your model may look very macho in his shirt, but surely HP must employ about 50 percent women. Perhaps they would

prefer a lady's shirt instead of a man's. I know that ladies' shirts cost about \$1 more per shirt, but we are worth it.

KAREN FOLEY
Cupertino

We goofed when we said our shirts come only in men's sizes. Our supplier tells us we have "unisex" shirts in four sizes: small (chest measurement of 34 to 36 inches), medium (38-40), large (42-44) and extra-large (46-48).

IDENTITY PROBLEM?

Projecting the proper HP image to the public has always been important to the company. Why do we see improper application of our logotype at various HP sites? Our Cupertino and Santa Clara sites proudly display at their entrance our old logo that hasn't been used since 1979. Misuse of the HP logo on signage or other applications can only leave an impression of a company not concerned with its public image.

BRYAN STAHLER
Palo Alto

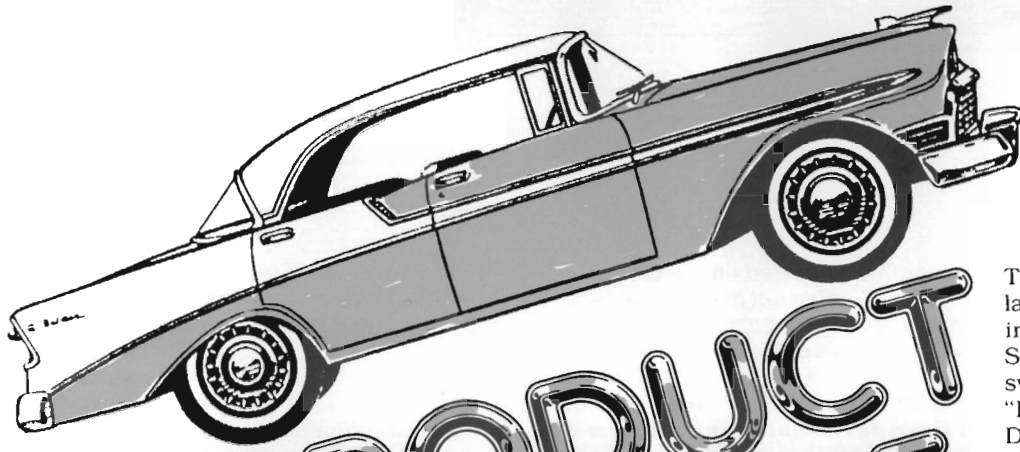
WRITE ON!

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 81,000 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.



A PRODUCT OF THE FABULOUS FIFTIES

Davy Crockett coonskin caps, Bill Haley and the Comets, and Hewlett-Packard's corporate objectives are all products of the 1950s. While the first two have faded through the years into relative obscurity, HP's objectives provide employees with a strong reminder of the company's past and a guide to its future.

The year was 1957. The Soviet Union launched the world's first earth-orbiting satellite—Sputnik I—and the Space Age began. Elvis Presley was swiveling his pelvis to the beat of "Heartbreak Hotel." U.S. President Dwight Eisenhower sent troops to Little Rock, Arkansas, to protect school integration. Home-run champ Hank Aaron led the Milwaukee Braves to a 4-game-to-3 victory over the New York Yankees in the World Series. And *The Bridge on the River Kwai* won the Academy Award for best picture.

Hewlett-Packard had just completed a successful year of business. Annual sales had topped \$20 million and there were 901 employees on the payroll. But company co-founder Dave Packard knew that future success of the growing firm depended on all employees sharing a clear understanding of the company's objectives.

Dave's presentation at the January 1957 management meeting was the first concise explanation of the company's core set of operating principles (see box). Today, HP employees hear about the seven corporate objectives almost from the first day of work. Even people outside the company read the objectives with keen interest: One best-selling management textbook devotes an entire appendix to a reprint of the seven principles.

Before Dave's talk, there had been occasional references to some of the goals for the organization; "Others may not have been specifically stated, but became apparent by examining what the company has done and how it has gone about it," said Dave at the time.

"I want all of you to understand as nearly as you can the reasons why these are, or should be, our objectives so that you will be able to accept them as being the kind of objectives you would choose, were the choice your own," he said. "For this reason I would like to have you study these carefully, think about them, and be in a position to discuss them critically, both for evaluation and for better understanding."

Study them. Discuss them. In just about every HP training class you'll find that course material is tied back to one of the seven corporate objectives. Translations into German, French,

Spanish, Japanese and many more languages give all employees a chance to work in unison throughout the world toward these common goals.

Since their original publication in 1957, the objectives have been modified seven times to reflect the changing nature of HP's business and the world. The three most recent revisions were in 1981, 1974 and 1969. In 1974, Bill Hewlett compared the original wording with that year's revision: "Our key ob-

jectives have changed little. They have stood the test of time well."

Six of the seven objectives carry relatively equal weight—the order in which they're presented simply doesn't matter. But in explaining the lead-off spot for profit, Dave said, "I do so with the specific emphasis that I consider it to be the most important objective to guide your day-to-day thinking... It is (profit) which has enabled us to do all of the other things which make for a good

company... but it alone is not a sufficient objective."

Although the objectives trace their roots to the early successes of the company, they aren't relics of the past. "Strong and steady adherence to their basic precepts adds direction and force to our company," says HP president John Young. "These precepts will be as important to our success in the years ahead as they have been in the past." **M**

TODAY'S OBJECTIVES

HP's corporate objectives were most recently revised in 1981 to place increased emphasis on product quality, customer satisfaction, new product lines, safety and teamwork.

- 1. Profit** To achieve sufficient profit to finance our company growth and to provide the resources we need to achieve our other corporate objectives.
- 2. Customers** To provide products and services of the highest quality and the greatest possible value to our customers, thereby gaining and holding their respect and loyalty.
- 3. Fields of interest** To build on our strengths in the company's traditional fields of interest, and to enter new fields only when it is consistent with the basic purpose of our business and when we can assure ourselves of making a needed and profitable contribution to the field.
- 4. Growth** To let our growth be limited only by our profits and our ability to develop and produce innovative products that satisfy real customer needs.
- 5. Our people** To help HP people share in the company's success which they make possible; to provide job security based on their performance; to insure a safe and pleasant work environment; to recognize their individual achievements; and to help them gain a sense of satisfaction and accomplishment from their work.
- 6. Management** To foster initiative and creativity by allowing the individual great freedom of action in attaining well-defined objectives.
- 7. Citizenship** To honor our obligations to society by being an economic, intellectual and social asset to each nation and each community in which we operate.

OBJECTIVES: 1957 STYLE

The first cohesive set of corporate objectives emerged at the company's management meeting in January 1957. Dave Packard's discussion of these six points was the first item on the agenda.

- 1. To operate our business** so that, year in and year out, we obtain a profit of about 20 percent of sales before taxes.
- 2. To design and develop** electronic measuring instruments and techniques that will contribute to the advancement of science and practical application of electronics and electrical engineering.
- 3. To make available to industry** instruments which have inexpensive quality.
- 4. To provide employment opportunities** for HP people that include the opportunity to share in the company's success which they help make possible; to provide for them job security based on their performance; and to provide the opportunity for personal satisfaction that comes from a sense of accomplishment in their work.
- 5. To meet the obligations** of good citizenship by making contributions to the community and to the institutions in our society which generate the environment in which we operate.
- 6. To let our company growth** be determined primarily by our performance, limited on the one hand by the rate of growth which we can finance from our current profits, and on the other hand by the rate at which we can build up our product line and our market through customer acceptance in accordance with our other objectives.

CLOSEUP

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



HP PHOTO

PORTABLE PLAYS INSTRUMENTAL ROLE

The Grateful Dead's drummer Mickey Hart and bassist Phil Lesh are making better use of their time on the road, thanks to the nine-pound HP computer that joined the band in 1984.

The veteran rock-and-rollers travel an average of 200 days a year, spending much of their time on planes and buses and in hotel rooms. Band members use The Portable from

HP to communicate with their home base as well as write notes and lyrics.

The Portable may perform an on-stage role soon. "The computer lets you specify and shape a sound wave, so theoretically you can create any sound in your imagination," says Mickey. "Once we've developed the programs for it, The Portable will be another instrument in our orchestra."

HP COMPUTERS KEEP PEOPLE IN STITCHES

A Huntsville, Alabama, businessman is using a pair of HP computers to design custom cross-stitch patterns for customers all over the U.S.

When someone sends Alan Austin Studios a favorite photo, employees transfer the image to an HP computer using a digitizer with a wand. The computer edits the information and prints a finished chart. The chart serves as a roadmap for the sewer to follow, a different symbol represents each of the design's colors.

Although the finished chart doesn't look much like a picture, with its strange collection of Xs, +s and Σs, the end result is surprisingly lifelike.

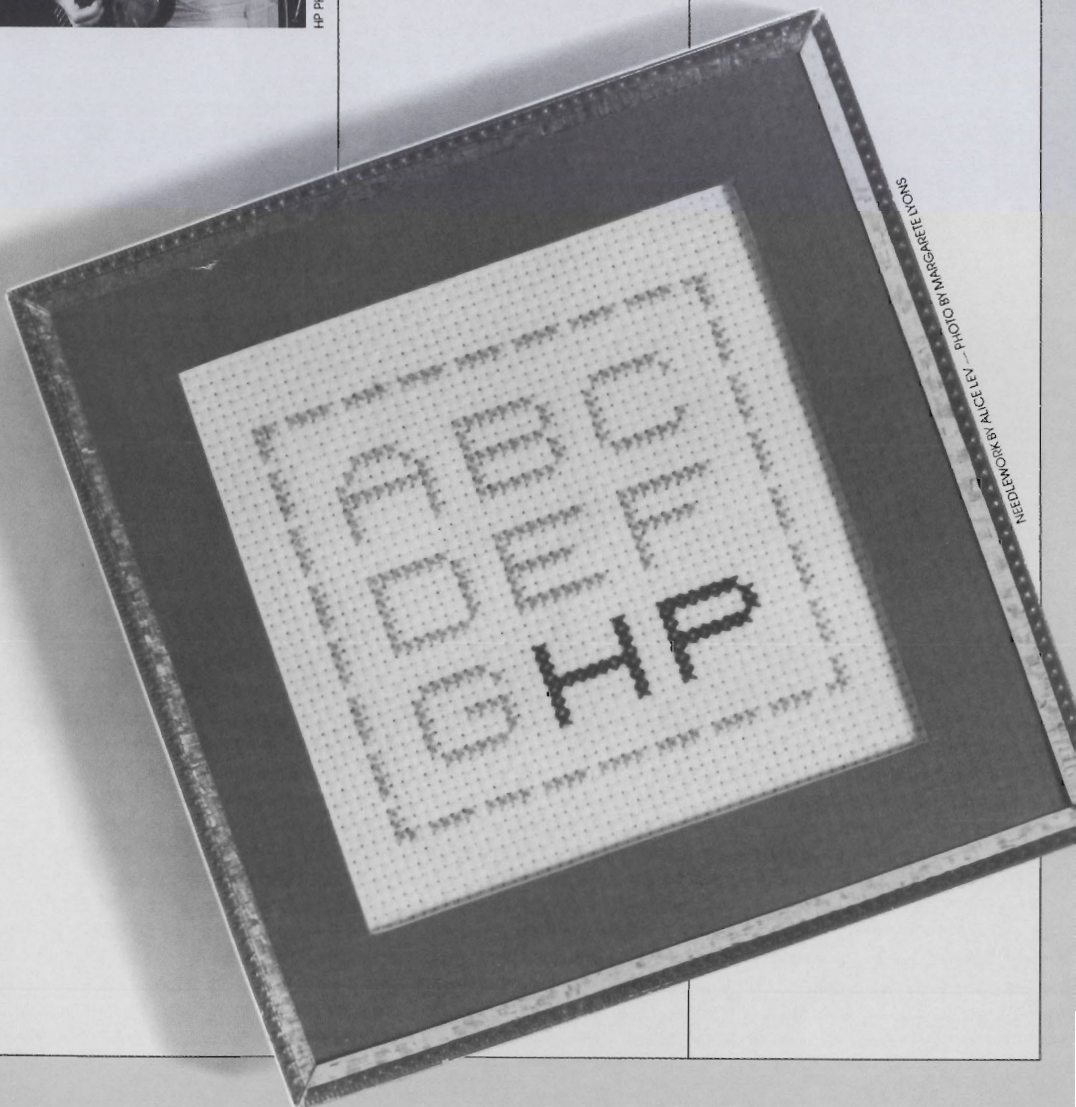


PHOTO BY MARGARET LYONS
REPRODUCTION BY ALICIA - PHOTO BY MARGARET LYONS



HP PHOTO

HP DRIVES AWAY WITH WORLD RECORDS

Hewlett-Packard's Touchscreen personal computer was the driving force behind 14 international and 25 national records for speed and endurance at Surfers Paradise Raceway in Australia.

The HP computer recorded lap times, speed,

distance and drivers during the 24-hour endurance test run in the Volvo 360GLT. A team of four drivers shared the time behind the wheel, averaging 110 kilometers per hour (68 miles per hour).

When the information was fed into the computer, a special software program let organizers know when a record was about to be broken. The

Volvo covered about 2,500 kilometers (1,550 miles)—a distance equivalent to that from Miami, Florida, to Boston, Massachusetts.

The Volvo and the Touchscreen computer toured new-car showrooms in Victoria and New South Wales and were quite a draw at the Sydney Motor Show.

THEY'RE NOT JUST HORSEING AROUND

A 22-kilometer (13.6-mile) cross-country course with water hazards greeted nearly 60 teams of one, two and four horses and their drivers at the 1984 Swiss Driving Championship in September. The competition was held in Meyrin-Satigny, across the street from HP's European headquarters.

Louis Guigoz, field marketing manager at the local HP sales office, scored the two-day tournament using a program he'd written for the HP 150 Touchscreen computer.



JOSETTE BOULMIER

He was so busy entering participants' results that he couldn't enter his own pair of horses in the event which was organized by the Société de Cavalerie de Genève.



CHUCK FOX

HALF A MILLION TERMINALS LATER

Since HP's Data Terminals Division shipped its first product in 1974, the company has introduced a variety of terminals. In October, the company celebrated the shipment of its 500,000th display terminal. On hand for the ceremony were company co-founder Dave Packard and Larry Mitchell, general manager of the Roseville Terminals Division.

The 500,000th, an HP 2392A, was shipped to Longs Drug Stores in Walnut Creek, California. Today HP's terminal manufacturing has expanded to Roseville, California; Aguadilla, Puerto Rico; and Grenoble, France.



This engraving machine was used by workers at HP Germany to put product numbers and the company logo on instrument panels.

25 Jahre in Deutschland

*HP Germany celebrates a quarter century
of growth and innovation.*

□ Fred Schroeder didn't even know the name of the company with the job listing in the morning paper. He was sure, however, the ad described a job that suited him perfectly. He would apply.

As he entered the hotel room where the job interview would take place, he began to wonder. These Americans were with such a small company. He was used to working for a well-established firm.

He was aware that this company didn't have any operations in Germany. It then began to dawn on him: They want me to get things started for them!

□ When Ray Deméré landed in Germany in August 1959, his mission was to establish a manufacturing operation for HP. Bill Hewlett had selected Baden-Württemberg as the best region because he'd heard the people there were hard-working.

Ray and Fred found a good place for the plant in the small town of Böblingen. A home for Ray's family was another matter.

The first place Ray and his wife lived was the Cafe Böhler. They had two bedrooms, no kitchen—all dish washing had to be done in the bathtub.

□ Peter Frye had never met either founder of the company he worked for. Now, here was one of them, sipping tea, chatting with Peter and his co-workers.

The small staff of HP's Berlin sales office gently bombarded Dave Packard with suggestions for things they thought could be changed at the office. Dave listened attentively and took notes on the back of his airline ticket.

"Those notes will surely be lost," Peter thought. He was amazed as, over the ensuing months, every item on the list was addressed. The year: 1966.

□ The day is October 2, 1984. Peter, now a district computer service manager, sits in a ballroom in Frankfurt, Germany, near the new Bad Homburg headquarters of HP GmbH (the legal name of HP's German subsidiary). Along with more than 500 customers and invited guests, Peter is here to celebrate the 25th anniversary of HP's first business operation outside California.

Fred Schroeder is here as well. He took that job with the little start-up and helped build it into a thriving enterprise. Under his guidance, the German company started a practice that spread through HP and to other companies—flexible working hours. Fred retired in 1982 as director of corporate development, after 23 years.

This night's festivities brought to a climax a long weekend of celebration—and brought into focus the significant business venture Ray and Fred and a host of others had started.

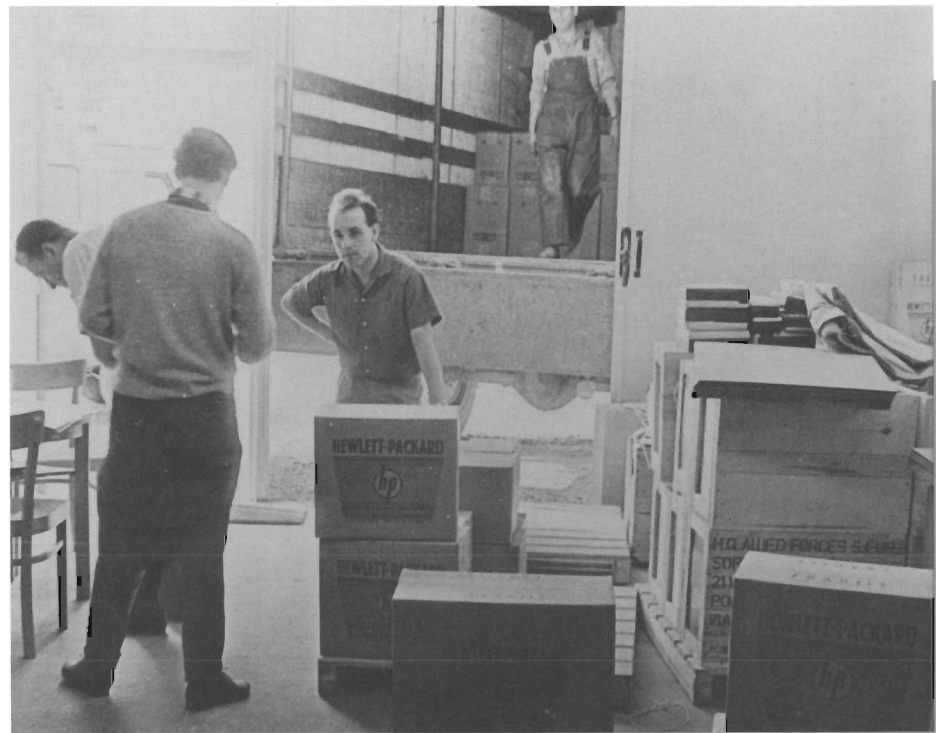
In FY 1984, HP Germany accounted for 13 percent of the company's international orders. Its five sales districts—the outgrowth of HP's first independent sales force begun there in 1959—serve the strong German market through offices in 11 cities.

HP Germany is a microcosm of HP as a whole. In addition to its 1,500-plus sales and service employees, HP GmbH has more than 2,000 people in four product divisions and three operations.

They manufacture a broad cross section of the company's products: in Böblingen, outside Stuttgart—HP computers, test and measurement instruments and medical products; in Waldbronn, 60 kilometers away—laboratory analytical equipment.

HP Germany has worldwide responsibility for the HP 250 small-business computer, neonatal and fetal monitors, logic signal sources, liquid chromatographs and some financial and engineering design software. In addition, it manufactures and supports the HP 3000 line for all of Europe.

At the anniversary celebration in Böblingen, region general manager Eberhard Knoblauch called HP Germany "Hewlett and Packard's 25-year-old very beautiful and also prosperous daughter." He read a letter from Ray



Some of HP Germany's first products await shipment from the loading dock in Böblingen factory, now a major HP manufacturing and sales center.

HP ARCHIVES



At the dedication ceremony for the new Bad Homburg headquarters, company president John Young describes HP Germany's start in a former textile factory in Böblingen.

HP PHOTO

Deméré, the enterprise's first manager (who retired in 1983 as vice president—manufacturing), which attributed HP Germany's success to "the quality and loyalty of our staff, the continuity and stability of jobs and employment, and teamwork. From a small beginning, we experienced continuous growth, and that has also included the financial aspect of the business."

Also before the assembled crowd in Böblingen, Eberhard received the Order of Merit, Germany's highest civilian

honor, for distinguished service to the country. The Baden-Württemberg governor who presented the award noted HP's "special style of management and the company's social and economic contributions."

As evidence of HP Germany's cultural commitment, guests at the anniversary events were entertained by young musicians who had received scholarship support from HP. A duet from the International Bach Academy in Stuttgart played one night. Frankfurt's Horn Ser-

enade Ensemble performed the next.

Echoing Eberhard's family symbolism, Bill Hewlett spoke fondly of "our first child."

"It had a godfather (the mayor of Böblingen) and two grandparents (two noted German scientists), and its adolescence was hard... we were only getting 1.75 German marks to the dollar at one point!" Hewlett said. (Today's rate is about 3 to 1.) "Now there are some 50 brothers and sisters around the world (other HP divisions), who all have learned from HP GmbH."

Two new buildings—country sales headquarters in Bad Homburg and a regional sales office in Böblingen—were dedicated as part of the two-day celebration. Employees at the new Bad Homburg center were delighted to see Bill Hewlett in the aisles, and marveled at his intense interest in a mechanical problem they were having with some office equipment.

The weekend before the dedications, all HP Germany employees participated in celebrations of their own, and residents of the spa community of Bad Homburg were invited to an open house at the new facility.

"We are the new residents here, being previously headquartered nearer to Frankfurt," said Ernst von Glasow, country communications manager whose staff organized all the anniversary events. "We wanted the community to have a chance to get to know us."

The events in Frankfurt were highlighted by a talk from Jesuit philosophy professor Rupert Lay of St. George University. He suggested that developments in electronics are creating a revolution on par with the Enlightenment in the 18th century and the Industrial Revolution in the 19th century.

He called those involved in this new revolution a "technological elite" and urged them to share their knowledge with the world at large. "The fear many people have of new technology will be lost by exposure to it, and this will result in good changes in society."

When Bill Hewlett took the microphone at the close of the evening, he said he agreed with the professor. The existence of HP Germany is evidence he and Dave Packard could see far ahead more than 25 years ago. **M**



The new HP office building in Bad Homburg, Germany, serves as the country sales headquarters. Bad Homburg is on the outskirts of Frankfurt.

HP PHOTO



At the 25th-anniversary festivities in Böblingen, Bill Hewlett recalls the early days of German operations.

HP PHOTO

JOHN YOUNG

HP's president evaluates operating results for 1984 fiscal year.



KATHLEEN ARCHAMBEAU

John Young answers questions about company plans from a group of new engineers at HP's Cupertino, California, site.

With the fiscal year wrapped up, I'd like to take this opportunity to tell you how HP performed during 1984 and what we can expect in the months ahead.

HP closed the books this year with sales of \$6.04 billion, up 28 percent from last year. Net earnings increased by 27 percent and totalled \$547 million, not including a one-time increment from a change in U.S. tax law. All sectors of HP's product offerings posted gains, and we ended the year with a backlog of \$1.3 billion.

For the first time in three years, HP's international business grew as a proportion of total sales. Non-U.S. orders were up 35 percent over 1983. Part of this increase must be attributed to changed reporting requirements that resulted from our increased equity position in YHP, where we went from a 49 percent ownership to 75. Without that changed accounting requirement on YHP, international sales would have been up 28 percent compared to 1983.

Still, we can be very proud of our international performance, since the strong U.S. dollar has translated into higher prices for HP products sold internationally. Our ability to adapt products and selling strategies to local markets—including aggressive pricing to offset the effects of the dollar—was an important element in our competitive international performance this year.

We've also seen the positive effects of our growing international presence. Increased manufacturing and development abroad has made us more sensitive to the needs of our customers and puts us in a better position to compete in key markets. And three new joint ventures—in China, Mexico, and Korea—will enhance our access to international markets.

In the United States, orders increased by 25 percent from the previous year. During the fourth quarter, however, we saw a noticeable softening of the U.S. order picture. Since international economies tend to lag the U.S., we are expecting to see our order growth rates moderate in the coming months.

This brings me to the subject of costs and expenses, and the way we need to manage them more closely. HP's profitability depends on two major factors—the external business environment in which we operate and the degree of pressure it places on prices, and our own internal costs and expenses.

In our external business environment, we're seeing a number of trends that put pressure on profit margins. During the past three years, the dollar has appreciated by roughly 40 percent, making HP products more expensive in international markets. We have been using new local pricing policies to counteract the strong dollar, and these have been an important element of our improved international performance. Sales and pricing discounts used during this past year, as well as the growing importance of price-sensitive products for personal computation, affect margins. With these changes in our markets and the competitive environment, such actions must continue.

This leads to the factors under our control that affect HP's performance, and they are product costs and expenses. Our emphasis on manufacturing productivity must be a continuing focal point, and we must strive for product designs with sufficient value to customers to provide adequate margins. This is the best way to offset the pressure on prices.

Our expenses grew more rapidly than sales during the past year, so here's another area of concentration. In the fourth quarter, we saw a record year-

end "bulge" in spending. This was an unwelcome return of a chronic problem that we had successfully conquered during the two previous years. We simply have to go back and review our spending plans and eliminate these kinds of surprises.

The somewhat sober message I'd like to leave you with is this: The gains from strong shipment growth must be carried to the bottom line. We can't just concentrate on getting orders and assume that expenses will take care of themselves. We are operating in an increasingly competitive environment. Our future profitability and success depend not only on the appropriateness of our strategies, but on our self-discipline in carrying them out.

The electronics industry is ushering in what promises to be one of the most challenging—and rewarding—eras yet. Product integration for total systems solutions, telecommunication networks, productivity enhancements, and advancement in software programs designed to make technology more accessible—all these are part of our future directions. We are well organized to approach those challenges, and we have ample financial resources to finance our own growth internally. Most important, we have 82,000 committed employees worldwide. I'd like to thank each of you for your efforts this past year.

NEWSCLIPS

Recaps the newsworthy events, changes and achievements within HP.

FOURTH QUARTER

Hewlett-Packard reported a 27 percent increase in net sales and a 14 percent increase in net earnings for the fourth quarter of its 1984 fiscal year which ended October 31. Year-end sales and earnings were up 28 percent and 27 percent respectively when a one-time increase related to a tax law change is excluded from net earnings. Here is a summary of FY84 results with the comparable FY83 figures in parentheses:

Net sales for the fourth quarter totaled \$1.688 billion (\$1.330 billion in 1983), with net earnings amounting to \$167 million equal to 65 cents per share (\$147 million or 57 cents per share). The current-quarter earnings benefited \$11 million or 4 cents per share from a change in tax law related to the company's Domestic International Sales Corporation (DISC). Orders for the quarter were \$1.579 billion (\$1.285 billion), up 23 percent.

For the fiscal year overall, sales totaled \$6.044 billion (\$4.710 billion in 1983). Net earnings were \$547 million equal to \$2.13 per share (\$432 million or \$1.69 per share). FY84 earnings stated here exclude a one-time increase of \$118 million or 46 cents per share related to DISC taxes accrued prior to 1984 and now reversed. Orders totaled \$6.350 billion (\$4.922 billion), up 29 percent.

CHANGES AT HP LABS

HP Laboratories was restructured in November into six centers. **Chuck Tyler** becomes director of the expanded Technology Research Center. New labs and their directors: Distributed Systems Center, **Jay Richards**; Design and Measurement Research Center, **Frank Carrubba**; Application Technology Center, **Ira Goldstein**. The Manufacturing

Research Center under **Bob Grimm** is unchanged. The U.K.-based Bristol Research Center under **Don Hammond** now includes an Information Systems Lab headed by **John Taylor**.

ENTITY CHANGES

A new Lyon Manufacturing Systems Operation, part of the Manufacturing Systems Group, will occupy a recently purchased site in Isle d'Abeau, France. Operations manager is **Jacques Ferdane**. . . . In the Medical Products Group, the former Sunnyvale Medical Operation has been consolidated with the Andover Division.

NEW HATS

Ned Barnholt has been named general manager of the Electronic Instruments Group and a member of the Management Council, along with **George Bodway**, GM of the Information Technology Group. Succeeding Barnholt as GM of the Spokane Division is **Byron Anderson**. . . . **Tom Uhlman** is manager of Corporate Development. **Roger Cooper** has been named the future GM of the Office Productivity Division, effective next summer. . . . **Ed Hayes** is Information Technology Group marketing manager. . . . **Toshiteru Suwa** has overall responsibility for marketing, sales and support activities in Japan, with **Masao Terazawa** heading marketing.

HONORS

Eberhard Knoblauch, managing director of the German Region, received one of Germany's highest honors, the Order of Merit (see page 21). . . . Hewlett-Packard board member **Shozo Yokogawa** has received from the Emperor of Japan the Second Order of

the Sacred Treasure in recognition of his vision and leadership in the field of international commerce. He is president and chief executive officer of Yokogawa-Hokushin Electric Corporation in Tokyo and was the first president of Yokogawa-Hewlett-Packard.

NEW PRODUCTS

The Manufacturing Productivity Division has brought to market HP JIT: software running on the HP 3000 for Just-in-Time production techniques. It was developed in cooperation with 14 HP divisions using JIT.

The advanced HP 3562A dynamic-signal analyzer from the Lake Stevens Instrument Division can replace several instruments for electronics and vibration analysis and for the development of servo-control systems. . . . The Optoelectronics Division has entered a new market with the introduction of the HEDS-7500 digital potentiometer (the internal control for a knob) which can produce digital output when turned by hand.

A family of three new PageWriter cardiographs—each about one-tenth the price of the HP ECG management system—has been developed by the Andover Division and will be marketed by the McMinnville Division. . . . The HP 78834A neonatal monitor from Böblingen Medical Division allows the user to set parameters suitable for a particular application.

Other entries include the Scientific Instruments Division's HP 5988A gas chromatograph/mass spectrometer which provides high-level performance at a low price. . . . The HP 2566A and HP 2565A matrix line printers from the Boise Division offer high-speed printing (900 and 600 lines-per-minute respectively) in rugged environments.

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