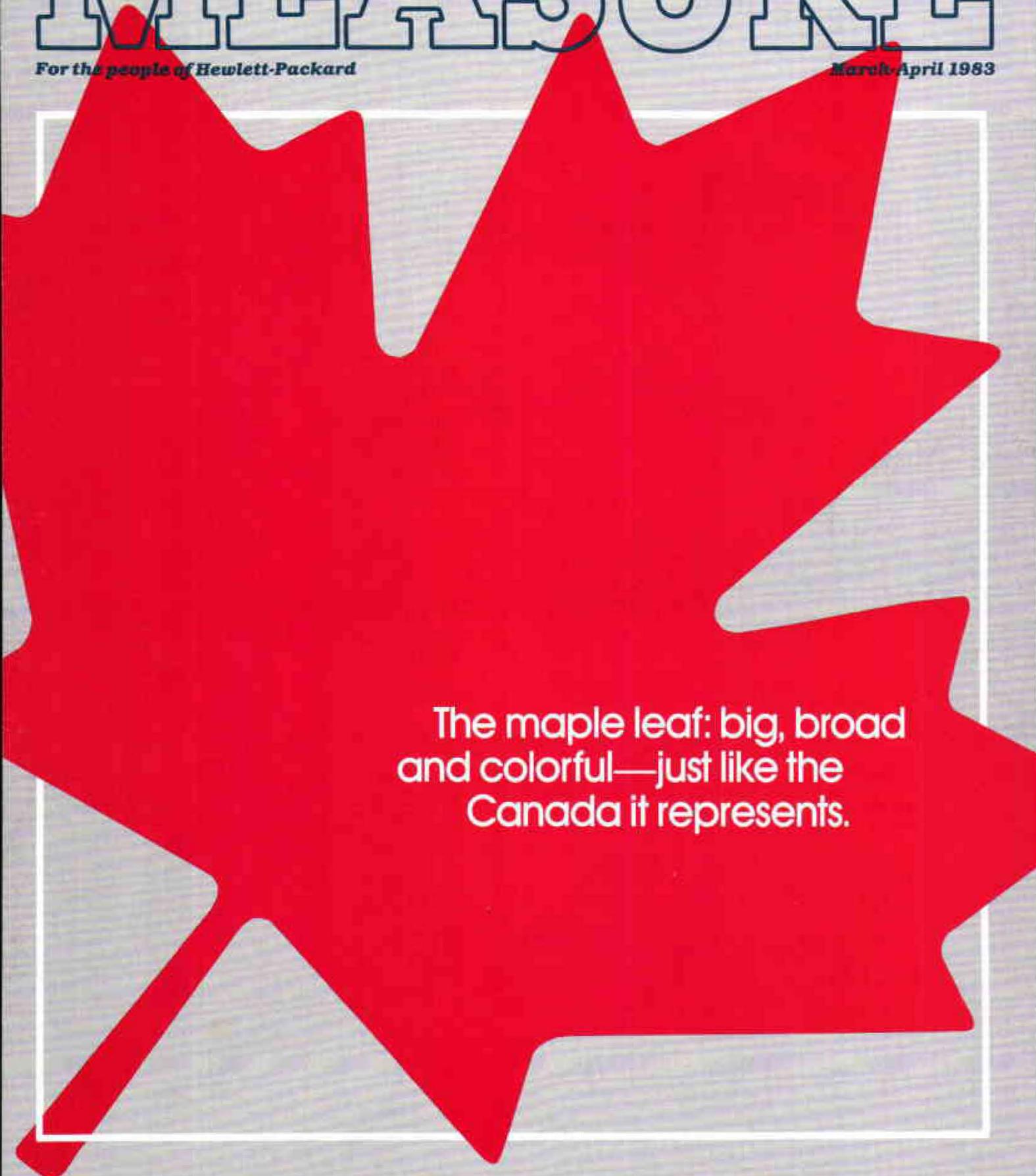


MEASURE

For the people of Hewlett-Packard

March-April 1983



The maple leaf: big, broad
and colorful—just like the
Canada it represents.

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MEASURE

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

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

ON THE COVER:

From Canada's Arctic wilderness to its thickly populated U.S. border, the maple leaf flies over this land of tremendous natural resources. Staffer Gordon Brown describes HP's activities in the country, starting on page 3.

UPFRONT

Stanford's Fred Terman, "father of Silicon Valley," dies at age 82.

It's difficult to measure the impact that a man like Frederick Terman had on the university where he taught, the community where he lived and the industry he developed. The emeritus provost of Stanford University and the "father of Silicon Valley" died of a heart attack in December 1982 at the age of 82.

Terman encouraged Bill Hewlett and Dave Packard, two of his Stanford electrical engineering students, to go into business in Palo Alto. Terman became one of the first three outside directors added to the HP board in 1957 and served until 1973, when he was named emeritus director.

"Much of what Stanford is, it owes to Terman's extraordinary vision," said Donald Kennedy, the university's current president. During Terman's 40-year Stanford career he served as dean of engineering and then provost, the second-ranking academic officer of the school.

He is remembered for luring top technical talent to the school—including William Shockley, co-inventor of the transistor, and Nobel Prize winner Carl Djerassi. Although Terman retired in 1965, his home was still on the campus. In 1977 the \$9.2 million engineering center at Stanford was named for him.

Terman "was always coming up with ideas, such as setting up the honors cooperative program through which a company could help pay for the continuing education of its engineers," said Bill Hewlett. The bespectacled professor also helped establish the Stanford Industrial Park in 1951 in an effort to create an industrial community (emphasizing research and development) surrounding the campus (with its emphasis on engineering and science).

His non-stop work to foster closer cooperation between industry and academia was extremely successful in his own backyard. In 1974 *Fortune* magazine noted that Santa Clara County had "the densest concentration of innovative industry that exists anywhere in the world." The buildup was "almost wholly the handiwork of Frederick Terman."

Terman moved with his family to

Stanford from his native Indiana in 1910. His father was psychologist Lewis Terman, creator of the standardized Stanford-Binet intelligence quotient tests. The two Terman eventually became one of the few father-son combinations ever elected to the National Academy of Sciences.

Because the elder Terman believed in "natural" education, his son did not attend school or learn to read until he was more than nine years old. Despite the late start, he entered high school three years later, finished a chemical engineering degree at Stanford at age 20 and received a doctorate from the Massachusetts Institute of Technology four years after that.

He returned to Stanford as a teacher in 1925. Of Bill Hewlett, Dave Packard and the other students he taught throughout his career, Terman said, "I loved them all and they have provided me with many happy memories."

"If I could relive my life," he concluded at the time of his retirement, "I believe I couldn't do better than to play the same record over again."

Today that recording is more than worth its weight in gold. **M**



Dr. Fred Terman

STANFORD UNIVERSITY

The wide, wide world of HP Canada...



A good part of both the woes and wonders of Canada can be traced to two salient national features: A land mass (3.85 million square miles) second only to the Soviet Union, and a population (25 million) only a little more than a tenth that of the neighboring U.S.

The people of this huge land—widest HP sales territory in the world—clearly enjoy the space it affords, even as they attempt to cope with the great distances and provincial differences it imposes.

What is perhaps an even greater dilemma for Canadians, however, is to strike the balance between their culture and the omnipresence of U.S. culture and economic influence. Canada certainly wants to do business and be a good neighbor (70 percent of Canada's imports come from the U.S.A.), but not at the cost of being overwhelmed, of losing its own distinct identity and freedom of choice.

It is inevitable, therefore, that Canadians occasionally feel the need to share with their U.S. friends and neighbors their perceptions about the facts of life to the north. For their part, HP Canadians have some particular points to make about their relationship with the U.S. organization as well as



the influence of the prevalent U.S. economy on their own sales activities.

Fact number one is that Canada and the U.S. are two different countries with different laws and customs. HP accommodates this by organizing and administering its activities through Hewlett-Packard (Canada) Limited. (HPCL), a wholly owned subsidiary established in 1962. In these matters HPCL reports through the Intercontinental organization. But when it comes to sales, HP Canada is regarded as a fifth North American sales region, and reports through the Corporate Marketing organization.

Commenting on this, region general

manager Malcolm Gissing sees benefits in being considered a member of the U.S. regional team. "Working directly with the U.S. regions has certainly helped us get off the ground. But some important differences have tended to become obscured in the process.

"Since the border really represents a border between two countries, all the laws and regulations of Canada apply to what we do. Simple things like U.S. visitors bringing advertising materials or samples across the border have major implications. Unlike the U.S. regions, we operate as a separate legal entity. We have to have a pricing strategy of our own, one that will recover the added

cost of doing business here. For example, our selling costs are higher because of the additional cost of travel and equipment, along with lower productivity in U.S. dollars of our field force. Typically, prices in Canada will be some 10 to 20 percent higher than those in the U.S."

Compounding the problem, of course, has been the fall in value of the Canadian dollar relative to the U.S. dollar. Ten years ago Canadians could get about \$1.04 (U.S.) for their dollar; now they get 80 cents (U.S.). It all boils down to the fact that HP Canadians have to work harder and sharper to make a dollar.





Coast-to-coast microwave network is overviewed by HP 1000 computer-based instrumentation system.

Canada's markets also present some special challenges to HP sales forces. Sherif Alaily, regional sales manager for computers, points to the quandary of customers who do business on both sides of the border. "Some buy HP products in the U.S., bring them home and then look to us for warranty. This can become very complex, given that HP is committed to support customers on a worldwide basis. In fact, in times of economic difficulties, the border can confuse just about everything including prices, purchasing decisions, and marketing strategies as competitors adjust prices to hold market share. On the positive side, the distribution of Canadian customers and their need to network their plants and explore the north have opened up an excellent market for our computer products."

Dave Mutch, regional sales manager for Medical, says that dealing with a totally socialized medical industry presents both challenges and opportunities. On the one hand, big buying decisions tend to involve one layer after another of government. On the other, medical technology such as HP offers is one way of delivering more uniform medical care over long distances and among areas that have been served unequally in the past.

Geography—the sheer magnitude

and variety of it—looms as another major challenge for many HP Canadians, especially those engaged in service, administration and other staff functions. Their responsibilities may sprawl over five time zones, with thousands of miles between one sales office and the next.

"Visitors not used to our vast distances are surprised when making calls on customers here," says Dick Marino, Central area service manager. "Our economy is based largely on energy and resources whose centers are very widely separated between the Pacific, the Arctic and the Atlantic. Some of our customers—government agencies, oil drillers, mining and timber companies—set up operations in very remote locations. In one case our service engineer is put down by bush plane, with no one else around for hundreds of miles. The most northerly area serviced in Canada is Tuktoyaktuk, some 200 miles north of the Arctic Circle."

In contrast to such far-flung activities, the great majority of customers and sales efforts are concentrated in a few major cities located within 100 miles of the border, with Toronto in a clear lead. That city, in fact, hosts HP headquarters and local branch office in outlying Mississauga, plus a computer service district office at Willowdale in

East Toronto. Together they support the efforts of some 350 of HP Canada's 900 people. Montreal, Edmonton, Ottawa, Calgary, Dartmouth, Burlington, Vancouver and Winnipeg are the other offices that maintain district-level sales operations.

One thing all HP Canadians recognize is the potential benefit of a local HP manufacturing operation. Alan Holdway, regional sales manager for Instruments, points out that Canada's trade deficit in electronics products of some \$2 billion a year is creating pressures to "buy Canadian." The federal government puts special teeth into this approach, applying it as a policy by giving advantages to suppliers who have significant local content in their product lines or who otherwise help reduce the outflow of capital. The government recognizes the need for high technology companies to assist in the long-term development of Canadian resources. In fact, HP is currently investigating ways to become a local manufacturer.

The people of HPCL are a pretty clear reflection of the country itself with its makeup of diverse cultures, languages and provincial influences. In the Montreal office, for example, all speak French as a first language, but everyone also is fluent in English. Product training is offered in either language,



hardware must be able to cope with French character sets, and product literature must be translated into Canadian-style French. Victor Cormier, personnel rep in the office of some 175 people, notes that the staff of the Montreal office can deal with customers in 44 other languages.

Quite a few HP people number themselves among Canada's new settlers. Malcolm Gissing is one. "I'm a Canadian by choice," he says. Malcolm came from HP's United Kingdom organization to head Electronic Products Group sales 10 years ago and took on the country manager job in 1977.

Canada is a very interesting and challenging place, in Malcolm's view.

"The business style is U.S. The banking style is European. The living style is very cosmopolitan. And, in spite of the particular problems that the border creates, it's very stimulating in many ways. For people who love open spaces, the four seasons including winter, a European-style social life and structure—Canada has it all."

Of course, the economic tide went out in 1982 and, given the usual pattern of a Canadian economic recovery about nine months behind the U.S., 1983 may be another slack year. Still, the long-term signs are for strong growth, Malcolm believes. In spite of '82, HPCL has grown at a rate faster than HP's corporate average. In per cap-

ita sales, HPCL at \$7 (U.S.) for every Canadian is second only to the U.S. sales force at \$11 per head of population.

"The company is very highly regarded in Canada, and respected as a leader," he adds, "and we now have the critical mass on which to build. For example, HPCL has taken an active role in the setting of standards for the use and safety of computers in Canada. The country is in a good position to grow, to develop resources and new technology-based industries—to get away from being mostly an economy based on 'hewers of wood and drawers of water.' HP can play a significant role in that change." **M**



Edmonton refinery symbolizes Canada's resource-based industry.

TALE OF TWO CITIES

Montreal and Edmonton provide two highly contrasting settings for HP and HP people.

Hal Dawson came to the Edmonton, Alberta, office as instrument sales manager in 1976 after 10 years in the Ottawa and Calgary branches. One of the first things Hal did at his new location was to purchase an 80-acre farm on prairie land 15 miles from the office. Here he spends his off hours tending a string of "American paint" horses for showing and breeding—both with success.

At Edmonton, Hal has discovered a real boomtown. Some call it the "oil capital of the world;" others describe it as the "Gateway to the North." It's a sprawling town of 630,000 people, with more square miles of incorporated land than any other North American city.

Hal's sales territory may be among the biggest ever—1,000 miles wide by 500 miles north to south. Calgary to the south and Regina to the east in Saskatchewan province are among his regular stops.

While telecommunications, oil and gas companies have provided the main base of HP business in the area, Hal points out a strong new trend toward the manufacture of high-technology products.

"There's lots of money around. The provincial government has banked 30 percent of oil and gas revenues against the day when those resources begin to run out."

Speaking of her job as a systems engineer in the Montreal office, Françoise Poliquin says, "I love it!"

Her work with users of HP 1000 systems brings Françoise into regular contact with a wide range of local industries and applications—rail-car testing, flight simulation, stock market management, food weighing and processing, plastics manufacturing, environmental testing, hydrographic studies, astronomical research, new product testing and so on. She particularly enjoys the



On a cold, snowy morning in Montreal, Françoise Poliquin calls on an HP-1000 user.

selling and technical aspects of the work—meeting people and solving problems.

That work tells something about Montreal itself as a highly diverse urban center. Its three million people reflect a wide variety of origins and cultures, dominated of course by the influence of the French settlers who founded the city in 1642.

From a career point of view, Françoise has always enjoyed variety and some adventure. After graduating from the University of Quebec, she signed on as an electrical maintenance engineer at an iron mine in northern Quebec—300 miles of wilderness away from civilization. In addition to the abundant wildlife, it

offered her the opportunity to become involved with computer systems. After three years with the mining company she returned to Montreal where she put her computer training to use with a printing company. That phase of her career ended when a management change resulted in a decision to abandon automation!

Françoise appreciates the ambience and opportunities offered by the city, yet finds her energies directed to furthering her career and to her liking for the outdoors. She recently completed her MBA studies after more than four years of night courses. Now she looks forward to spending more of her free time skiing, hiking, fishing and camping, all within easy reach of the city.

HP SUPER KIDS

These sons and daughters of HP people are not yet out of high school but they have already earned high honors in their fields.

GYMNAST. At 14, Pammy Bileck is already a veteran of international gymnastics competition and a serious contender for a spot on the U.S. 1984 Olympics team. For the past two years she's been on the U.S. Junior National gymnastics team and shines in both individual events and overall consistency. In 1982 she competed four times in other countries: she was fourth all-around finisher in a dual meet with Japan and second all-around in an invitational meet in Czechoslovakia against gymnasts from 15 nations and in dual meets in China and Australia. This March she competes in France as a member of the American team. Along with tournaments, trips and practice she maintains straight-A grades. Says her mother, Corporate's Judy Bileck, who sees the long hours and dedication behind Pammy's success, "I'm more proud of what she puts into it than the awards she gets."



GREGG P/BURN

ACADEMY NOMINEE. When Hoang Nhu Tran, 17, fled Vietnam with his family eight years ago, his only English words were "yes" and "no."

Today he's a high-achieving senior at Rocky Mountain High School in Fort Collins and has been nominated by Colorado congressmen for admission to all three major U.S. military academies: Air Force, Navy and Army. "This is my adopted country and I want to serve it," says Hoang.

A straight-A student and the top of his class, he skips lunch hour to attend extra classes. In addition, he's a letterman in wrestling and cross country and former president of the junior class.

Both his parents work for HP: father Anthony at Loveland Instrument Division and mother Kimmie-teen at the Desktop Computer Division.

ART: SMI — PENNINGTON/TREBNI



OLAV MILLS

THREE STARS. With two youngsters competing nationally in swimming and another who is a top-rated figure skater, Atlanta Sales Region's Joan Sykes and her husband Shelly have done a lot of early-morning driving to rinks and pools over the years. They now have three champions in the family:

- Leslie (right), 15, won the 1981 Junior Ladies Figure Skating Champion in the international competition held in Merano, Italy. She's now passed her final figure and free skating tests and is competing for the first time on the senior level. Wins in the South Atlantic and Eastern section championships qualified her to compete in the Nationals this February, where she placed 11th among the top 15 female senior skaters in the country.
- Jennie (left), Leslie's twin sister, won three gold medals in free-style swimming events at the Junior Nationals and qualified to compete in last fall's Senior Nationals. Based on her national rankings she has been named Georgia's most valuable female swimmer in the 15-16 age group.
- Chris (center), 17, set six state records in free-style events and qualified for the 1982 Junior Nationals. He's currently the fastest free-style swimmer in Georgia and was the top ranked swimmer in the state at age 14.



THOMAS BRITTON

MUSICIANS. Stephen Singer (left), 17, is an all-around musician who is the best high-school jazz trombonist in the state of New York. His brother Jeffrey, 16, is a fine percussionist who focuses on classical music. While neither plans to become a professional musician, playing in a variety of orchestras, bands and ensembles dominates their present schedules.

Both brothers won the chance to take part in the prestigious all-state music festival held in November for New York's most talented high school musicians, and Jeffrey went on to be named for the All-Eastern Orchestra drawn from nine states. They're the sons of Eastern Sales Region's Lawson Singer of the Woodbury, N. Y., office and his wife, Betty Carol, a music teacher.



RACQUETBALLER. Three years ago when Mark Henshaw was 14, his father Alan tried to get him interested in his own favorite sport of handball. Instead, Mark took up racquetball, which uses the same court geometry but is less hand-bruising. He turned out to be such a natural that the next year, playing as a junior, he narrowly lost the 1981 national championship for boys 15 and under. Since then Mark's been ranked "Open," playing against men and only allowed to compete as a junior in state and national championships. (He's currently Northwest Regional junior champion for both 18 and 16.)

Says Alan, who is with the Lake Stevens Instrument Division, "When I'm really in top form, I might get three points against Mark's 21."



CONSUELO ANDRES

ACTRESS. Imagine this scenario: Talented little first-grader with no professional experience goes with her mother to the West Coast audition for the role of Molly in the Broadway production of the hit musical "Annie." Finds herself in a long line of 250 hopefuls, some equipped with résumés, portfolios and agents. So impresses national casting directors with her singing and dancing talent that she's one of two girls flown to New York City for final auditions. Gets the role, and a few weeks later is living with her mother in Manhattan and performing on Broadway. That's the breathtaking story of Dorothy Andres, now 7, the daughter of Consuelo Andres who went on leave from Corporate. (At left, Dorothy is being fitted backstage with her costume.) She played the featured part of the smallest orphan in 216 performances from last June until the show closed in January.



ICE SKATER. Working her way up gracefully in ice-skating competition is Stacey Halloran, 15, the daughter of Waltham Division's Mark Halloran. A first-place winner two years in a row at the International Lake Placid Open, she took honors in the juvenile category in 1981 and intermediate ladies in 1982. She's now ranked as a junior lady in solo competition and also competes as a member of a precision skating team.



COMPUTER PROGRAMMER. When Troy Higgins was six, he learned to program the world's first programmable calculator which HP introduced in 1972. His father Marv, now with the Personal Computer Division, was part of the manufacturing team for the HP 65. Troy, 16, has since programmed every calculator that HP has made and made useful suggestions for improvements to Corvallis engineers. These days he develops sophisticated programs for his family's HP 85, such as a flashcard program which quizzes him on class notes according to the percentage of accuracy of his answers.

An award winner in electronics, he studied digital design with his father. Here they're examining a logic probe and function generator that Troy designed and built, among other original projects. In addition, Troy runs his own five beef cows on the family farm and raised 28 pigs this school year to help pay for spending next summer as a foreign exchange student.



RUNNER. At 14, Shannon Clark has been running competitively for six years with impressive results. Competing with track clubs, she was a member of the 1981 National Two-Mile Relay Champions which set a national record, the 1981 National Cross Country Team Champions TAC, and was the 1980 National Cross Country Champion (ages 10-11). She has a string of California and regional wins as well. This year the 5-foot, 75-pound freshman is adding great strength to the Mountain View (Calif.) High School varsity team with a regional win.

She's part of a family of runners that includes her mother Bev of the Corporate Parts Center, twin sister Stacey and brother Richard, and dad Marshall, who coaches track and field and cross country at San Jose State and is a former All-American in the sport himself.



WATER POLO PLAYERS. The Pekary brothers—Shannon, 17, and Chris, 16—both swim on the varsity water polo team for their Cupertino, Calif., high school. On successive years each has gone to the National Junior Olympics with California's AAU 15-and-under team and brought home silver medals. Chris (second from left) recently made the training squad for the 16-and-under Junior National Water Polo Team which will represent the U.S. against teams of other countries.

Shannon (right) is the student body president at Homestead High School this year and a member of the executive cabinet of the state association of student councils. He travels frequently to Sacramento as director of the student advisory board to the California Board of Education. Their parents are Lee and Pat Pekary, both of Corporate.

YOUR TURN

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

ADEQUATE COVERAGE?

I was very disturbed by your article some months ago about HP in South Africa. The mild language used to describe conditions in that country was totally inadequate to convey the horror of everyday life for its African majority. For example, you said, "Adequate medical care is a real need. . ." The statistics for infant mortality per thousand give a clearer picture: whites-12; urban Africans-69; rural Africans-282. And you made no mention at all of political repression, including laws allowing indefinite detention without charge or trial, laws requiring Africans to carry a pass book at all times with permits to enter white areas, and torture and execution of those opposing apartheid.

Massachusetts has just passed a law requiring the withdrawal of all public pension funds invested in firms doing business in South Africa. State Senator Jack Beckman said the new law "will send a strong message to the rulers of South Africa, the only government in the world whose constitution mandates racial discrimination, and its allies in Washington and the corporate world."

Do we really want to be known as an ally of apartheid? The time has come for HP to join the vast majority of the world's people in isolating this brutal government, until the time that all of its citizens are able to live in freedom and dignity.

DAN SCHWARTZ
New Jersey Division

Katie Nutter, the HP writer who put together the Measure article, responds:

"When I started, I wasn't sure how I would feel about the story. I had previously served as a Peace Corps volunteer in West Africa, and was the sole white inhabitant for three years in a village deep in the rain forest.

"I chose not to focus on the mortality or oppression in South Africa for a simple reason: That's not what the story was about. Most HP employees know about South Africa's apartheid; few know how HP is conducting itself in that environment.

"Let me also add that the black-ruled country where I lived had an even higher infant mortality rate and almost as much oppression as South

Africa. There, however, the issue was not race, but tribe.

"There is a basic problem about suggestions that the only way to deal with South Africa is to withdraw. The proposition is like saying sinners should not be invited to church unless they first repent. To maintain one's purity by withdrawing from human contact is somewhat absurd.

"After talking to concerned HP employees in South Africa, I was convinced our presence there should be viewed as a positive. One employee spoke of 'lighting candles' and said that HP was lighting candles every day.

"Better to light a candle than to curse the darkness."

WHO ARE THOSE TWO MEN?

I have wondered for some time how the design for the HP stock certificates was selected. More specifically, who or what do the two men represent? Is there an allegorical significance?

STEVE LUND
Signal Analysis Division
Santa Rosa, California



No, the engraving is not one of Dave and Bill setting out to conquer the world. New York Stock Exchange rules call for two human likenesses on every stock certificate. The idea is that such artwork is difficult to forge.

The artwork was selected from designs approved by the NYSE.

Incidentally, if you dislike the hassle of hauling certificates to the safe-deposit box, there's hope in sight. You'll soon be hearing about a plan whereby your stock can be deposited in special trust accounts at the bank which serves as HP's transfer agent. The new program will simplify the selling process and reduce the amount of paperwork at HP (and therefore the program's cost).

Although certificates will still be issued on demand, most employees on the stock purchase plan probably will

elect to receive a quarterly statement showing all their stock purchases, much like a checking account's monthly summary, according to Craig Nordlund, assistant corporate secretary. There'll even be a way to deposit existing shares.

Details of the new arrangement will be available from U.S. personnel departments sometime in March.

BILL AND DAVE TODAY

I was fascinated by your article "What are Dave Packard and Bill Hewlett doing today?"

I talk with pride about "my" company to friends and family, and the HP story has always been a fairytale to me.

It occurs to me that they must have a virtual team of secretaries, capable of independent management and organization, to help them through each day.

IRENE COOK
Hewlett-Packard Australia Ltd.
Sydney, Australia

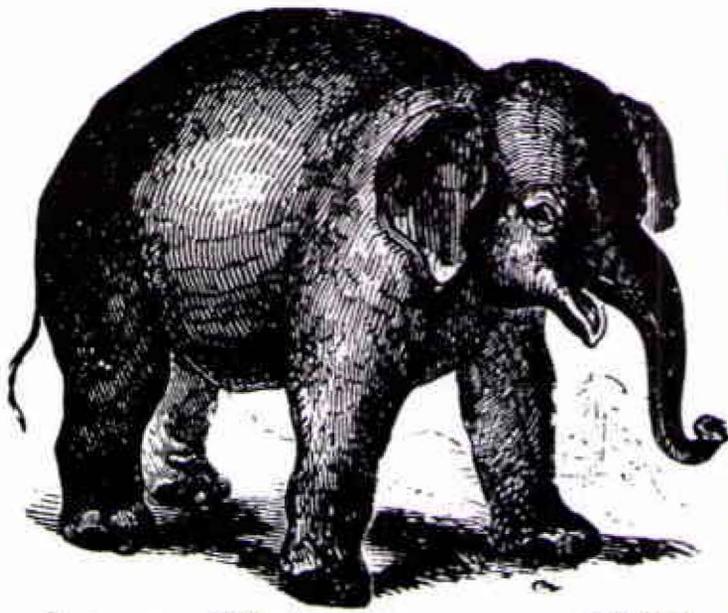


Meet the team: Madie Schneider, Leah Klick and Margaret Paull.

Madie, Bill's secretary, says the pace hasn't slackened one bit since his retirement. "The challenge of my work is maintaining a smooth operation and relieving him of many details," she says. "One of the reasons I enjoy my work is that he is a man of diverse interests."

Leah finds her job split three ways. She serves as a backup to both Madie and Margaret, and the rest of her time is spent working with Ernie Brioza, business and tax manager of Bill and Dave's ranching operations.

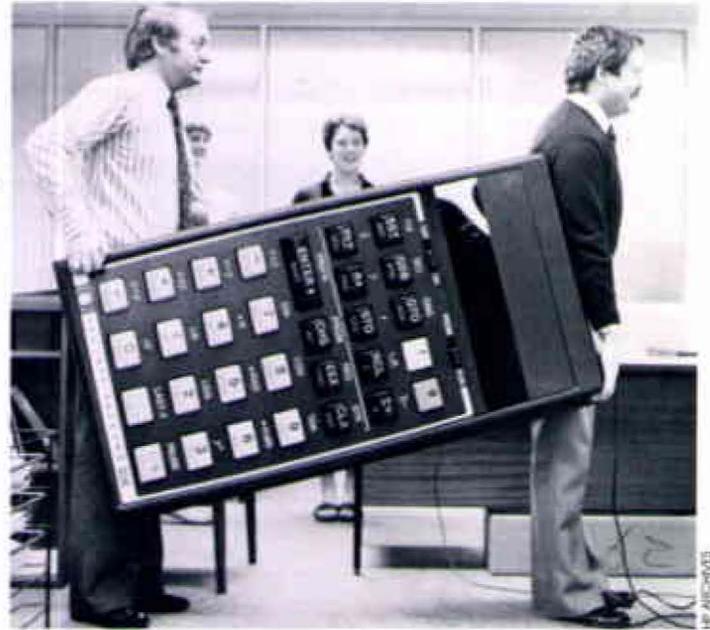
Margaret, who spent three years in Washington, D.C., as Dave's personal secretary during his tenure as deputy secretary of defense, also enjoys her job. "I feel like another member of the Packard family. I can't imagine working for anyone else."



A small list of some of HP's
BIGGESTS

"I think no virtue goes with size," said Ralph Waldo Emerson. But with size travels a lot of natural curiosity (and some bragging, if you're from Texas).

Please don't infer from this random list of HP gargantuans that biggest is necessarily best. We're just telling you about some of the largest.



BIGGEST HANDHELD CALCULATOR

This HP 33E calculator really works, but lengthy calculations are a pain. This demo model was built by HP for promotional events in England in 1979. Barrie Bell and Mick Berry haul the handheld out of the Manchester office.



BIGGEST HP PRODUCT

Back in 1975 HP's McMinnville Division put together this behemoth called Febetron 705. The heavyweight emits high-intensity pulses of X-rays or electrons to produce radiographs (X-ray photographs) of extremely fast-moving objects. Length: 14 feet. Weight: 6,700 pounds.



JOANNE ENGELHARDT

BIGGEST MANUFACTURING FACILITY

HP's site in Boise, Idaho, can claim more square feet of manufacturing space on one site than anywhere else in the U.S. (European honors go to HP's second factory complex in Böblingen, West Germany.) Currently under construction at both Greeley, Colorado, and Roseville, California, are HP's first "big-foot" buildings, which will claim the honor for the most manufacturing space under one roof. The floor plan for the 300-by-400 foot design is 50 percent larger than the standard HP manufacturing facility.

9.95

BIGGEST PROFIT-SHARING PERCENTAGE

HP's cash profit sharing has been around since 1962 in its current form. (The program traces its roots to a production-bonus system that started in 1940, although the Sanborn Company, forerunner of HP's medical products group, had a different profit-sharing program as early as 1917.)

The 9.95 mark was achieved in the second half of 1965, and only twice since then has it reached 9.0. The average over the years has been 7.30 percent. **M**

BIGGEST HP "SNOWMAN"

This outdoor holiday decoration appeared on Page Mill Road in Palo Alto in December 1958. This California "Frosty" was made of papier-mâché and stood more than 30 feet tall.



HP ARCHIVES



PICKING A PARTNER

You think you've found a partner for life — someone with whom you feel comfortable and can share your goals and aspirations.

You both understand the importance of your relationship and the responsibilities you each have to keep it growing in the years ahead.

For a large corporation getting ready to pick a companywide computer vendor, the selection process can be almost as important as choosing a mate.

Hewlett-Packard's major account program in the Computer Marketing Group was designed to make that decision a bit easier. Now in its seventh year, the program assigns sales teams to more than 170 of HP's largest industrial customers. Those teams' goal is to develop long-term relationships with customers to increase their productivity through computer solutions.

In the past, there were limited ways for a major company to solve its overall computing puzzle. The answer was almost always to build a centralized data processing center at corporate headquarters staffed by a troupe of operators, programmers and analysts. All the work from the various branches and plants was handled at the central facility with limited local ownership of equipment and application software. Any changes required approval by the central organization.

But as computers became smaller, less costly and easier to use, it made sense to distribute them to the user organizations throughout the company. The problem then became one of deciding which computers to buy and who should provide the programs for them.

"The new problem created by the distributed computing trend is one of 'islands of automation' between functional departments in a firm's business units," says Jerry Klemushin, manager of HP's major account program. "These systems have cropped up without a grand plan, although each one is undoubtedly more productive than the old method it replaced. But these 'islands' aren't talking to one another. The companies are realizing that if information can be entered once and be made available throughout the organization, important productivity gains can be made. One answer is to standardize on a systems vendor that can allow the integration of information as part of a long-term plan."

That's where HP's major account program fits in. Various HP sales representatives, assigned to a customer's corporate headquarters and important

divisions, are all made part of the same team. As HP sales reps work with the customer's headquarters to develop productivity strategies, computer networks and special projects, HP sales reps call on the outlying plants and branches around the world, coordinating their activities to the master scheme.

The results have been impressive to date. In the program's earliest stages in 1977, less than 1 percent of HP's computer sales came from the major account teams. That figure grew to almost 30 percent in 1982, and plans call for an increase to nearly half of HP's to-

tal computer sales in the years ahead. HP's business with some individual companies in the program has grown 50 percent per year through such sales teamwork.

HP concentrates on large industrial customers because they can use *all* of HP's computer products, including a full line of technical and commercial systems to personal computers and data communications. "Just like HP, they have a need for business systems in office and planning operations, technical systems in factory automation, and engineering systems in their research and development activities," ex-

plains Jerry. "And we use HP as a showcase—the role model many companies would love to follow."

These large companies, generally defined as having annual sales of more than \$400 million, are perfect candidates for implementation of MPN, the Manufacturer's Productivity Network. That concept, launched by HP in 1981, is designed to allow a company to link computer applications and resources throughout its organization. (See accompanying story.)

Selling such a concept calls for a new sales role. "When you call on the corporate headquarters of a major company,

MPN: A GRAND STRATEGY

Your engineering staff is using an HP desktop computer with a software package to design remote-control telephones. You were proud of the productivity gains when you added the computer. You'd like to achieve similar results in your production areas.

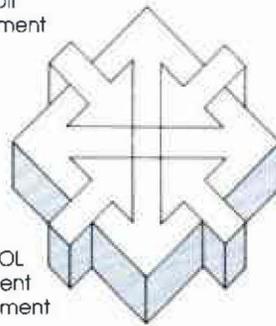
Through the HP Manufacturer's Productivity Network (MPN), it's possible. Via computer networks, for example, new designs can be moved directly to production-control computers, thus enabling you to transfer products more quickly from engineering to manufacturing.

When HP introduced the concept of MPN in 1981, it built upon individual products already available from the computer and instrument lines. In the ensuing year lots of new products have been added to the offering, and the concept has been applied to specific industries (see the story of the Winery Productivity Network in *Measure*, September-October 1982).

Now other product groups have seen the advantages such a framework can provide to its customers. At HP's 1983 general managers' conference, participants learned of net-

OFFICE SYSTEMS

- financial management
- personnel and payroll
- document management
- decision support
- word processing
- electronic mail



PLANNING AND CONTROL

- materials management
- production management
- cost accounting
- quality management
- sales and service support
- distribution
- order processing

ENGINEERING

- mechanical computer-aided engineering
- software computer-aided engineering
- electronic computer-aided engineering
- engineering management
- laboratory automation
- microprocessor-based design

FACTORY AUTOMATION

- production engineering
- automation control
- facilities monitoring
- material handling
- machine control
- process control
- computer-aided testing

Computer applications in the four major areas of large companies can be linked with the HP Manufacturer's Productivity Network.

working efforts in the medical and analytical fields.

Ben Holmes, general manager of the Medical Products Group, sees terminal-intensive systems as a way to maintain quality health care and improve hospital productivity by substituting capital for labor. Lew

Platt, general manager of the Analytical Instrument Group, explains that a network for people who use analytical chemistry in their labs can tie together six key activity areas—from sample handling to data interpretation.



"Our goal is to develop working partnerships, and relationships of that sort take time to mature."

it can be a little intimidating the first time," says John Hughes, district manager for major account activity in HP's St. Louis sales office. "Although selling of the actual product is done at a lower level, the approval of a concept like MPN requires the OK of top officers like the controller, vice president of operations and even the president."

It's one thing to hear about a grand concept like MPN and another thing to see it in action. Thanks to a new series of HP-sponsored seminars, these key executives get a chance to see this company's MPN successes first-hand (see accompanying story). The seminars, held at HP's corporate offices in Palo Alto and computer manufacturing facilities in Cupertino, offer an inside peek at HP's position in such hot fields as office automation, factory management systems, personal computers and computer-aided engineering systems.

The dialogue continues when HP executives visit customer sites. "You can't overestimate the importance of such a visit," says John. "An executive visit can really seal the envelope on a partnership. It reinforces the meaning of the entire major account program."

Even though a customer's top executives have been exposed to the computer solutions available through MPN, things usually don't happen overnight.

"It's pretty obvious that it takes time to make significant progress. Our major account activity at Monsanto took almost three years to develop. But the team hung in there regardless, through thick and thin," says John.

"What we have to do, though, is deliver. Once we've sold someone on the concept and identified a specific project where the concept can be applied, we must install the system and keep it successful.

"We're really talking about customer satisfaction, which has always been one of HP's strongest suits," explains John. "It's the total opposite of hit-and-run sales tactics. Customers can see, through our systems engineering and customer engineering operations, that they can count on us from now on."

"The strength we offer customers is a team that understands their needs," says Jerry.

One of HP's largest teams calls on the

"An executive visit can really seal the envelope on a partnership. It serves to reinforce the meaning of the entire major account program."

various branches of General Electric Company. The account team received special recognition in 1982 from the Computer Marketing Group for work on 15 strategic GE projects, each involving multiple systems. At the hub of the activity is the team which calls on GE's corporate headquarters in Bridgeport, Connecticut.

"An important part of the headquarters team's responsibility is to focus its sales and marketing energies on applications that can leverage business at several remote buying locations," says Ed Oakley, manager of the major account team for GE. "The role of the major account manager is to determine where and how we should focus our company's resources to optimize our strategic position within the account and to get the customer's top executives involved with HP."

To provide one communication link between the HP sales reps (in more than 25 HP districts) and the GE headquarters team, Mike Cohn and John Wood, who coordinate HP's technical and commercial computer programs for GE, compile a monthly newsletter. The collection of memos, reports and ideas puts all team members on the same wavelength and brings them up to date on events from across the continent.

The team also stages product training sessions for GE contacts throughout North America.

Although the major account program started in the U.S., "we are paying an increasing amount of attention to our activities in Europe and Icon in 1983," says Jerry.

Last year in Japan, for example, YHP increased its major account sales 30 percent over 1981 levels. With 130 of *Fortune* magazine's top 500 international companies headquartered in Japan, a similar focus is expected in 1983.

Throughout the world, major account teams build upon the strengths of individual computer sales reps. They have a few characteristics that set them apart from the other members of the computer sales force. "We look for people who have more experience in business and exposure to corporate politics, for example," says John. "Of course they must have good presentation skills and a thorough understanding of the fundamentals of selling. They must also be mature enough to realize that developing an account is a continuing effort."

As important as individual selling skills is the ability to function as a member of a team. "My role as manager is to serve as constant coach," says John, who also teaches "Selling at HP" classes throughout the Midwest Sales Region. "I work with teams to help them develop selling strategies and then watch as they come up with their individual tactics. It's rewarding to watch the dynamics of teamwork in action."

The financial rewards for major account sales reps are slightly different, too. The compensation system has

been changed to place more emphasis on team selling and yearly progress worldwide.

"But sales dollars alone don't tell us how well we're doing," says Jerry. "Our goal is to develop working partnerships, and relationships of that sort take time to mature."

John Hughes agrees, offering this proof of the program's initial successes. "In all the major accounts in my district, the customers that we've sold computers to simply don't change vendors." **M**



A roomful of HP 125 computers greets executives on the second day of their HP-sponsored seminar.

A LEARNING EXPERIENCE

Four times a year HP conducts special forums for key executives from a lot of large companies.

Discussions center on HP's own use of computers and the visiting executives are able to hold discussions with their HP counterparts. The typical two-day seminar starts with breakfast and an opening address from HP's president, John Young. Other HP executives involved include Paul Ely, executive vice president of the Computer Groups; Chuck House, director of HP Labs' Corporate Engineering; and Joel Birnbaum, director of the HPL's Computer Research Center.

Tours conducted by manufacturing, engineering and financial managers at HP divisions in Cupertino show many applications in action—real-world evidence of HP efforts.

To have some fun, the visitors roll up their sleeves for an hour of hands-on use of HP personal computers. This low-key session with the nitty-gritty of using an electronic

spread sheet turns out to be the highlight of the event.

"It's not product pitches or canned demos that make these seminars work," explains program manager Jerry Klemushin. "Instead it's the open discussions of how HP and other large firms are investing internally to use the new computing technology."

CLOSEUP

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



A CAPITAL IDEA

Hewlett-Packard's name often gets a lot of play on the business pages of local newspapers. But rarely does the company show up in elementary school grammar and composition books.

But in a workbook written by James Chapman, HP appears on the very first page as students learn the capitalization rule.

"In each sentence, circle each letter that should be capitalized," the book directs.

"12. We recently purchased a hewlett-packard calculator."

How many of you circled both the "H" and the "P"? Good. You may go on to Lesson Two.



A FIRSTHAND LOOK

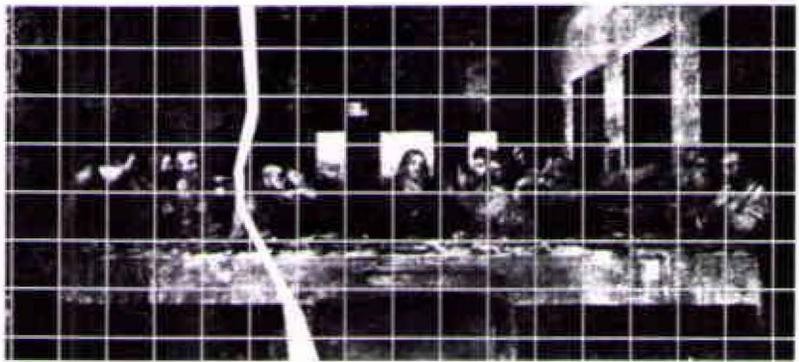
Andover Division has taken a cue from the medical profession by establishing "mini" clinical internships for some employees who design, market or manufacture the division's products.

The one-week internships have received high marks both from HP participants and the staffers at Lahey Clinic Medical Center in Burlington, Massachusetts, where the interns observe clinical procedures and hospital departments' operations.

"We wanted our employees to have a firsthand understanding of the needs of the users of our equipment," explains HP's Mark Low, the program coordinator.

Here Lahey's Dr. Charles Naggar conducts an echocardiography exam under the eyes of HP's Candace Wyman, Steve Leavitt and John Lape. The "patient" is Lahey employee Donna Ales.

"It was an eye-opening experience," recalls Steve, a hardware development engineer. "It was invaluable to see the actual environment in which our equipment is used."



RESTORING A PAINTING BY THE NUMBERS

For centuries millions of people have viewed Leonardo da Vinci's "The Last Supper" on the wall of the refectory of Santa Maria delle Grazie in Milan. With the help of an HP data acquisition system, the fragile fresco will be around for centuries to come.

The painting is on an unstable wall suffering from traffic vibrations and years of neglect. A major restoration effort of both building and masterpiece is now underway. During the work, HP instruments connected to an HP 75 computer measure the static and dynamic stress factors on the wall. The system will take readings every six hours during the 18-month restoration project.

The HP 3421A data acquisition and control system being used was designed by the Loveland Instrument Division.



SQUASHED!

Santa Rosa's Steve May and Glenn McCarthy weren't ready for the intense competition they met last October at the Sonoma County Harvest Fair.

After qualifying by completing the fair's 10-kilometer run, Steve and Glenn took part in the preliminaries of the World Championship Grape Stomp. The pair practiced their footwork for three minutes in a giant wooden tub filled with 20 pounds of grapes and squeezed out six other teams for the right to compete in the finals.

In the five-minute championship (with 30 pounds of grapes), the defending world champions walked away with the trophy—a giant ceramic foot stained with grape juice. Was it a close race? "No," says Steve matter-of-factly. "We got stomped."



JOANNE ENGELHARDT

ROW, ROW, ROW YOUR BOAT

Every night Nancy Koelper leaves the HP Honolulu sales office for some fast paddling at the Kailua Canoe Club. For the past five years, she's spent the canoeing season (April to August) practicing her stroke. "Sixty-six to 68 strokes per minute is normal, but we've done 72 strokes a minute in a race," the HP secretary explains.

To keep herself in shape from head to toe for such activity, Nancy began lifting weights (to build up arm and shoulder muscles) and running (for leg muscles).

"I love it. You get caught up in the race and just paddle like crazy for about two minutes. Although our regular race is a quarter-mile sprint, we do one long-distance race a year. I didn't like the last six-miler because we got beyond the reef and our canoe huli (flipped)."

The bottom line? Nancy's canoe crew has twice won the state championship. "I guess our efforts paid off," she smiles.

JOURNAL



ARVID DANIELSON

Thirty-three-plus years of *Hewlett-Packard Journals* stack up pretty impressively. Dick Dolan has been associated with the magazine for half of its history, first as associate editor, then managing editor and, since 1980, as editor.

You'll never read a story that begins "Once upon a time..." there. Nor will you find much to interest you if your taste runs to romance or Agatha Christie novels.

For all its no-nonsense approach, though, the venerable *Hewlett-Packard Journal* has an estimated 400,000 loyal readers and is widely regarded as an informative, credible source of technical knowledge.

If you're not familiar with the *HP Journal*, it's probably because you're not in the engineering end of the company's business. Engineers like Dan Battazzo of Boise Division read the *Journal* avidly each month "to see what products have been introduced that are of interest to me in my field. I'm a mechanical engineer, so I rarely read articles about medical or analytical products. I'd say I read about a fourth of the articles thoroughly."

That's typical of the way most readers respond. A year ago a three-page readership survey was inserted in an issue. Slightly more than four percent of readers returned it, and *Journal* editor Dick Dolan found the tabulated responses enlightening.

"An increasing percentage of our readers are computer oriented, so our response has been to increase our coverage of HP applications software," he explains. Technically, the *Journal* compared favorably with such influential trade journals as *Electronics* and *Electronic Design* and with respected research publications like the *IBM Journal* and the *Bell System Technical Journal*.

Now midway through its 34th year of publication, the *HP Journal* has been the consistent chronicler of the company's technical accomplishments. The premier issue in 1949 was only four pages and introduced the company's then-new 460A wide-band amplifier.

Why is the *Journal* so well received by HP engineers and other technical people throughout the world?

The most likely answer is that every article is written by the same HP engineers and scientists who develop the

featured products and technology.

Once the basic information about a product or project is put on paper by the technical staff, it's up to editor Dick Dolan and associate editor Ken Shaw to make the information understandable to the *Journal's* audience.

"Our authors and editors must walk a tightrope between making the information technical enough to hold the interest of engineers, yet simple enough that all our readers can understand it," says Dick.

This is not easy, given the fact that the *Journal* has a very diverse readership ranging from small business computer customers to the department heads of graduate engineering schools.

The *Journal's* worldwide readership presents other "challenges." Current circulation figures show that 70,000 copies are printed and distributed in Europe, and another 12,000 are sent to people in HP's Intercon countries.

From time to time someone suggests that the *Journal* be published in multi-language editions. While it is a goal worth pursuing, Dick feels it's nearly impossible to translate the *Journal's* technical material in both a timely and accurate manner.

Dick has a rash of admiring letters from Australia to Alaska. Typical is one from a Melbourne telecommunications manager who lauded the *Journal* for being "a first-class publication which is both informative and readable. It's rare indeed nowadays to be able to open a journal and find that even the subjects you're not involved in are interesting and hold the reader's attention. Then again, maybe one should expect no less from a company with a reputation for producing the best electronics equipment in the world."

The *Journal* staff recently began production of a hardback book which will highlight 32 HP products that, in retrospect, have made some significant technical contribution.

Roberto Albanesi, country manager for HP Italy in Milan, gets the credit for suggesting such a book. "We decided it was a good idea because the book, besides chronicling HP's technical milestones, can also be used for recruiting purposes or be given to customers as a memento or used as a technical reference," explains Dick.



The 120,000 copies of the *HP Journal* printed in the United States come off this massive press in Seattle, Washington. HP's Arvid Danielson, left, checks the final proof each month before the *Journal* is printed. Bud Hjorth, of the printing company, provides a second set of eyes.

So how do you figure out *which* products to include (from among hundreds that were considered)? Dick invited 20 veteran HP people to submit their suggestions. Some sent in two or three ideas, some sent dozens.

"I tallied all the suggestions and came up with about 30 that were the most frequently mentioned. Then I submitted the list to Bill Hewlett. He asked Barney Oliver (who retired as HP's vice president of research and development in 1981) to go over the list. Barney took off a few and added a few. Bill made the final pick and we ended up with 32."

(Bill, incidentally, is writing the introductory chapter, and his name will

be printed on the binding as the author.)

What made the finals? The RC (resistance capacitance) oscillator that started the company is a natural. So are the HP 35 calculator, the 9100A personal desktop computer and the 524A frequency counter, first introduced in 1951. Others that made the list include the 8551A microwave spectrum analyzer, the HP-IB, LEDs (light-emitting diodes) and the "flying clock"—a portable cesium-beam standard.

A knowledgeable follower of HP's technical advances might notice that few recent products made the list. Dick's explanation is that it takes a while before you know whether a product is "significant."

"Twenty-twenty hindsight gives you some perspective," he explains. "In a few years you would probably have more recent products on the list."

It's not very easy to get an article in the *Journal*, according to Dick. "Years ago we had to hunt around for material, but lately we seem to have an abundance. We've already been offered enough articles to carry us through 1983."

Some divisions make a point of contacting the *Journal* staff about their new product developments. Others which are not so aggressive have to be courted. Dick says he also tries to keep up on what's going on in HP Labs "though we have to be careful not to give away the store."

He recognizes that lately the *Journal* is producing more one-product issues. That's because complex projects require a "package of articles" to explain them. In 1982, for example, it took five stories to cover the 7470 graphics plotter, while the 5180 waveform recorder took an entire issue.

"We try to shorten some of these single-subject issues, but it's not easy," Dick explains. "Short articles have become like rare jewels."

Recently Dick and Ken came to the conclusion that some of HP's younger engineers—particularly marketing engineers—were unaware of the *Journal*.

JOURNAL

"If they did know about it, they thought of it as an internal publication for a small, U.S. audience," says Ken.

"We think marketing people can find some real uses for the *Journal*," Ken says. "For instance, showing a potential customer the *Journal* article that tells about the product may clinch a sale. And if a marketing department is aware of the *Journal*, it can motivate local engineers to write articles about their projects."

Because of its large press run, the *Journal* has a relatively low cost per copy: 36 cents. That breaks down to 25 cents for production costs and 11 cents for bulk mailing. Salaries up the total another seven cents to about 43 cents per copy. Since no advertising is accepted in the publication, the *Journal's* total yearly budget is \$1.5 million.

A typical *Journal* issue will include a column summarizing the issue by Dick Dolan, and four or five articles. Issues vary between 24 and 40 pages, depending on the length of the articles.

The brief biographies about the authors of each article have been a *Journal* staple for many years. In fact, some engineers find those bios the most interesting part of the magazine. Although Bob Holland of HP Labs says he reads most of every issue (and saves them), those mini-biographies are what he likes the most. "I enjoy reading about the engineers I know or have come in contact with," the five-year employee explains. "Of course I also like to see what kinds of products are coming out."

Bob feels the *Journal* has just about the right amount of technical flavor to keep engineers interested as much as those with a less technical background. Dick admits it's not an easy task.

"There are times when I have to ask the authors for a further explanation because I can't understand it," says the editor (who has a graduate degree in

electrical engineering). "I feel if I can't figure it out, some of our readers won't be able to, either."

Journal authors aren't paid for their efforts. Their only reward is the modest "glory" of being in the publication.

But Dick relates that occasionally a *Journal* author gets an unexpected "bonus" from publication of an article. Art Wilson, a design engineer at San Diego Division, was featured in last December's issue. His biographical note included the fact that Art enjoys restoring antique automobiles, his current project being a 1909 two-cylinder Maxwell. Before long, a reader contacted Art to let him know he owned a Maxwell which Art could use for parts.

But the pièce de résistance has to be the reaction Christina Szeto received to her biographical statement that her dream was to live in Europe for a year. "I've been overwhelmed," says the Santa Clara Division development engineer. "Three people have contacted me from Europe—one each from Germany, France and Norway—to see if I was serious about wanting to live in Europe. I am—someday—but right now I have other priorities.

"What I was most surprised about was the fact that the *HP Journal* is so widely read around the world. It renewed my respect for the *Journal* and for HP as well." **M**

HELP WANTED: EDITOR

No, Dick Dolan isn't retiring as editor of the *HP Journal*. Even after 17 years of involvement on the magazine's staff, Dick still finds a lot of satisfaction in his job. But the monthly grind is taking its toll on both Dick and associate editor Ken Shaw.

"We're putting out bigger issues now, so we feel we'll be needing a third editor very soon," Dick says.

What kind of qualities does an *HP Journal* editor need? Ah, there's the rub, says Dick. "It's nearly impossible to find someone with all the qualifications we'd like." Such as: an M.S. or Ph.D. in electronic engineering or computer science; some hardware and software design experience; solid writing ability; and "someone ready for a career change."

Dick isn't quite ready to handle an avalanche of applications just yet, but he's hoping some qualified HP people will start thinking about the idea. "When we get ready we'll write a job requisition describing the job in more detail." In the meantime, if you're too curious to wait, drop Dick a note in care of the *Journal*.

JOHN YOUNG

HP's president plays a leading role in the Computer Groups' major account program.

The shifting product mix within Hewlett-Packard to more and more computer sales, now slightly more than one-half of the total, has had a broad influence on many sides of our business. Perhaps the most complex changes stem from the many levels of relationships required to serve large customers. That story, describing our major account program, starts on page 14.

In much of our instrument product line our field engineers and the customer's design engineers can define the problem and work out a solution between themselves. Contrast this with a major corporation making a decision on which manufacturing-control system to buy for all their divisions. The system must interface with existing computers and requires a very large investment; if the system fails, it could halt the entire business. So it's clear that a far more comprehensive vendor selection takes place and the on-going support, while not different in principle, is of a far different kind.

What's constant in the sales process is the need for the HP sales representative to convince the real end users that on a day-to-day basis the HP solution is the best one for their needs. What's different is the additional need to persuade the company's functional management, computer systems director, many division managers, finance people, and top management. They must all be convinced that HP not only has the best solution but that our long-term strategy fits, we're financially stable and that we have answers for support, training and a host of other issues.

The idea of a working partnership with major customers is an apt characterization. Consequently we find new activities going on that were not necessary just a few years ago. One example is the large number of high-level customers that visit not only sales offices but our main division locations as well. We have opened sales centers in key manufacturing locations such as Cupertino, California, and Fort Collins, Colorado. With so much of our instrument, medical and analytical business taking on a systems character as well, we'll see this happening in more and more locations.

Many of us in company management



Sweden's Prince Bertil listens to John Young at the opening of HP's new head offices in Kista, a suburb of Stockholm.

now become directly involved in the sales process. Region, group and division managers, corporate staff and executive committee members have extensive direct customer contact. During a recent trip in the Eastern and Midwestern parts of the United States, I called on the heads of six major corporations to review with them HP's problem-solving capabilities. In fact, with our move to have our divisions and sales locations serve as showcases for our manufacturing and office products, a great many of you will be seeing customers and explaining how we use these products in our work.

Another change from past practices is that we now brief major accounts about our future product plans. It's been our policy, and a good one, that we don't discuss new products until they have completed the development cycle and are ready for production. When major customers spend tens—if not hundreds—of millions of dollars on HP products, support, software, training and other costs, they simply have to know where our business plans are leading us during the next one to three years. We've had to work out ways to meet this need, yet not create false expectations about new-product introduction dates, prices and related issues. What we learn about our customers' plans during these briefings helps us shape our program to be most helpful to them over time.

One might ask, "If selling to major accounts requires so much effort, is it worth it?" The answer is "yes" for two

good reasons. First, the companies in *Fortune* magazine's list of the 500 largest industrial corporations in America comprise well over half of the total manufacturing output of the U.S., more than all of the nation's other hundreds of thousands of manufacturing companies combined. Their scale demands that these companies be addressed.

The second reason is that once we have established a business relationship with a major account, we can effectively transport standard solutions across many divisions in many countries. At this point the sales process becomes quite efficient.

We have come a long way in the last few years in our major account program. It's a demanding test of our sales, support, product performance and quality skills, and I'm proud of what we've been able to accomplish. However well we've done, these relationships can never be taken for granted. We must strive continuously to earn partnership status year after year. We have built a strong base of major accounts to which new companies are added each year, ensuring that this will be a growing part of HP's future sales program.

NEWSCLIPS

Recaps the newsworthy events, changes and achievements within HP.

COMPUTER GROUPS

A new Computer Groups reorganization was announced February 1. A newly created Business Development Group under General Manager Ed McCracken will serve as center for strategic marketing and coordinated business development. A Computer Products Group under Vice President Doug Chance brings together CPU and operating-system architectures; an Information Products Group under General Manager Dick Hackborn combines system peripherals, data communication and network resources. A new Personal Computer Group had been created in January, with Cyril Yansouni as group general manager. The Computer Marketing Group continues under VP Jim Arthur.

OTHER CHART CHANGES

Bill Doolittle will retire April 30 as senior vice president—International. Succeeding him will be Dick Alberding, who becomes VP—International on that date. On February 1, Ben Holmes, general manager of the Waltham Division, replaced Alberding as GM of the Medical Products Group; Ron Rankin succeeds Holmes as division GM. . . . Frank Carrubba is the new director of the Design Technology Laboratory in HP Labs' Computer Research Center.

HIGH VISIBILITY

Hewlett-Packard ranks close behind IBM as the "most admired" among 200 of the largest U.S. corporations, according to a *Fortune* survey of executives, outside directors and financial analysts reported by the magazine in its 1/10/83 issue. . . . New in marketing manager roles: Chuck Acken to European marketing manager for the Microwave and Communications Group, Rick Baker to the Personal Computer

Division, Terry Eastham to the Roseville Terminals Division, David Sohm to the Manufacturing Productivity Division, Norm Alexander to combined responsibilities for marketing and software development for the Guadalajara Computer Operation. . . . HP Austria has been awarded the coat of arms of the Republic of Austria (shown here) for the company's contributions to the Austrian economy. The presentation was made by the Minister of Commerce, Dr. Josef Staribacher.



NOTEWORTHY

The Spokane Division has moved into the first permanent facility to be built on its Liberty Lake, Washington, site. . . . HP is one of 13 electronics companies which have endorsed a new IEEE draft standard for local-area networks (LAN) that eventually will permit computers and office equipment—regardless of brand—to communicate with each other. . . . Harris Trust and Savings Bank in Chicago, Illinois, was appointed transfer agent for HP's common stock, replacing Crocker National Bank on November 13, 1982.

NOTABLES

Frederick E. Terman, emeritus director of Hewlett-Packard and early mentor of co-founders Bill Hewlett and Dave Packard, died December 19, 1982, at the age of 82 (see page 2). . . . Her Majesty Queen Elizabeth II and the Duke of Edinburgh visited HP's Cupertino site March 3 during a visit to the West Coast. . . . Prince Bertil of Sweden was an honored guest at the opening of the HP Sweden's newly constructed head offices in the Klisa suburb of Stockholm (see page 23).

NEW PRODUCTS

The newest color graphics terminal from the Roseville Terminals Division, the HP 2627A, sells for the low price of \$5,975 (U.S.). It features a high-resolution raster display, vector graphics, polygonal area fills and can generate hundreds of different colors. . . . Two recent Böblingen Instrument Division products—the HP 8180A data generator and HP 8182A data analyzer—form a digital analysis system that is efficient and easy to use at the bench. . . . From Colorado Telecom comes a new protocol analyzer, the HP 4955A, which makes it easy to examine "conversation" between various types of equipment in a data communications network and to pinpoint problem areas.

Digital designers now have a single, low-priced instrument for the testing, debugging and analysis of hardware and software: the HP 1630A/D logic analyzer from the Logic Systems Division. It adds performance analysis to sophisticated logic, state and timing analysis. The same division continues to add emulators to the HP 64000 logic-development system. Recent introductions include a user-definable emulator (64274S), a ROM emulator system (64272S), and additional support for Motorola microprocessors.

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