MEASURE

New ways to work

THE INSIDE STORIES

Page 8

Page 15

On the cover: Cheryl Marks (with an assist from her dog, Chastity) edits a document at home where she "telecommutes" to work 1 or 2 days a week. Photo by Walter Hodges/Liaison International.

Dr. Martin Luther King, Jr. stirred a multitude of people with his "I Have a Dream" speech. A phenomenon called the Beatles invaded the world. And singers Peter, Paul and Mary told us that the answer was "Blowin' in the Wind."

The year was 1963, a time of hope, change and new directions.

For the Hewlett-Packard Company, the challenge was how to communicate effectively with its exploding population—6,000 employees throughout the United States and in Canada, Europe and Japan!

Co-founders Bill Hewlett and Dave Packard—along with a one-person public-relations department by the name of Dave Kirby—decided on a new employee magazine, *MEASURE*, which began in July 1963.

"...the goal of *MEASURE*," wrote then-president Dave Packard, "(is) to serve as a regular, effective medium of communication among all our people.

"Like any responsible news and feature-article publication, the primary objective of *MEASURE* is to inform. But we also want the magazine to be interesting and entertaining."

MEASURE will celebrate its 30th birthday throughout 1993. We'll look at some of the pictures, stories and people that have made the magazine a special HP publication for three decades.—*Editor*
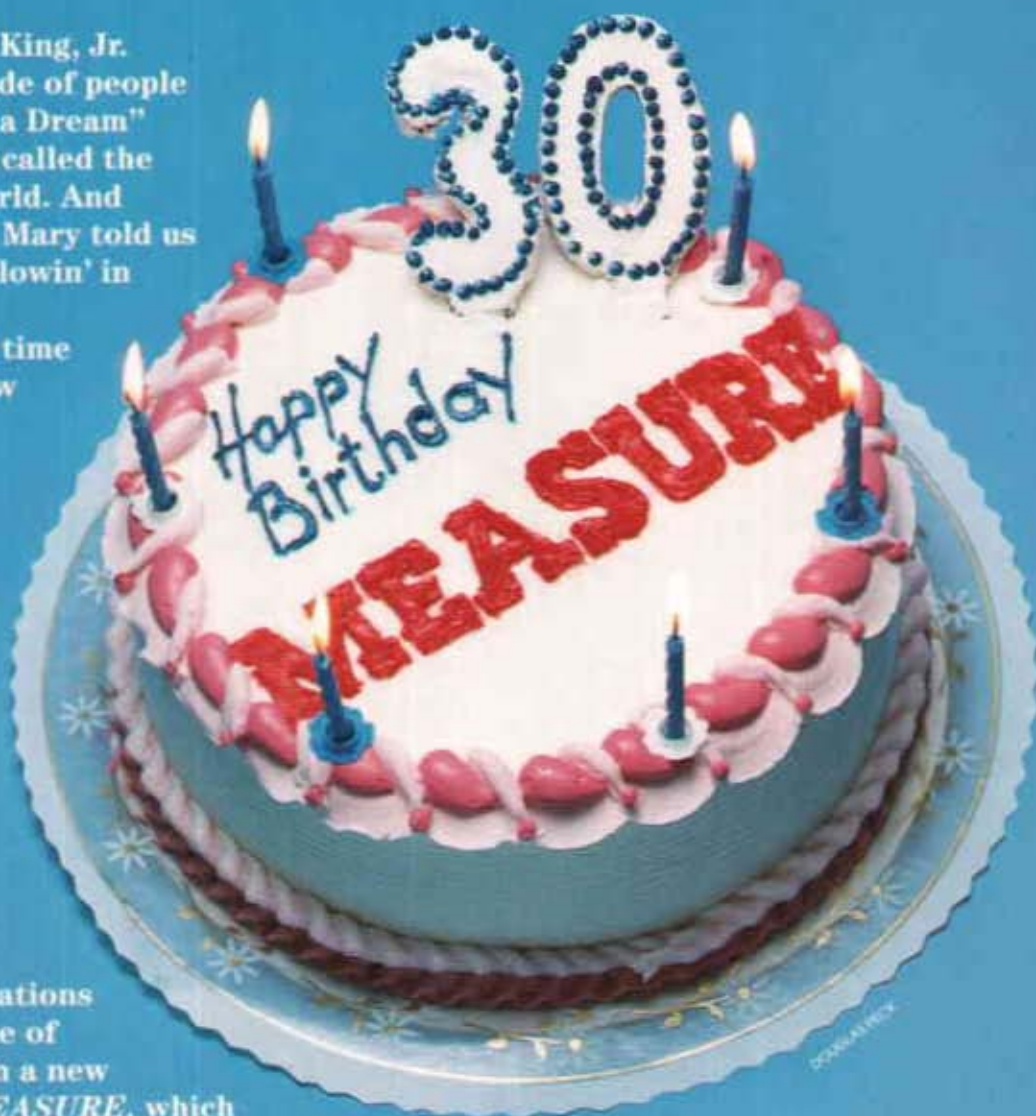
Are personnel and finance compatible? Bob Wayman, HP's top financial executive, discusses his unusual dual role.
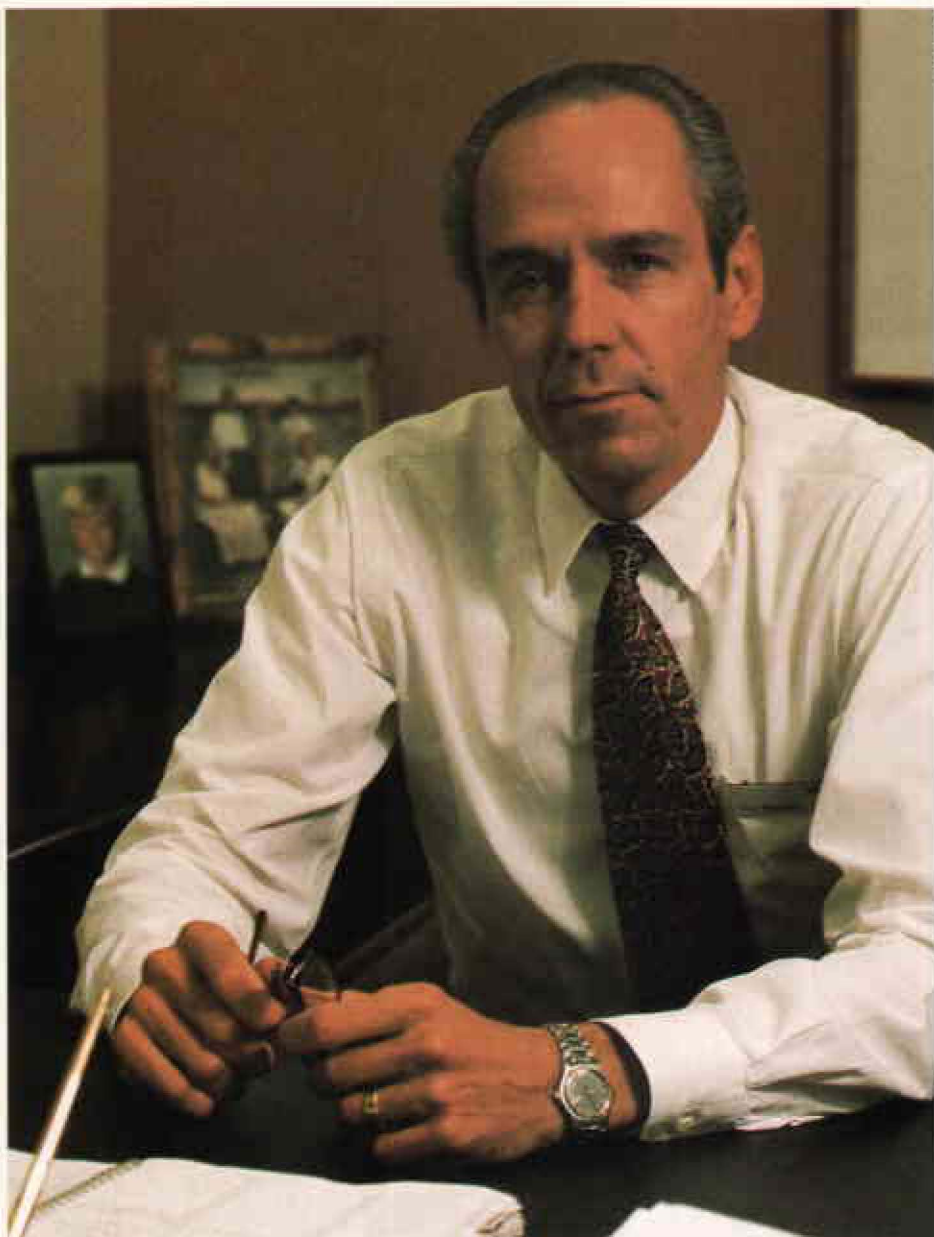
Bob Wayman sees financial performance and personnel issues as interrelated: "It's people who create the added value that generates profits."

It's not just the numbers

Finance—a world where the road to the bottom line is paved with hard numbers that tell an unambiguous story. Right? Executive Vice President Bob Wayman's job would be a lot easier if that were true. But it's not, and his efforts to articulate HP's financial results just start with the numbers.

Bob's responsibilities extend beyond finance and include HP's information-systems and real-estate functions. He recently added responsibility for several departments at Corporate—personnel, development, Corporate Affairs and legal—to his role as chief financial officer.

In addition, he currently heads up the Personnel Committee (one of five committees of the Management Council), which monitors and makes decisions on pay, benefits, staffing, affirmative action and issues related to employee morale and motivation.

Bob joined HP in 1969, starting out in cost accounting at Loveland, Colorado. In November 1992, the 47-year-old Chicago native shared his perspective on 1992 and the challenges ahead with Steve Beitler, HP's manager of investor communications.

Q: How would you rate HP's financial results in '92?

A: My assessment is probably like that of many HP people. If we had had four quarters like the first two, I'd be very happy. If the whole year had been like the last two quarters, I'd be pretty disappointed. As it is, I'm somewhere in the middle.

We had a decent year overall, and we did set new records for revenue and orders. Our revenue growth, 13 percent, was very good in today's environment. Our operating expenses rose by 8 percent, but we also had a big increase in cost of sales, so we didn't improve our profitability.

The second half was a lot weaker than the first, but not because of any real mistakes on our part. What hurt us was that we didn't reduce our operating-expense ratios as quickly as our cost-of-sales ratios increased. Many factors can put pressure on cost of sales, including the costs of materials and manufacturing, pricing, discounts and the mix of products we sell.

The forces that have been driving up cost of sales—in particular, intense price competition in many businesses—aren't going away. So better profits have to come from keeping the rate of operating-expense growth well below the rate of revenue growth.

Over the last few years we've done fairly well at keeping operating-expense growth at good levels. We're also doing a lot to keep cost of sales under control: some examples are consolidations and improved processes in manufacturing, as well as more cost-effective procurement of goods and services.

Q: What are the biggest challenges HP faces in '93?

A: I think there are three. One is growth. Our 13 percent rise in revenue in '92 is pretty good; a stronger tailwind from the economy would help, but there's little reason to count on that in '93. We need to stay focused on giving customers the best possible products and services so we're in position to get more than our share of the business that develops.

Another is profit improvement. Our earnings from operations were up 16 percent, without the fourth-quarter special charges or the one-time impact of an accounting change I'll talk about in a bit. Most of our competitors would love to have done that well, but it's really just an acceptable performance in my view.

Over the last few years, people at HP have done a great job of achieving business goals with fewer resources; it's important that we all stay focused on key priorities and take work out of the system wherever possible.

Better profit balance is the third challenge. We're fortunate to have tremendous diversity in products and in where we do business. But reaching our overall goals is very tough when there's such variation in performance among businesses. Obviously, we can't control everything that affects growth in the short term. Some businesses are in markets where opportunities for strong short-term growth just aren't there, such as those parts of test and measurement that sell into a shrinking aerospace/defense marketplace.

Q: HP announced another voluntary-severance-incentive (VSI) program and other expense-control actions in October. What will the impact of those programs be?

A: First, I have to say that the decision to offer VSI wasn't made lightly or without real concern for employees. Last spring, after two great quarters, most of us expected that redeployment and ongoing attrition, along with the 1991 VSI and related steps, had gotten our expenses where they needed to be.

But in the third quarter it became clear that what had looked like the ups and downs of the business cycle were something more. We were seeing the impact of further structural changes and intensifying competition. VSI is one response to these changes.

Our VSI program should help us get our expense structures in line. Of course, it lowered earnings in the

Wayman

Bob discusses employee issues with Pete Peterson (left), V.P. of Personnel, and John Lynch, workforce diversity manager.

Bob meets with Corporate Financial Reporting team members (from left) Carol Leininger, Dotty Hayes and Gene Zamiska.

fourth quarter, but I strongly believe we did the right thing.

Q: Combining finance and personnel responsibilities is unusual, and some people might think they don't go together or are even contradictory. Do you agree?

A: First, I should mention that even though I currently head the Personnel Committee, Pete Peterson is vice president of Personnel; he has overall responsibility for that function and he continues to serve on the Management Staff.

It's also important to understand the role of the Personnel Committee, which is to apply management resources to personnel issues. The members are general managers and others who focus on the need for all managers to take responsibility for these issues.

With HP's culture and values, I see my roles as complementary. The key is HP's fundamental philosophy of how we provide value to customers and how we succeed for shareholders and employees. It's people who create the added value that generates profits, which satisfy shareholders and, in turn, provide what's important to those people—pay and benefits certainly, as well as professional development and an environment within which they can do meaningful work. So I see financial performance and personnel issues as closely related.

Q: I understand that the Personnel Committee recently reviewed the latest round of employee surveys. What did they show?

A: Surveys are done on an ongoing basis; we're getting almost continuous feedback about what's on employees' minds. The Personnel Committee had been working with general managers to get them deeply involved in the survey process and help us identify companywide issues. We developed a list of key issues and set up two task forces, each made up of a number of general managers. Let me talk about each.

Pay and performance show up consistently in the surveys. There's a lot of frustration—and some misunderstanding—around those issues. So one task force is looking at pay and ranking. These G.M.s are working to find out what's at the root of these frustrations. Is it the amounts we pay? Or the way we evaluate performance? Is it that people don't understand how we determine pay? We do know that how we match pay to performance is a real issue, and this becomes critical

as we go more and more to self-managed work teams.

The second task force is looking at other companywide issues. A lot of employees feel frustrated when they believe that people, including managers, aren't held accountable for their results. Beyond that there's a fairly widespread perception that what we know as the HP way is changing. We have some work to do to make sure the basic values that make up the HP way are understood and reinforced in action. Related to this is the concern that we haven't done all we should to develop our people. I think redeployment and reorganizations have probably resulted in less time and energy devoted to development.

In addition, many employees don't feel very good about their benefits. Those of us who review these matters feel that our benefit programs put HP among the leaders. But the perception is often different, and we're taking a fresh look.

We'll discuss the work of both groups at the general managers' meeting in mid-January and at other management meetings. From there we'll be able to work on and report what the action plans are.

Q: In September, HP announced a change in how it would account for retiree medical benefits. Why did the company do this and what does it mean?

A: One reason was a new rule that requires companies to recognize the costs of retiree medi-

During a recent vacation, Bob poses with his daughters (from left) Kirsten, Jennifer and Allison, his wife, Susan, and son Clay. A second son, Grant, isn't pictured.

cal benefits based upon the age and service of their employees. In the past, we could account for these as we paid out the money. I think the new standard is better accounting, and it has already led us to look more closely at retiree medical costs.

And that's really the second reason; medical costs are rising dramatically. The new rule motivated us to look at what our real liability was for these benefits and to ask what was reasonable for the company to pay. We've announced changes in our medical plan that, starting in 1994, will affect both retirees and current employees. We're still working out the details of the changes, and both groups will hear more about them this year. The 1994 start date gives us time to work out the specifics and for employees to adjust their financial plans.

Q: In 1993 Lew Platt became HP's president. Do you think we'll see major changes as a result?

A: I think there will be mostly continuity; there won't be radical shifts in strategy or direction. A smooth transition was a key goal of the succession process. Lew is a very energetic, dedicated and thoughtful person. He has broad experience leading several HP businesses, and he is steeped in HP's culture and style.

I think he'll be able to focus on the short term without losing sight of long-term issues. He'll take the concerns of HP's people into account as he and the management team address difficult issues. And while he values HP's emphasis on consensus, he also recognizes the importance of truly autonomous business units. In the extremely challenging environment we do business in, I think Lew's ability to draw on the best of HP's past will help the company compete in the future. **M**

Will HP remain true to itself?

A noted author and long-time HP watcher takes a candid look at the company.

By Milton Moskowitz

I first started writing about Hewlett-Packard in 1971 when I moved to San Francisco from New York City. Although I had been writing about business for more than 10 years and wrote a three-times-a-week column that ran in two dozen newspapers, I confess that HP was an unknown entity to me. I wrote mainly about companies which had major consumer brand names.

As I got to know HP, it quickly became clear to me that the company marched to its own drummer. For example, there was no question that HP, a company devoted to measurement, knew how to make a calculator. But they were not interested in making a $9.95 calculator that they would then have to market to a mass audience.

Advertising? That was almost anathema at Hewlett-Packard. And $9.95? Whoever heard of an HP product priced that low? The perfect product for HP was the programmable calculator, or electronic slide rule, which they introduced in 1972 and sold at the princely price of $395. Even then, some HP people were leery of this product, feeling that it was too much of a toy.

So, HP struck me as an engineer's company selling to other engineers. Their attitude was: "Make a good
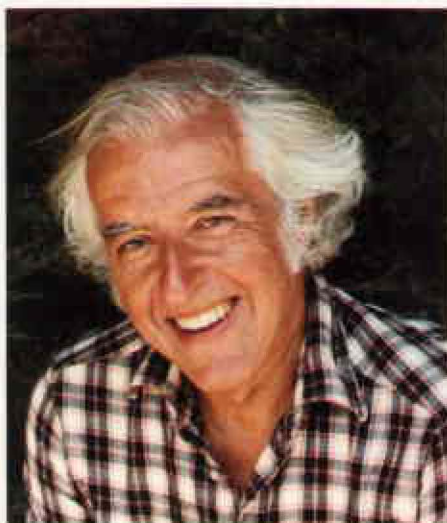
Milton Moskowitz

product and people will find us; we won't have to find them." A little of that elitism lingers today. HP is not always comfortable hawking its wares.

In the early 1980s, with two other writers in San Francisco, I embarked on the research for a book that was eventually called, when it was published in 1984, *The 100 Best Companies to Work for in America*. It marked the first effort to look at companies through the eyes of their employees.

By that time, I had visited HP a half-dozen times, and was impressed enough by what I had seen there that when we set out to visit companies to evaluate them as workplaces, Hewlett-Packard was the first company we went to. I wrote a draft of a profile that became a model for the entire book.

There were many reasons why HP was such a model: a friendly atmosphere, no time clocks, flexible hours, great profit-sharing plans, vacation retreats, a policy that looked to me like a no-layoff policy—and, most of all, people who seemed to enjoy getting up in the morning to come to work here. We were glad to have a model like HP as we went out to find the 100 best workplaces in America.

After the book was published, we received a lot of letters from employees, some of whom berated us for putting their companies on the roster, saying they didn't belong. (And indeed, six of them were dropped in the paperback edition which appeared in 1985.) However, not a single HP employee wrote to object to the inclusion of Hewlett-Packard.

During the 1980s HP became bigger and bigger (its employee force more than doubled during the decade), and we began to hear about the problems. A former female manager told us it wasn't easy for women to advance at HP. And then, after 1986, when Carol Townsend and I began to do an annual survey for *Working Mother*

...HP was no longer the easygoing patriarch of Silicon Valley.

magazine, tracking the best companies in the land for working mothers, it was obvious to us that HP lagged behind others in this area. They were slow to expand family leaves, help employees with child-care choices, and support other benefits such as adoption aid and elder care referral. Those programs were eventually put into place, but HP didn't pioneer them.

We also got the sense that life at HP changed once it became embroiled in the highly competitive computer industry where they had to duke it out with oldtimers like IBM as well as newcomers like Sun Micro-systems. It appeared, from the reports we were receiving, that HP was no longer the easygoing patriarch of

So HP is not the same company it was when I first visited there in 1972...

Silicon Valley. The whip was being cracked. People with jobs branded as "excess" were being redeployed. Others were being offered incentives to retire early or go elsewhere. No more Mr. Nice Guy?

In the early 1990s, when we geared up to revise our book, HP was once again one of the first companies we visited. This time it was No. 5 on our visit list. Our first interviews took place in November 1991, five days after the *San Jose Mercury News* had flashed across its front page the screaming headline: "Can David Packard save H-P?" and seven months after the *Financial Times* of London had stated flatly that the "much vaunted 'HP way' had fallen by the wayside." I saw and felt the anxiety in my interviews with HP people, especially among oldtimers, who tendered comments like these: "Some of the caring has been lost." "The family atmosphere has changed." "We used to have more of a warm feeling about people." "We never see the top people in the company anymore."

However, I was impressed that no one, including the people who made the critical comments, felt that Hewlett-Packard was going to renege on the traditions of trust, fairness and respect for people that have been part of the fabric of the company. As I went around the room, I heard such comments as "I don't like a lot of the changes, but I'm still glad I work here." "I can't imagine working any-where else." "Other places don't develop you." "We have the feeling that HP is going to take care of us."

One issue we examined very closely was job security. In our origi-nal edition, we stated: "One of the unwritten policies at HP is never to lay off people." HP's public-relations department circled that sentence with the comment, "untrue." Yet, in one of our first interviews in Palo Alto, a veteran employee told us: "One thing unique about this company, we've never had a layoff." It says something about this company that even when management insists it does not have a no-layoff policy, employees have the feeling that they are not going to be dismissed summarily.

So HP is not the same company it was when I first visited there in 1972, nor is it the same company I visited 10

I saw and felt the anxiety in my interviews with HP people...

years ago in my first round of inter-views with employees. More often than not, size is a killer. And for the employee, I think HP is less accessi-ble today. Many other companies on

our original roster have also changed (we revisited all of them), and when we came up with our final list, 45 of them failed to make the cut for the

I hope HP will be strong enough to...resist short-term pressures...

new edition. Hewlett-Packard is not one of the 45.

When Doubleday publishes our book on January 22, 1993, it will still be called *The 100 Best Companies to Work for in America*, and the cast of characters will be quite different, but HP will still be one of the 100. Our bottom-line assessment was: "Just surviving in the computer industry is an accomplishment. HP did more than survive. It came through the flak with its reputation as a company that's both smart and humane intact."

Life is just tougher these days, and I hope HP will be strong enough to continue to resist short-term pres-sures that result in the sacrifice of the quality of day-to-day life in the work-place. In that way, it will remain true to itself. **M**

(Writer and author Milton Moskowitz lives in Mill Valley, California.—Editor)

New ways to work

By Betty Gerard

Self-managed work teams, alternative work schedules with 10- and 12-hour shifts, telecommuting and job-sharing are already a reality.

Undeniably, the shape of work has already changed for many Hewlett-Packard people as the company seeks new flexibility to compete in today's fierce business environment:

■ In Boise, Idaho, a production worker on a self-managed work team calculates how many people to schedule for the next week.

■ In San Diego, California, a team member's paycheck includes extra money because her team made its monthly goals on key business metrics.

■ In Corvallis, Oregon, a clean-room operator gets up at 4:30 a.m. so he can get to work by 6 a.m. for a 12-hour shift.

■ Beepers, telecommuting and job-sharing are a part of the work lives of other HP people.

Many of these variations are centered in the United States, where an 8-hour day, 5-day work week has long been considered standard. (That pattern is not the norm in many other countries, however. In some Asia Pacific countries, HP employees work another day or half day. In Europe, a shorter work week is common in France and Germany.)

"The issue for HP is really organizational capability," says Stu Winby, who heads the Factory of the Future group in the HP Product Processes organization.

"Rapid response to changing business conditions, the flexibility to execute faster, the ability to innovate —and even to fail occasionally—at a faster rate will be a competitive advantage for companies in the 1990s and beyond."

Stu's group encourages the self-managed work-team concept through a Work Innovation Network (WIN)

organized in 1989. Some 21 entities now have self-managed teams (also called high-performance teams) or are poised to start them. Most are in manufacturing, with a few in the field.

The first such teams were pioneered at HP in 1987 by the Lake Stevens (Washington) Instrument Division (LSID).

In a self-managed team, the supervisor's role changes to what has been called "the turfless supe": coaching the team to make its own decisions, based on clear guidelines and boundaries of authority. The supervisor (or "team leader") sees that the team gets the services and information needed to make intelligent business decisions.

Managing interdependencies— within a team, and between a team and other HP functions or external suppliers—becomes a key part of achieving success. Stu Winby sees the move toward teams as part of HP's larger organizational challenge to blend its classic functions into joint management of entire processes.

The Boise (Idaho) Printer Division (BPR), which is successfully coping with high demand for its products, uses self-managed teams in its "Formatter Factory," where more than 500 people are on 37 teams.

Skip Creighton manages BPR's state-of-the-art production arm. When the division began building boards four years ago, he was concerned that people might be subordinated to machinery, and he didn't want them to be "baby-sitting a robot." People from production helped design the factory operation.

Members of self-managed teams rotate such roles as scheduling and

Butch Hardeman, Tina Dains and Diego Hernandez, members of a work team in Boise, Idaho, confer about a business problem.

time cards; training; quality and safety procedures; and communication. There is a team representative on each of five technology councils.

Teams also interview and select new hires. "They have a real commitment to coaching and training these newcomers," Skip says.

To cope with the rush of orders and new products, the Formatter Factory operates seven days a week, with a variety of work schedules including 8-, 10- and 12-hour shifts.

"It still looks and feels a lot like what you see around HP but it's incredibly different," Skip says.

Vivian Wright, Formatter Factory transition and training manager, adds that she sees the new team-based work mode as a renewal and extension of some basic values of HP. "There's incredible magic when you eliminate the barriers to bring the hearts and minds of people to their work," she says.

The goal, in Vivian's opinion, is to build a learning organization that can redesign itself because "you're never done." It's like surfing: "You know that things don't calm down after each wave. They always keep coming."

Both BPR's Formatter Factory and San Diego, California, manufacturing

It's like surfing: "Things don't calm down after each wave."

have introduced their own pay system based on the team rather than the individual as the unit:

■ A team sets a goal for quality, cost and delivery metrics; if all goals are met or exceeded, every member

receives extra pay. (San Diego has three levels of pay if certain stretch goals are met.)

■ In addition, individual pay is based on certified skill levels and performing different team roles. People are paid for their cumulative knowledge, not just for their current assignment. It's appropriate, says Chris Elwell, San Diego work team program manager, "because by maintaining a broader, deeper set of skills, they are more flexible employees."

Both divisions have moved away from "ranking" individuals, although team members do evaluations of one another's performance to improve the team. This feedback is not tied to pay.

Every experiment related to pay must be approved by the Management Council's Personnel Committee.

While Pete Peterson, vice president of Personnel, thinks HP's present pay system works well, he welcomes such controlled experimentation. "That's

New ways

how we get many good ideas," he says. "Flexible hours started in Germany and became company practice."

Different skills are involved in the new team pay plan which starts February in the Eastern Sales Region's Park Ridge, New Jersey, office, but the principle of paying for skill and knowledge is the same. The GEM project, now in its third year, broke down departmental barriers in the administrative area. Customer-focused teams are cross-trained in such areas as support, order processing, sales finance and quotes.

Kathy Moore, GEM project manager, laughs, "A lot of people have said, 'I'm glad you're doing this first.' "

Similar cross-training is a feature of new self-directed work teams at the Business Operation Center in Toronto, Canada. Says center manager John Sedge, who has coordinated the project, "We want incredible depth and diversity of knowledge on each team."

Flexibility is also the reason the North American Distribution Organization's East Coast unit in Rockaway,

"A lot of people have said, 'I'm glad you're doing this first.' "

New Jersey, has created high-performance teams. Mike Hayes, who's helped develop teams since 1990, says, "We wanted to move beyond lip service to give responsibility to the people closest to the work."

The 29 employees are divided into three self-managed teams that set their own business fundamentals,
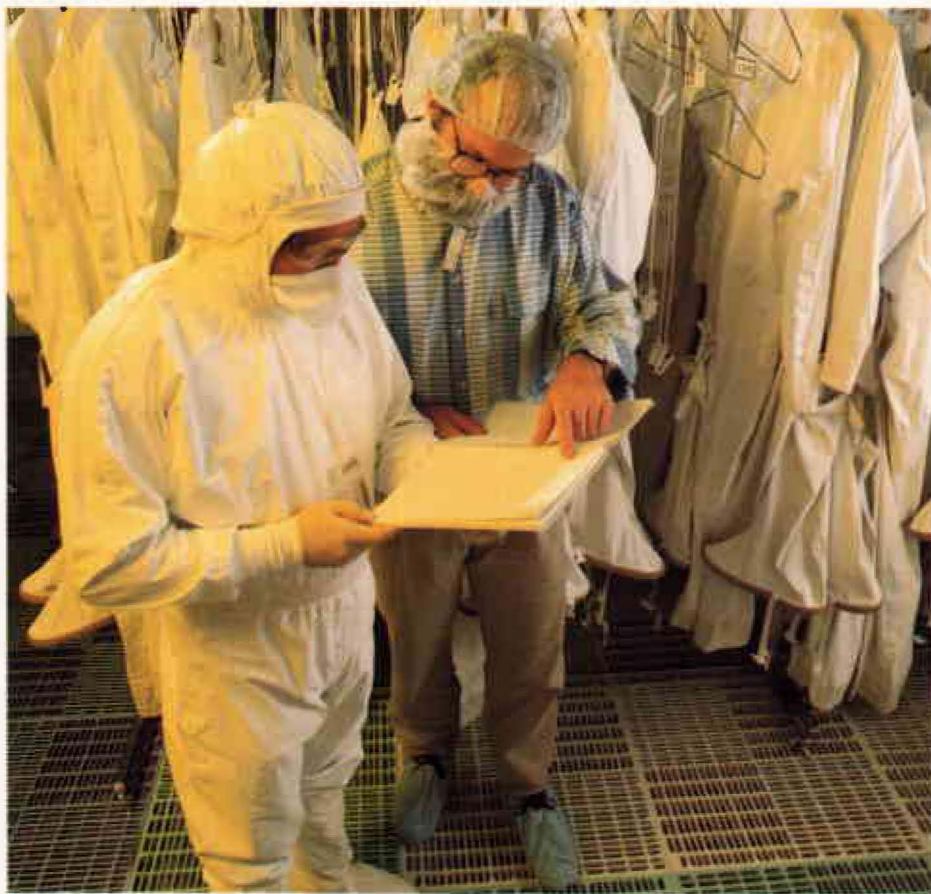
At ICBD's Corvallis, Oregon, fab, Randy Lanz and process supervisor Bruce Heys work a 6 a.m.-to-6:15 p.m. shift Tuesday to Thursday and every other Monday.

develop the metrics for monitoring the process and make necessary corrections. They have been able to ship a million pieces a month with a 99.9 percent error-free shipment record.

The Ink-jet Components Division in Corvallis, Oregon, has had self-directed work teams since 1991. Pete Sedlack, a fab transition specialist, was an early skeptic but has been won over. He points out that moving to teams is not done overnight: "It's a very slow process and it should be, so people have the full perspective of what they're getting into."

Feelings are more mixed about the Alternative Work Schedule (AWS), defined as work periods longer than eight hours (on day, swing or night shift) and a compressed work week of less than five days.

By last November, more than 2,100 HP people in the United States were on AWS schedules—a large number that might come as a surprise to others in the company.

AWS is a response to business imperatives. Divisions in Vancouver, Washington, and Boise are scrambling to keep up with a high volume of orders. Integrated Circuits Business Division (ICBD) labs have gone to 12-hour shifts for continuous operation of complex semiconductor equipment.

John McCormick of the ICBD unit in Corvallis headed the Circuit Technology Group task force that in 1988 began looking at the pros and cons of going to 12-hour shifts. A revolutionary concept for HP at the time, it required high-level approval. A pilot started in Corvallis in 1989—after employees had been polled to see if they were willing to make the change and asked for their shift preference. People work a 12-hour shift for three days one week, four days the next.

"In the beginning, our task force didn't take into consideration a

In Cupertino, California, Fara Brock and Tony Stieber each work a partial week. They share a job and one office—with two desks but one set of files and equipment.

number of things that were really important to people working unusual shifts: access by their families to the cafeteria on Saturday, for instance, or not getting to have an assembly or rally on night and weekend shifts," John says.

"We did weigh such home and family issues as child care and quality time at home, and the need to pick up a child from school. Public transportation is limited to daytime hours. There's an impact on one's social life and recreation, and it's hard to take classes. Fatigue is a concern. And not being able to go to church was an issue for some people on weekend schedules."

On the positive side, the changeover did result in some "incredible gains in productivity" from a business standpoint, John notes. People on weekend night shift can go to college full time during the day.

The task force has continued under the leadership of Tony Coleman,

group personnel manager, to resolve issues related to benefits and pay, and the need to tailor systems to handle

"We're breaking new ground at HP (with 10- and 12-hour shifts)."

these new schedules, which challenge old routines.

On the personal side, the main reason that Eric Hamrick transferred from ICBD's Fort Collins, Colorado, unit to the Vancouver Division was to get away from working 12-hour shifts. "It was hard for my body to get used to them, either on days or nights," Eric recalls. "I had difficulty sleeping and eating."

The Vancouver Division, where Eric is a shipping supervisor, has

adopted 10-hour shifts. It is now looking at how to put continuous operation into process, but no decision has yet been made.

Eric sees a need for improved support for AWS schedules in such areas as HP Desk availability and information-technology support. "Whether it's real or not, you perceive yourself as a second-class citizen."

There is general agreement that the rest of the company has indeed been slow to realize the extent of AWS and its implications. Sometimes the problem is semantic—even the "Thank You" day given everyone in 1992 raised the question what is "a day" if you're working a 10- or 12-hour shift? (The answer: 8 hours, for reason of parity throughout the company.)

Alan Marty, manager of ICBD's new R&D lab in Palo Alto, points out the need for HP to set policies and procedures "so people feel supported in this new environment."

"We're breaking new ground at HP," Alan says. "There are going to be times when business issues will say that working around the clock makes sense." HP will be successful with the AWS approach, he feels, "when our employees help define the schedules and the support services that meet their personal needs."

A lot of people "were very scared and leery of the 12-hour schedule," says Lillian Amarillas, who was on a planning team for the new lab. "But now that we're into it, they're enjoying their days off. It's not 100 percent good, but people are getting used to it."

AWS isn't the answer every time. On January 1, the Neely Sales Region's service center in Fullerton, California, ended a year-long experiment with a

New ways

Working at her Seattle, Washington, home on a telecommuting day, Cheryl Marks is in touch with her LSID office by computer, modem, e-mail and phone.

voluntary 10 x 4 schedule (10-hour days for 4 days).

Another scheduling challenge comes with a need for around-the-clock systems support, both for outside customers and within HP.

Mary Neptune, IT manager at the Vancouver Division, became aware of the psychological burden placed on engineers, project managers and programmers on call beyond office hours to fix hardware, software or network problems. "It's like being on an electronic leash to have a beeper or cellular phone that can summon you back to work," she says.

She was part of a task force that won management agreement for Guaranteed Availability Pay (GAP) that provides extra compensation for being on call beyond work hours. It has been piloted in Vancouver.

To a lesser degree, HP entities are trying "telecommuting": working at home (typically one or two days a week) to save long hours on the road.

Cheryl Marks was one of 14 LSID employees who took part in a telecommuting demonstration sponsored by the Washington State Energy Office last year to relieve traffic conditions. A technical writer with an R&D group, she kept in electronic and phone contact with her office when at home.

LSID has now officially approved telecommuting as an option, and at least a dozen employees use it regularly for part of their work week.

In California, which is facing strict Clean Air Act requirements to reduce emissions, 20 to 40 people at the Roseville site will begin in February to telecommute one to four days a week.

Also gaining favor at certain sites are such variations on the work week as job-sharing and part-time work, which broaden the pool of valuable employees who are available for a partial week.

Tony Stieber and Fara Brock job-share handling strategic alliances for the Computer Systems Organization.

Managers at the Cupertino, California, site have been receptive to the concept, and a number of teams of managers, project engineers and admin assistants share positions there. Having two seasoned people on tap for a job gives added flexibility if a crunch develops.

Both Tony and Fara have young children, and like some free weekdays to spend with them and to help teach in the classroom.

They say the key requirements for successful job-sharing are a set of basic skills that match or are complementary, a similar management style, and the same degree of commitment to work.

All these new approaches are beginnings in work redesign, says Stu Winby, with more expected to come. Some, like self-managed teams, may require a stretch; others, such as AWS, may be inconvenient or even

"It's like being on an electronic leash to have a beeper..."

painful. It's part of adjusting to business reality in the 1990s.

And since the rate of change itself is changing, Stu warns, "We must be in a position to respond quickly and be flexible." Flexibility, it seems, is emerging as the word for the decade. **M**

Tale of a Cat

DECATUR, Illinois—If history is written by its survivors, workers at Caterpillar Inc. factories across the American Midwest have a story to tell.

While other companies abandoned U.S. factories for low-cost operations outside the United States, Caterpillar reinvented assembly processes with a $2 billion factory-modernization plan called Plant with a Future.

Since 1985, Caterpillar has redoubled its commitment to manufacturing by overhauling the company's 17 U.S. and 15 international factories. Cat increased spending for machine tools, equipment and factory computers fourfold. Chairman and CEO George Schaefer asked workers to streamline the assembly process and master new technology so that Caterpillar could succeed in the global marketplace.

And succeed it did. Revenue climbed from $6.725 billion for 1985 to $9.83 billion for 1991, while sales outside the United States jumped from 44 to 59 percent.

The union has accelerated Caterpillar's drive to remain the supplier of choice for construction crews around the world. Workers at the Mining Vehicle Center here take pride that Cat is second only to Boeing on the list of publicly held U.S. exporters. In 1991, Caterpillar added $2.23 billion to the U.S. balance of payments through export of mammoth machines such as the Mining Center's 85-ton off-highway truck.

To watch an army of skilled laborers assemble the 777C is to reflect on the genius of humankind. Inside the Vehicle Center, workers swarm the production line. Unlike a true assembly line, this line does not move continuously. It travels in spurts.

A blend of "humanware" and hardware, the Vehicle Center is a rational method for producing motor graders,

wheel tractors, off-highway trucks and large mining wheel loaders. Craftsmen station themselves at 11 stations in the 74-acre assembly hall.

A central computer dispatches driverless carriers laden with partly assembled earth movers along guided paths to each station. Teams of workers install complete subassemblies such as the wiring, rear differential, engine and cab.

"We've taken the assembly boredom out and put employee ownership in," says Dave Switzer, technical resources engineer for the Mining Vehicle Center. "It's no longer a matter of tightening the same bolt day after day. Each worker has a sizeable portion of the truck for which he or she is responsible."

Unharried by a moving conveyor belt, craftsmen pace production. Team members complete their work, inspect it, then route assemblies to

the next station. "The line is driven by the worker, not the process," says Switzer.

Workers ensure the quality of their work by using an electrical test system designed and built by HP's Integrated Systems Division.

"After assembly, we transport the off-highway truck to one of 11 test booths," explains Michael Dennis, senior manufacturing and systems engineer for Cat Decatur. "An HP 9000 Series 300 computer running under HP's Test Development Environment checks the engine, transmission, electrical circuits, chassis, hydraulic system, radiator hoses and the air conditioner for electrical faults or leaks." **M**

—*Tom Ulrich*

(Tom Ulrich writes for the Integrated Systems Division in Sunnyvale, California.—Editor)

Caterpillar

right

HP's John Shubert (center) discusses results of an end-of-line test for an 85-ton off-highway truck with Caterpillar engineers (from left) Michael Dennis, Darlene Jayroe and Dave Switzer.
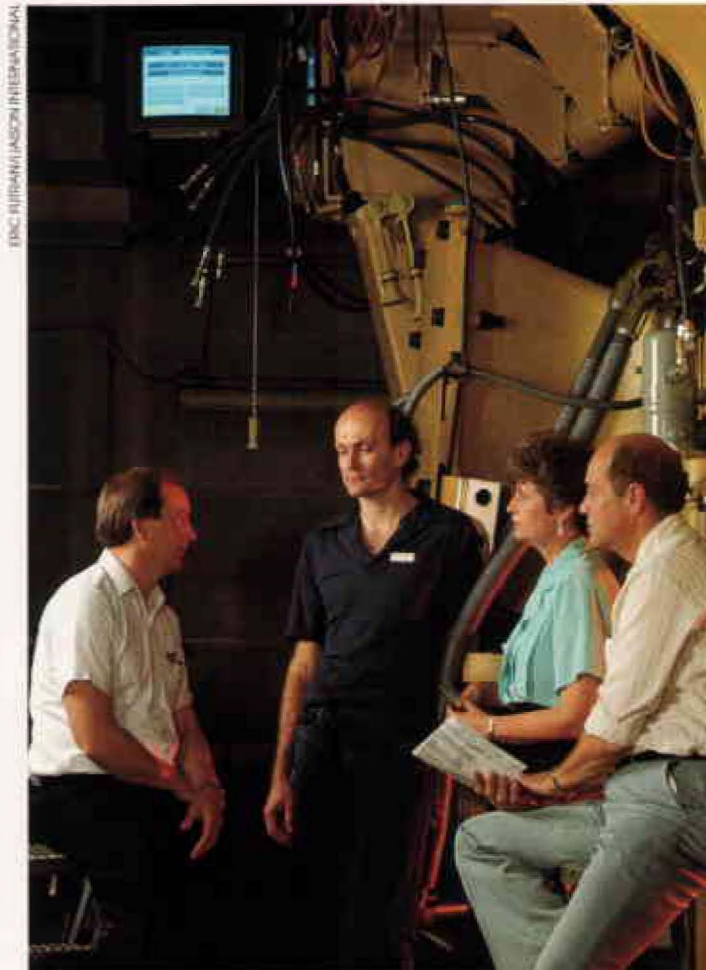
right

Huge wheels dwarf workers in Belo Horizonte, Brazil, where one of the world's top iron-ore exporters uses Caterpillar off-highway trucks to haul chunks of earth.

Rows of D10N track-type tractors are lined up on the docks in Portland, Oregon, awaiting shipment to gold mines in Siberia.

Caterpillar's SIS system allows employees to access information instantly and serve customers faster.
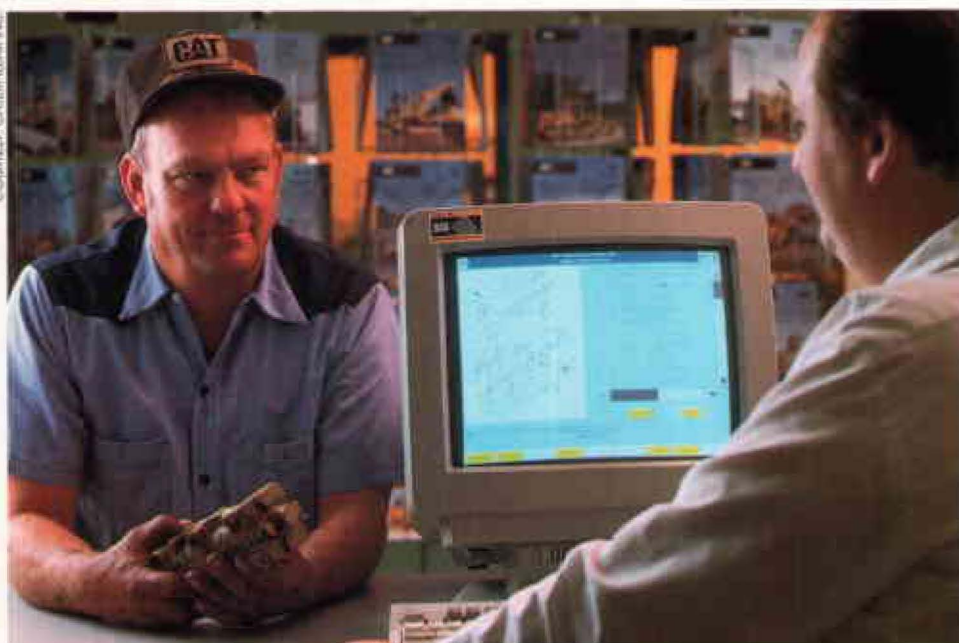
"(Hospice work) helps me to look at life from a different perspective and makes me appreciate my life more," says Karen Seet.

A time to live, a time to die

By Jean Burke Hoppe

A relative's death inspires an HP employee to reach out to help others.

SINGAPORE—The raw pain associated with death and dying is not something most people seek out. Those in the hospice movement make it their life's work. They feel it is a privilege to comfort those who are dying and to help ease their transition from this world.

Many who are drawn to hospice work have lost a loved one. They want to ease the burden for those who care for loved ones with a life-threatening illness.

So it is with Karen Seet, a planner at the Asia Pacific Distribution Operation (APDO), who has been a volunteer with Singapore's Hospice Care Association for about a year. Her grandmother's death from abdominal cancer prepared her—heart and soul—to reach out to others at this difficult crossroads.

"The experience is real," Karen says. "I can feel for the family members (of hospice patients) because I

took care of my granny when she was ill and it was no easy task. Feeding her, bathing her, changing 'diapers' for her took up a lot of energy. When you have to balance that with work or school, it makes it so much worse. My

> ## "It helps me look at life from a different perspective...It's hard to explain."

hospice work is meaningful to me because I can understand how the family members feel to be relieved of some chores like these. More often than not, they are just as stressed out as the patient. Every little bit helps. I know that for sure."

In developed countries, most people die in institutions where the mission is to cure and death is the enemy. Too often, little attention is paid to the spiritual or psychological needs of patients with life-threatening illnesses.

That void in health care created the hospice movement, spearheaded by Cecily Saunders in England and Elisabeth Kübler-Ross in the United States. The word itself—hospice—comes from a medieval word for a place of shelter on a difficult journey. Those cared for by modern-day hospices—typically expected to live fewer than six months—are on a final journey, a journey they are allowed to make with dignity.

While there are inpatient hospices, most hospice care takes place in patients' homes, warm and familiar, where they can be surrounded by

Karen Seet confers with fellow distribution planner Karen Ang at HP's Asia Pacific Distribution Operation facility in Singapore.

friends and family. Hospice workers and volunteers join the team, managing symptoms and pain control, offering support, respite and an open ear.

Karen Seet looked into volunteering for hospice at the suggestion of a friend. She is quick to point out how much she gets from her volunteer work. "It helps me to look at life from a different perspective and makes me appreciate my life more," she says. It's hard to explain. We can have everything—monetary comfort, a good job, good qualifications—and still feel empty inside. I wanted to do something that can give more meaning to my life.

Karen is still with the first hospice patient she was assigned following her 10-week training course in early

> ## "When your patient needs you or their family needs you, you must go."

1992. She has come to consider her patient a friend. The 89-year-old woman has abdominal cancer and has survived well past the six months

A time to live...

allotted for hospice benefits in Singapore. Her patient has no family and is cared for by a woman to whom she was a nanny for more than 30 years. Karen helps the two women in myriad ways. She checks in on them frequently and runs errands, cleans, cooks, does laundry, visits and takes the older woman to church with her. "I am a Catholic and my patient is Buddhist," Karen says, "but she likes to be in the church. We stay for only five or 10 minutes, but it brings her peace to be there."

Sometimes Karen visits simply so her friend knows she cares. "Patients like someone to be around, whether we speak to them or not. Although some show dislike of your presence, inwardly I feel they are glad that someone is around them."

Karen's patient has been an inspiration to her. "Her will to live has really inspired me. The work has made me

"I am Catholic and my patient is Buddhist," Karen says, "but she likes to be in the church. We stay for only five or 10 minutes, but it brings her peace to be there."

> **"Sometimes I do get depressed when she gets weak and when I feel only her bones."**

even more sympathetic to the needs of those who are dying and those who are caring for the dying."

Karen understands that this type of work is not for everyone and admits she was a little scared at first. "I can't let myself get too emotionally involved, but it's hard. When people ask me how I feel about doing this work, I tell them that as long as I have done my best for someone, I feel good. Sometimes I do get depressed when she gets weak and when I feel

only her bones. I ask the Lord not to let her suffer too much. If it gets too emotional for me, I remember how much worse it must be for her and her caregiver. You just take a deep breath —and be there."

From the outside, Karen is a typical young businesswoman. She is a successful 27-year-old native Singaporean with a degree in business from the University of San Francisco. She lives with her family and is happily involved with her church and work at HP. In her willingness to share the pain of death and dying with complete strangers, she is not typical at all.
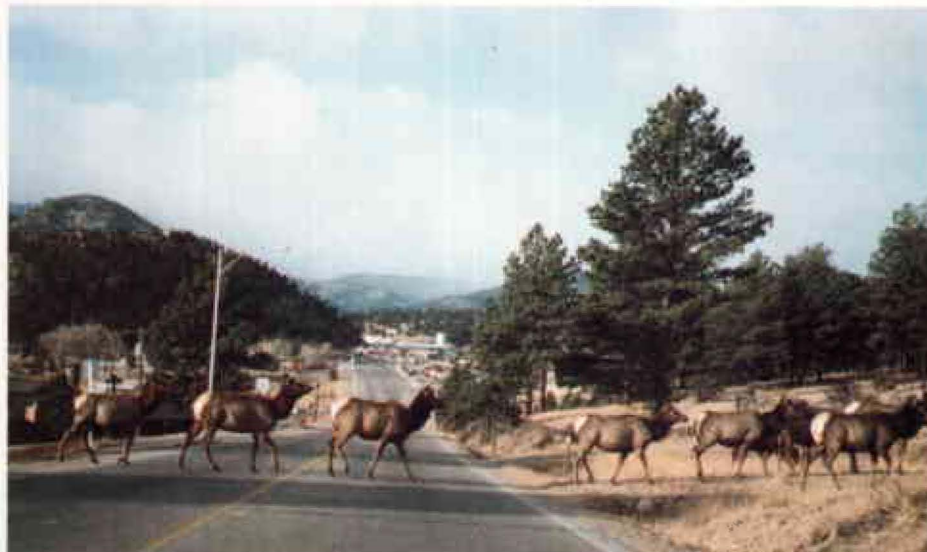
Karen thinks a hospice volunteer must first be mature, someone with a high threshold for a lot of strong emotions. "You need to be non-judgmental, open to people's beliefs. As a Christian, I feel that death is a passage to another life, a new life with Christ. But I would never bring that up with a patient unless I knew they believed the same thing. You need to be patient, have a high tolerance level.

As it's a serious commitment, you must have some extra time in your life and an understanding family. When your patient needs you or their family needs you, you must go."

The work also requires a warm, sympathetic personality, an ability to listen and communicate, flexibility and sometimes a sense of humor.

When a hospice patient dies, the volunteers often keep in touch with family members as they work through the stages of bereavement. Karen points out that many of those family members go on to be hospice volunteers themselves, completing a cycle of compassion, courage and healing. **M**

(Jean Burke Hoppe is a Lincoln, Nebraska-based free-lance writer, a former MEASURE editor and a three-year hospice volunteer.—Editor)

these savings will be achieved many-fold and that HP earnings, dividends and share price all will increase.

FRANK MUSSO JR.
Los Altos, California

An elk by any other name...

I did a double take on the back cover of the November-December *MEASURE*. That was a great picture of a "herd of elk." However, it was identified as a "herd of elks." Boy, was I surprised. So I went looking. Sure enough, elks is the plural of elk in one old dictionary. Both elk and elks are recognized as the plural of elk.

So I checked even further. The wildlife writings I have on elk all use elk as the plural. This is consistent with other members of the deer family: several deer are deer, several moose are moose, several caribou are caribou.

The articles on F.O.E. (Fraternal Order of Elk) all use elks when referring to several members of this organization. Is it possible that pluralization is dependent upon what kind of elk you are?

MARC BROWN
Fort Collins, Colorado

Logic over cynicism

I am absolutely impressed with the potential annual savings of $55 million to $65 million a year regarding the "Beyond the glass houses" story in the November-December 1992 issue. This is an indication that HP is continually innovative with the leading edge of technology.

My first reaction, however, was cynical: Here is another MBA program requiring a mega investment that will generate another management structure negating much of the estimated savings.

But then logic prevailed and, as a stockholder and retired employee, I am more than ever dependent on the successes of HP, so I truly expect that

Nice job, podner

I am writing to commend Gregg Piburn on the excellent article (November-December). "One guy in the Big Sky" was a great read! I was absolutely enthralled by the escapades of Hewlett-Packard's Ron Glass, which were described in glorious detail throughout the piece.

Gregg is a wonderful writer. He expresses himself with great clarity and perception. I actually felt as though I were *with* Ron Glass out in the "wilds" of Montana.

I hope you will give Gregg more opportunities to write for *MEASURE* in the future.

SUSAN FEINBERG
Edison, New Jersey

Please send mail

Do you have comments about something you've read in *MEASURE?* Send us your thoughts. If we publish your letter, you'll receive a free *MEASURE* T-shirt (one size fits most).

Address HP Desk letters to Jay Coleman; by company mail to Jay Coleman, Building 20/BR, Palo Alto. Via regular postal service the address is *MEASURE*, P.O. Box 10301, Palo Alto, CA 94304-1181 USA. The fax number is (415) 857-7299. Please limit your letter to about 150 words, sign your name and give your location. We reserve the right to edit letters.

To market, to market

As HP President and CEO Lew Platt told the world recently, "Our new-product program is incredibly effective, and that's how you win in this market. We're getting out new products more rapidly than ever before."

Here is a sampling of HP products introduced in 1992—out of of hundreds that made news.

The HP G100A protein sequencing system broadens HP's line of bioscience laboratory products. It is a complete, automated chemistry and analytical system for non-stop sequence analysis of protein and peptide samples—whatever the mix of contaminants.
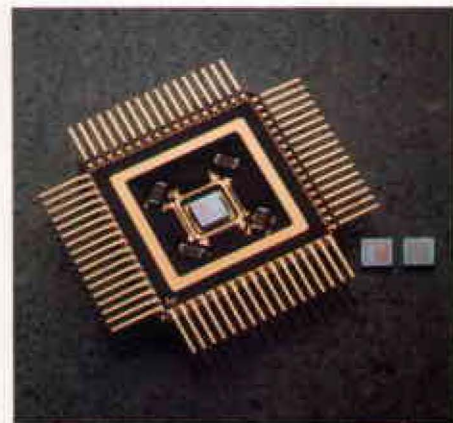
The HDMP-1000 gigabit-link silicon chip set is designed to move massive amounts of information among mainframes, supercomputers and workstations at far lower cost than previous solutions. It's the first silicon bipolar transmitter-receiver pair to operate at rates higher than 1 Gbit/second.

The HP SONOS intravascular imaging system uses Boston Scientific's catheter-tip ultrasound transducers to provide high-resolution, 360-degree internal images of the coronary arteries, peripheral vessels and heart chambers.

The HP DeskJet 550C printer for PCs (above) and the **HP DeskWriter 550C printer** for Macintosh computers are the first affordable laser-quality, plain-paper personal printers with both true black and color printing. A new HP DeskJet portable printer performs on a par with the HP DeskJet 500 printer.

The HP LaserJet 4 printer for PCs (above) and 4M for the Macintosh computer are RISC-based, 600-dots-per-inch resolution printers. Both also serve network computing systems. Using a new engine design, they produce superior print quality enhanced with technology that smooths the edges of text and graphics.

The HP Vectra 486N PC series of desktop PCs and servers in many models includes four low-priced, high-performance desktop PCs based on the Intel486 microprocessor. They come standard with built-in diagnostics, pre-installed software and other advanced features.

The HP Apollo 9000 Series 700 family of workstations—based on the PA-7100, the industry's fastest RISC processor—sets new performance standards for the CPU, graphics, disk throughput and network operations. With HP MPower software, users on a network share multimedia tools integrated in one solution.

The HP 16542A data-acquisition card for the modular HP 16500 series logic-analysis system is believed to provide 5 to 10 times the memory depth of any 100-MHz logic analyzer on the market. The 2-Mbyte card offers high-speed, deep data analysis for digital-systems designers of video, radar, sonar, ultrasound, etc.

HP 8133A 3-GHz pulse generator is ultrafast with high precision. It makes exact parametric measurements of high-performance integrated circuits and boards, and provides precise pulse performance of digital devices with clock rates from 33 MHz to 3 GHz.

The HP 75000 Model HD2000 data-acquisition system lets users measure and characterize physical parameters of electromechanical devices and structures. Based on VXIbus architecture, it provides high throughput and continuous mixed measurements—especially useful for test-system upgrades and new-test-system development.

Other significant 1992 products: the first 1.3-inch disk-drive module, the HP Kittyhawk Personal Storage Module...HP Corporate Business Systems, an alternative to mainframes ...HP 54720A modular oscilloscope, HP 8560 portable spectrum analyzer and HP 83731A synthesized signal generator...HP ChemLMS standards-based software system for lab management...OpenView 2.0 products, the first based on OSF's DME...HLMA ultrabright amber and red-orange LEDs...the HP 5971A atomic clock... Series 50 fetal monitors to track fetal movement more accurately...the first alternating-current, battery-powered defibrillators to stop heart fibrillation more quickly...the HP DesignJet 600 inkjet plotter with 600-dpi output... and many more.

"...until I needed a friend"

By Donna Trombly

Donna Trombly has worked for HP for 27 years, but it wasn't until her husband, Rod, suffered two near-death experiences that she appreciated HP's life-saving products.

Memorial Day weekend was winding down. My husband, Rod, and I were getting ready for lunch after a walk on the beach near our Santa Cruz, California, home.

Rod was planting the rest of the tomatoes. The discomfort in his chest had started again. After exercising the day before, it felt like a strained muscle.

Although we had lived in Santa Cruz for the past 15 years, our family doctor of 26 years was 42 miles away in Sunnyvale. That's where our hospital was, too. We had never had to use emergency services, although we knew where the Santa Cruz hospital was located.

Suddenly, on this Memorial Day weekend, it was becoming apparent that we needed help—and soon.

Down went the hoe and shovel. Very reluctantly, Rod agreed to go to the emergency room. Within five minutes he was connected to a heart monitor and intravenous tubes, and blood tests were taken. Less than five hours after a walk on the beach, we were in this stark room in a hospital we had never used, being taken care of by a staff we had never met.

I sat next to the bed, wishing I could find out about each person who was taking care of my husband. It was very lonely. I looked up at the equipment that beeped constantly—the equipment that kept telling me he was alive. That's when I noticed the logo on most of the machines: Hewlett-Packard. I felt relieved; a friend really was there.

After working at HP for 27 years, I knew that the equipment was the best. I knew the caliber of people who designed and built this equipment. That knowledge gave me an awesome sense of security.

The doctor recommended a quadruple bypass as soon as possible. The operation lasted seven hours. I was allowed into the intensive-care room an hour after the surgery ended. Nothing can prepare you for the sight. Rod wasn't breathing on his own—a ventilator tube in his throat did that. His hands were tied to keep him from ripping the tube out.

A machine that breathes for you during the operation also ices the blood as it cycles through your body. Rod's lowered body temperature made him look pale and lifeless. Pumps hissed, lights beeped and more hoses than I could count encircled him like snakes. The scene was frightening at first; then I heaved a sigh of relief: once again, almost every machine had a Hewlett-Packard logo.

Six weeks passed and Rod had a surprisingly rapid recovery, including jogging three miles a day. Then, during a regular checkup, doctors made a shocking discovery: cancer. The operation had to wait four more weeks because it was too soon for Rod to undergo two major surgeries.

During the second surgery, Rod's heart skipped a beat and he was put on an HP monitor. Ironically, in 1973 I posed for an HP ad for *Scientific American* magazine. I was at a hospital visiting my "husband," who was wearing a heart monitor. Twenty years later the same scene became real.

In 1973, the scene was make-believe; in 1992 it was life and death. In 27 years of working for HP I never thought much about what our medical equipment means to critically ill patients—until I needed a friend. **M**

(Donna Trombly, an administrative assistant in HP's Corporate Development department in Palo Alto, California, says Rod feels stronger each day and is jogging again. —Editor)

What's on your mind?

Do you have a suggestion about how to improve HP, an anecdote about the HP way or HP-related comment? Send your "On my mind" article—up to 500 words —to Jay Coleman on HP Desk or to Jay at the *MEASURE* address on the back cover.

HP's president and CEO outlines the two company Hoshin goals for 1993.

As I wander around HP this year, you'll often hear me talk about our Hoshin plan. I expect by now you've all heard the term, but perhaps you think our Hoshin goals are lofty ideals that have very little to do with your job. Perhaps you even think that what you do can't contribute to meeting these goals.

Let me correct any misconceptions: *Every* employee plays a role in meeting our Hoshin goals, and each of you can contribute.

This year, I have chosen two CEO Hoshins—profitability and order fulfillment—that undoubtedly will end up being multi-year objectives.

I'll explain those objectives in some detail in this letter, but first I'd like to clear up any confusion people may have about what exactly Hoshins are.

Hoshin is a systematic planning process that allows an organization to plan and execute strategic organizational breakthroughs. Indeed, the Japanese word "Hoshin" literally means "breakthrough." It is a component of the total-quality-management system. First used in Japan in 1965, it has become one of the most widely recognized and used elements of the total-quality-management system. In fact, during the 1970s and 1980s, Hoshin planning replaced management by objectives because of the Hoshin planning system's flexibility in

dealing with quickly changing situations. It's becoming more popular in the United States, and is widely used throughout HP.

The key elements of Hoshin planning are:
■ a planning and implementation process that's continuously improved throughout the year;
■ a method to break paradigms and re-engineer processes to achieve significant improvement;
■ a focus on key systems that need to be improved to achieve strategic objectives;
■ participation and coordination by all levels in the planning, development and deployment necessary to reach the objectives;
■ planning and execution based on facts; and

■ goals and action plans that cascade through the organization from the CEO to the department level.

During the past few years, HP has used the CEO Hoshin to describe our breakthrough objectives and our plans for meeting them. Our Hoshin plan also includes measures that help us gauge our progress toward meeting our objectives. The two Hoshins for fiscal year 1993 (FY93) represent significant breakthroughs for HP; therefore, we won't reach them in one year.

The first objective is to increase HP's net profit margin, improve business balance and sustain acceptable margins. There are many reasons for selecting this objective, but probably the most important is our concern

HP shareholders can learn more about new President and CEO Lew Platt in an interview in the 1992 company annual report, which begins distribution in January.

that not all HP businesses are making a significant enough contribution to overall company performance. Some organizations are doing very well, but others must make substantial improvements. Because HP's growth is based on a self-funding model, appropriate profitability in all businesses is essential.

Undoubtedly, we'll continue to see pressure to reduce our cost of sales—the cost of materials, labor and over-

Some organizations are doing very well, but others must make substantial improvements.

head directly involved in manufacturing products. To offset that pressure, we need to continue to lower our expenses and redeploy our work force so that everyone is working on things that can contribute to our overall success.

I've asked each business, corporate function and geographic operation to design and implement a plan that will contribute to reaching this company-wide profit-improvement plan.

My second CEO Hoshin objective relates to the order-fulfillment process. By the end of fiscal year 1997, we need to achieve a companywide tenfold improvement in the order-fulfillment process as measured by

our customers. There are five primary reasons for selecting this Hoshin goal:
■ First, customer expectations are increasing.
■ Second, our customers aren't happy with our order-fulfillment process. This is consistently the No. 1 dissatisfier in all customer surveys.
■ Third, our competitors are using our failures in this area to position themselves as "easier to do business with" than HP.
■ Fourth, this problem costs HP a lot of money. Order fulfillment "rework" clearly costs us several hundred million dollars per year.
■ Finally, as we develop more products aimed at the individual user and mass distribution, the demands for broad and rapid availability make order fulfillment an increasingly important competitive differentiator.

I've asked each business and geographic organization to begin programs to improve performance. Each business will establish goals for FY93 and each of the interim years leading

(It's key) for HP people to think in new ways...

to FY97. An important part of that process is for HP people to think in new ways: instead of process improvement, think process re-engineering; instead of entity shipments, think customer-order delivery; instead of design for manufacturing, think

design for delivery; instead of defective line items, think defective deliveries or orders.

These objectives are tough, and we need the creativity and energy of

I challenge each of you to find out...how you can help...

every HP employee to reach our goals. They're not "lofty ideals"; they're basic objectives for improving our performance. And they'll help ensure improved competitiveness, greater customer satisfaction and long-term financial strength.

You can be sure that these Hoshin goals were emphasized during the general managers' meeting in mid-January. I hope you'll see evidence soon in your organization that plans are in place to help us radically change our performance in order to meet these objectives.

You'll read more about our Hoshin goals and the progress we're making in future issues of *MEASURE*. These aren't just my goals, they're HP goals. They're challenging, and reaching them is critical to HP. I challenge each of you to find out from your management how you can help and to put your energy into achieving our Hoshin goals.

News from around the HP world

A fairy tale came true in October when Masahiko Kishira and Momoko Sekiya were married.

A *MEASURE* love story

TOKYO, Japan—*MEASURE* regularly brings readers success stories of HP products and people at their best.

This is a love story.

In October 1988, 17 photojournalism students from universities around the world spent a grueling 24 hours documenting HP people before, during and after work. The result was the 52-page, January-February 1989 issue of *MEASURE*—"ONE DAY: 24 hours in the lives of HP people"—a photo essay that kicked off HP's 50th anniversary.

It turned out to be an award-winning issue that, according to readers, was one of *MEASURE's* finest. It also resulted in a marriage.

Momoko Sekiya, the employee-communications specialist for Yokogawa-Hewlett-Packard (YHP) and editor of YHP's respected magazine, *Bridge*, was assigned to escort one of the Japanese student photographers during the day-long photo session.

Masahiko Kishira, a student at Nihon University, served as an assistant to a photographer, Nobutoshi Takagi.

"It wasn't love at first sight," says Momoko. "Masahiko and I saw each other occasionally during the following two years and our friendship developed."

In October 1992, Momoko and Masahiko were married. As *nakodo*—traditionally a husband and wife whose role is similar to godparents—Momoko chose Ron Soyama, her

The bride and groom changed clothes two times during the festivities, and at one time wore these kimono-like garments.

manager and head of YHP's public-relations group, and Ron's wife.

"Usually *nakodo* are chosen from the groom's side," Momoko explains. "However, in our case, Ron has known us since we first met and we thought Ron and his wife would be the best choices as *nakodo*."

Momoko continues to handle employee communications and public relations for YHP, while Masahiko is an account executive at a Tokyo advertising agency.

"I thank *MEASURE* and Hewlett-Packard for producing our wedding," Momoko says.

You're welcome!—*Editor*

Senior Oscar Hsu demonstrates the new HP workstation for (from left) Karel Liem, master of Dunster House, Walter Hewlett, HP director, and Linda Wilson, president of Radcliffe College.

School daze

CAMBRIDGE, Massachusetts —One of Harvard University's 12 undergraduate residential houses now has an advanced $250,000 learning center, thanks to the generosity of a member of Hewlett-Packard's board of directors and HP's employee-purchase program.

Walter Hewlett and HP's Workstation Group and a combination of eight software companies made the donation to Harvard's Dunster House in October.

Walter, the son of Hewlett-Packard co-founder Bill Hewlett, is a 1966 Harvard graduate. He lived in Dunster House while in school.

The combination of an HP Apollo 9000 Model 720 workstation and an HP 700/RX station make up one of the most powerful computing systems on Harvard's main campus.

"This center represents a new physical and intellectual environment right in the students' residence that fosters the crossing of traditional academic boundaries through technology and scholarly resources," says Karel Liem, master of Dunster House, which is shared by second-, third-and fourth-year students, and live-in tutors and faculty.

"The enormous graphics and numerical capabilities will provide unparalleled opportunities for students..." the Harvard professor said.

HP employees and board members can purchase HP equipment gifts to U.S. schools by contributing 25 percent of the list price (up to $5,000); HP contributes the rest.

Quoteworthy

66 I'm firmly dedicated to making sure that this is the best place in the world to work. 99

Lew Platt, HP president and CEO, in an interview with puls, HP employee magazine in Böblingen, Germany.

66 What people would like to have happen with computers is to ask a question and get an answer. Computers don't do that today. 99

Bob Frankenberg, vice president and general manager, HP Personal Information Products Group, in the "HP Directions for the '90s" videotape.

66 I personally think this is the most exciting time in the history of science and technology...the three technologies that most affect HP—measurement technology, communication technology and computing technology —are all undergoing revolution. 99

Joel Birnbaum, vice president of R&D and director of HP Labs, in the "HP Directions for the '90s" videotape.

Moving-crew members prepare for the onslaught of furniture and equipment in October when HP moved from Avondale, Pennsylvania, to Wilmington, Delaware.

Engineer Debra Snowden handles one last call.

A moving experience

WILMINGTON, Delaware— An unprecedented move took place in October when nearly 800 HP employees at the Avondale (Pennsylvania) Operation picked up stakes and relocated seven miles away to Wilmington, Delaware, to what is known now as the Little Falls Operation.

Delaware Governor Michael Castle and Dieter Hoehn, vice president and general manager of HP's Analytical Products Group, participated in a formal ribbon-cutting ceremony at the three-story, 360,000-square-foot facility.

Customer shipments were delivered on time during the virtually flawless three-week move. Nearly 60 employees remain in Avondale as part of American Manufacturing Technologies, an HP spinoff created to continue producing metal-fabrication products for HP and other customers. Two former Avondale managers formed the new company.

The Little Falls Operation is HP's first facility in Delaware, and the first time HP has moved an entity this large. HP paid special attention to preserving trees and protecting wildlife while developing the 59-acre wooded site.

Customer engineer Terry Cusick (left) sorts through a mass of HP gear to help get the new site up and running.

The new address and phone number are 2850 Centerville Road, Wilmington, Delaware 19808, (302) 633-8000.

ECHANDO UNA MANO

HP Spain sends help

BARCELONA, Spain—In a united effort to send aid to famine- and drought-ravaged Somalia, HP sales offices in Spain joined with the Barcelona Peripherals Operation (BPO) to raise "One Million Pesetas for Somalia."

The money ($10,000 U.S.) will go to the medical organization "Medicos Sin Fronteras" (doctors without borders), a non-profit group that provides medical personnel and supplies to disaster victims throughout the world.

HP employees at BPO also are gathering warm clothing and blankets, as well as canned foods and powdered milk, with the destination of Bosnia. The "Help Bosnia" effort is based in Terrassa, Spain, near BPO. The HP operation is matching the number of blankets and canned goods that employees collect, and all the supplies will be sent to beleaguered Bosnia via truck.

BOTTOM LINE

For the fourth quarter of fiscal year 1992, ended October 31, Hewlett-Packard reported a 13 percent increase in net revenue and a 20 percent increase in orders. Net earnings for the quarter declined 46 percent, including special pretax charges of $137 million for restructuring. (If special charges taken for the fourth quarter in both 1991 and 1992 are excluded, net earnings declined 28 percent from the year-ago quarter.)

Net revenue for Q4 totaled $4.3 billion, compared with $3.8 billion in the corresponding FY91 quarter. Q4 FY92 orders were a record $4.4 billion, compared with $3.7 billion in the year-ago quarter. In Q4 net earnings totaled $68 million, or 28 cents per share—after special charges of 36 cents per share—on some 251 million shares of common stock outstanding. In the year-ago quarter, net earnings totaled $125 million, or 50 cents per share, on some 252 million shares after special charges of about 40 cents per share.

Looking at results for all of FY92, HP's net revenue rose 13 percent to $16.4 billion, compared to $14.5 billion in FY91; orders were up 14 percent to $16.8 billion; and net earnings declined 27 percent to $549 million—largely due to the adoption of SFAS No. 106, an accounting change, during the year.

CHART CHANGES

With the move of the Analytical Products Group's former Avondale (Pennsylvania) Operation to the Wilmington, Delaware, area, it has been renamed the **Little Falls Operation** (see story on page 29).

A **Netware Operation** has been formed within the Systems & Servers Group to strengthen further HP's relationship with **Novell.**

YHP CHANGES AT TOP

Top-level management changes at Yokogawa-Hewlett-Packard in Japan:

Shozo Yokogawa retired January 18 as chairman of the YHP board of directors.

Kenzo Sasaoka became the new board chairman.

Katsuto Kohtani succeeds Kenzo as president of YHP and continues to serve as CEO.

I'll buy that

Purchasing magazine has awarded Hewlett-Packard's procurement team its Medal of Professional Excellence for 1992.

The magazine featured HP Director of Corporate Procurement Gene Richter on its September 24 cover.

Gene credits the award to his department's:
■ buying clout attained by leveraging across divisional boundaries;
■ careful cultivation of strategic alliances to assure a supplier base that provides a continuous flow of leading-edge technology;
■ quality-assurance program that annually racks up clear, quantifiable results;
■ strategic sourcing through tracking key commodities and plotting purchasing moves in advance of changes in market factors, sources and technologies; and
■ ability to provide management with a clear, comprehensive view of the supply strategy, and the opportunities and problems it confronts.

TELECOM BU FORMED

A new Telecommunications Systems Business Unit (TSBU) under **Andre Meyer** as general manager has been formed within the Integrated Systems Group.

It comprises a new joint venture (see below), and three HP product operations (Singapore Networks Operation; the Telecommunications Network Operation in Grenoble, France; and a newly formed Telecommunications Platforms Operation (TPO)—a spinoff from the Integrated Systems Division (ISD). The BU also has three geographic business development teams managed by **Ruth Cox.**

GETTING TOGETHER

Ericsson and HP have formed a joint venture to develop and market network-management systems for telecommunications operators and service providers worldwide.

Ericsson Hewlett-Packard Telecommunications AB will be owned 60 percent by Ericsson, 40 percent by HP. Headquarters will be in Stockholm. Managing director is **Anders Engvall.**

Within HP, the JV will be part of TSBU.

In an unrelated move, HP acquired the German and French subsidiaries of **Leasametric, Inc.,** a California-based international rental company for electronic test and measurement equipment, PCs and workstations. The two companies will operate independently under their own names as part of HP's Finance and Remarketing Division.

NEW HATS

Nick Rossiter to G.M. of Russia...**Mogens Jensen** to G.M., HP Denmark... **Kim Yu** to G.M., HP Thailand.

Within HP's Product Processes Organization, **Dick LeVitt** to director, Corporate Quality; **Claudia Davis** to director, Corporate Education.

Hoyle Curtis to G.M., Guadalajara (Mexico) Printer Operation...**Joe Mixsell** to operations manager, French Manufacturing Operation ...**Frank Cloutier** to G.M., Corvallis Division... **Glenn Osaka** to G.M., Commercial Systems Division.

Bangladesh in Europe

TIRANA, Albania—Manfred Troger was looking for new markets for HP medical equipment during his trip to East Central Europe in April. What he found was "Bangladesh in Europe."

After spending three days in Albania, the Vienna, Austria-based HP sales rep says he'll never look at life the same way again.

"Trying to sell HP equipment in Albania seems like a ridiculous idea because people don't have the basics," Manfred says. "The average monthly wage is about $12 U.S. and half of that is spent on rent of state-owned flats."

When Manfred visited the main hospital in Tirana, Albania's capital city, the most sophisticated equipment in the cardiac intensive-care unit was an HP 1500B cardiograph that was built about 20 years ago. "The cardiograph still works," Manfred reports.

On his way to the airport, Manfred asked a translator why there were so many mounds of earth in every field they passed. The translator explained that Albania built 320,000 bunkers in the last 50 years to protect the country against foreign invasion.

"I looked inside a bunker to see what it was like," Manfred says, "and when I came out, I saw this young boy. I took his picture and gave him a 10-franc French coin. Soon, other kids from the field ran toward me to get money, too.

"Albania is one of the most beautiful countries I've ever seen. However, my strongest memory is of this boy—one of 3 million dark, fluffy-haired, thin, little, innocent Albanians.

"I didn't get any business from that trip in April, but I learned a lot about life."

MANFRED TROGER