

For the people of Hewlett-Packard

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MEASURE

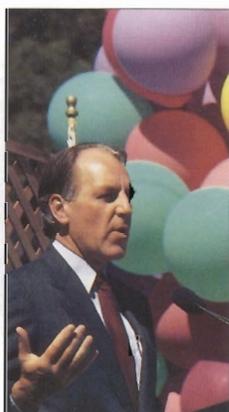


YHP sets
a fast pace
in Japan

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HP's joint venture in Japan is showing the rest of the company how to combine world-class products with "the Japanese heart." Cover photo of YHP salesman Yasukazu Suzuki by Bob Isaacs.

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MEASURE

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Hewlett-Packard Company is an international manufacturer of measurement and computation products and systems recognized for excellence in quality and support. The company's products and services are used in industry, business, engineering, science, medicine and education in more than 93 countries. Founded in 1939, HP is celebrating its 50th anniversary this year. HP employees more than 93,000 people worldwide.



YHP

A yen for success

HP's joint venture in Japan is showing the rest of the company how to combine world-class products with "the Japanese heart."



Yuriko Saito works in production at YHP's Hachioji plant near Tokyo. Manufacturing space will nearly triple when YHP builds a second facility in Kobe near Osaka.

It's been a remarkable five years since *Measure* paid a visit to Yokogawa-Hewlett-Packard.

In 1984, President Ken Sasaoka (see page 8) predicted that YHP could become a model for the rest of HP for testing competitiveness in a world with heightened competition.

Just take a look at YHP today:

- Top HP sales region outside the U.S. and the largest region worldwide in some business segments.
- A steep climb in business growth that rises on the chart as majestically as the slope of Fujiyama—128 percent of quota and 43 percent growth for 1988. From 1984 to 1988, compound growth rate was 22 percent.
- The world leader in its original component-measurement instrument product line (PL36), which has now spun off successful systems-based products (PL1H).
- On the manufacturing side, a major Japanese productivity innovation award—the Ishikawa Prize—to place alongside the 1982 Deming Prize.
- Plans to build a second plant, in Kobe, that will nearly triple manufacturing capacity.

YHP is a complex business, with 3,300 employees and an organization chart that is a web of matrix-management reporting. It manufactures its own proprietary products and is a licensee for making numerous HP product lines sold by its own sales organization throughout Japan, along with imported HP products.

One powerful YHP weapon is a Marketing Center that admirers have called the leading overall marketing program in the company. It's a model in the areas of marketing segmentation and communications. YHP does strategic local pricing of selected products to gain market share.

With a winner's quiet confidence, YHP is showing the rest of the company how to combine HP's world-class high-technology products with "the Japanese heart."

That's what Masao Teresawa calls the emphasis on building long-term customer relationships that is fundamental to doing business in Japan. It means selling completely to a local customer's needs—meeting high requirements for quality in products and all phases of the sales process. Flexibility is important, with special treatment

"Japanese customers, I think, are the most demanding in the world."

for special cases. YHP's sales managers spend the bulk of their time in the field to back up the sales force.

Masao has a broad perspective. Formerly YHP marketing manager, he became marketing manager for Intercontinental Operations last year.

U.S. companies in general, he points out, have top-notch technology but a discontinuity that comes from bottom-line, short-term thinking. Japan, on the other hand, believes in long-term management rather than stressing a quick return on investment. Selling is done on a longer timeline to know thoroughly a customer's needs.

"Japanese customers, I think, are the most demanding in the whole



Calling on an important business ally in Tokyo, Information Systems Group GM Bob Frankenberg exchanges business cards with Seiichi Takigawa, president of Canon Sales.

world," Masao says. To satisfy their high expectations, YHP long ago set up a screen for incoming HP products to make certain each delivery was perfect. Where possible, YHP sells products with the local language. It pays close attention to customers' suggestions for improvements.

It has helped greatly to have HP CEO John Young set stretch objectives for a 10-times improvement companywide in hardware and software, Masao says. Still, few HP middle managers understand YHP's urgent need to adapt products to the Japanese market, he feels.

Granted, not many HP people outside Japan know the Japanese language, which presents some problems. "But from our experience, it's not the culture gap but an effort gap," he says.

If the Mechanical Design Division in West Germany hadn't developed software in the Kanji language, YHP could not have become a top supplier in Japan for mechanical CAE and engineering workstations. "They were willing to make the effort," Masao says.

For non-Japanese companies, trying to break into the tightly knit, collegial business world in Japan can be frus-

trating. It's not enough just to go to Japan with a product offering, however excellent. Building a foundation for mutual trust can be a slow process. HP took an important early step by forming a joint venture in 1963 with Yokogawa Electric Corporation, Japan's No. 1 manufacturer of process control and electric-measurement products.

From the start, YHP has had local managers, with a handful of HP resident directors in the early years to smooth communications. In 1983, HP increased its investment in YHP from 49 percent to 75 percent, becoming the majority partner in a completely Japanese-managed venture.

In the current climate of struggle between the U.S. and Japan for market supremacy in many areas, an increased identification with a U.S.-based company could be awkward for YHP. But Hewlett-Packard, while undeniably headquartered in the U.S., is truly a global player: more than half its sales are international, and it manufactures products in 25 countries. In the fierce contest for recognition in Japan, it helps to be either a strictly Japanese company or part of a world-class, worldwide organization that



Harumi Aizu sets up integrated-circuit cases on an IC automatic-insertion machine at YHP's manufacturing facility in Hachioji, Japan. Among YHP's considerable successes in the past five years are its 43 percent growth for 1988 and sales topping 128 percent of quota.

NOBUTOSHI TAKAGI

can deal as an equal with the great Japan-based multinationals.

Ken Sasaoka sees YHP in a position to capitalize on more than a quarter-century of experience in blending two business cultures. "We have learned American technology and management and we have implemented Japanese management approaches, especially in the quality area," he says. "We are not just followers but a unique and creative contributor as a member of the HP organization."

When its large Japanese customers began to invest in subsidiaries outside the country, YHP began a global sales program last year.

Yukio Horie, a senior YHP sales manager with New York City experience, moved from Japan to California to establish contact with resident Japanese executives in Silicon Valley. He works closely with the local Neely sales office.

As part of his YHP-California program, Yukio has given high-level seminars to share HP's own experience as a multinational company, such as how to recruit good engineers and to deal with currency variations.

He has started a local version of YHP's

Japan Foundry Program. It's a patient, two-step sales process that builds a potential foundry customer's business by introducing it to application-specific IC centers that might place orders.

This spring Hajime Kawano started a similar YHP-Asia Program based in Hong Kong to support resident Japanese customers. Next arena for a global program: Europe.

The backdrop for YHP's sales success in Japan is a robust Japanese economy: fastest growing among the major economies and second largest in the world after the U.S. During YHP's lifetime Japan's electronics industries have swelled to heroic size, with strong growth in the semiconductor industry where YHP targets its proprietary products.

Capitalizing on this opportunity is the job of YHP's sales organization under Toshiteru Suwa. It blankets the Japanese islands with 33 sales and support offices. With a remarkably low turnover, the sales force is stable and highly focused. To "sell smart," YHP arms sales reps with detailed strategic information for each of their accounts.

Since 1984, YHP's market share in electronic instruments (where it has

historically been strong) has gone up 2.4 times and computers have increased 1.6 times. HP's analytical products, distributed exclusively by Yokogawa since 1984, have been going up 40 percent a year starting from a modest base.

To build recognition, YHP stages ambitious customer events. When Emperor Hirohito died in February, YHP cancelled a major private show in two cities. Instead, a traveling high-tech seminar was organized for 23 cities throughout Japan, with 200 seminar sessions covering all instrument and computer lines.

YHP's proprietary product lines have been developed in its own R&D labs, unusual for a joint venture in the country. The original component-measurement instrument product line (PL36) now has the largest market share (more than 30 percent) in the world.

With PL36 maturing, YHP began looking in 1986 for a new, even larger market where it could make a contribution. At the time, three U.S. instrument divisions were abandoning the network and spectrum analysis business. Last year YHP introduced the HP 4195A for combined vector network

and spectrum analysis. It has done well everywhere, particularly in the U.S.

HP management encouraged YHP to develop a semiconductor testing system business that leveraged off its expertise in measuring current and voltages accurately at very low levels. The resulting DC parametric test system was soon split off to become a new product line (PL1H) that is especially strong in Japan.

Looking for other possibilities, YHP has entered the rapidly growing linear mixed-signal integrated-circuit test market. The HP 9480 is a high-capability analog LSI test system—with a pricetag of \$600,000 to one million dollars—for IC manufacturing. It's the world leader in a narrow niche: testing precision A-to-D converters and D-to-A converters.

With this newest introduction, YHP has taken on heavy competition from Teradyne and LTX, both in the U.S., and Advantest in Japan. But Marty Neil, marketing manager for the Electronic Instruments Group, sees a bright future for YHP in linear mixed-signal test.

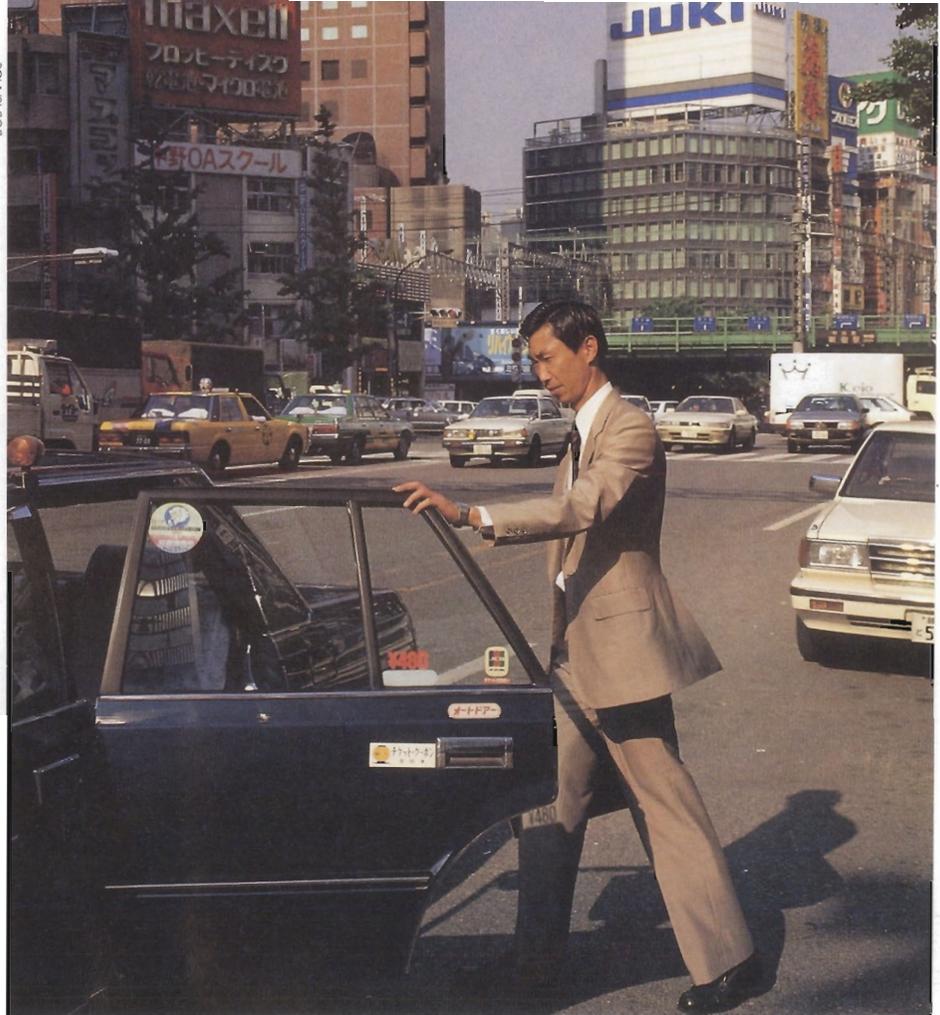
"It's a high-stakes, big-risk game in a competitive marketplace," Marty says,

"We are not just followers but a unique and creative contributor . . ."

"but YHP has turned into the kind of company that can go after this business and compete on a global basis."

Two-fifths of the products manufactured at YHP's Hachioji facility outside Tokyo have been developed in-house. The rest are transferred from HP divisions. Altogether, 500 different products (including accessories) are made, with 80 models as main products.

The Logic Systems Division has a relationship with YHP that goes far beyond merely acting as a licensor. Making microprocessor-development systems, LSD could see that Japanese microprocessor manufacturers would be a significant force. To support these Japanese products with an emulator, the Colorado division tried what Gen-



For a sales rep in central Tokyo, a taxi—not a fleet car—is the practical means of transportation to visit customers. Yasukazu Suzuki grabs a cab outside Shinjuku Station.

eral Manager Dave Dayton calls "a different form of localization."

A small R&D team started at YHP in 1984 has evolved into the YHP Logic System Operation (YLO). Working closely with NEC and Hitachi, YLO has helped make HP's MDS products dominant in Japan.

Another Colorado division, the Electronic Design Division, followed the YLO model when it entered the computer-aided-engineering business in 1985. To get into programmable logic device design systems in a hurry, YHP bought a small Kyushu company. It is now the YHP Design Systems Lab (YSL). Both labs report to Matsuji Tezuka, tying them closely to the technical systems marketing center that he heads, and are part of the Electronic Applications Group.

As a result, both Colorado divisions now do a large part of their worldwide business for these products in Japan. They are manufactured by YHP as a licensee.

To link engineering and manufacturing data on line for the many products it makes, YHP began in 1984 to develop

modules for an integrated system based on the concept of a manufacturing productivity network (MPN). Last November the Japanese Union of Scientists and Engineers (JUSE) awarded YHP its Ishikawa Prize for manufacturing or engineering innovation leading to productivity improvement.

For Minoru Saito, who manages MPN, the resulting prestige has meant a flood of visitors. Each month more than 100 customers come by, many attending MPN seminars. YHP is now considered one of Japan's major suppliers for products related to computer-integrated manufacturing.

To find room for its growing activities, YHP will supplement the Hachioji factory by building a second, larger plant in Kobe in western Japan. It will nearly triple the amount of manufacturing space in the future. The first building will be completed in 1991. Anchor for the Kobe site will be the YHP Instrument Operation responsible for PL36. The YHP Hachioji Division will remain at the original site, making PL1H and transferred products.

Interest in HP is on the rise in financial circles in Japan. Listing HP stock on the Tokyo stock exchange in 1988



When chimes play a refrain from Beethoven's Ninth Symphony twice a day at the Hachioji plant, work stops and it's time for a coffee break. Some 500 different products go through the line, and a prize-winning system links engineering and manufacturing data.

means Hewlett-Packard's name and stock price are in all the major Japanese dailies and in corporation reports.

New initiatives in sales are also stirring, as YHP and individual HP divisions continue to explore new strategic alliances with Japanese companies.

The stunning success of HP's cooperation with Canon on developing technology for the LaserJet (*Measure*, November-December 1988) is well known. Less familiar is the joint partnership and development program for the HP 3000 that the two companies agreed to in 1986. It resulted from YHP's careful self-assessment to see how the business systems market could be better addressed.

"YHP strongly supported the partnership and made it happen," says Bob Frankenberg, general manager of the Information Systems Group. He termed it "incredibly valuable—extending HP's ability to understand the needs of users and the technologies we can bring to bear to solve those needs."

The Micro 3000/Canon System 3000/

10 and 20 was the first hardware product sold through the Canon sales channel. Canon engineers worked in HP labs in Roseville, California, while co-developing a second Canon 3000 system and a software product.

This February, Canon and HP agreed to jointly develop, distribute and localize NewWave for UNIX, MSDOS and OS/2 environments. "This is a very significant product for HP," says Steve Hillyer, who has been in Japan for three years to manage the Canon-HP program for the Networked Systems Sector. "Canon is literally a member of HP's labs in the U.S." Canon will be responsible for the final product localized for Japan, including distribution—even to YHP. YHP and Canon both have sales offices in the same Tokyo building, and YHP trains Canon sales people.

The Mass Storage Business Unit has been active in developing such relationships, primarily with Sony Corporation. One of the areas has been co-development of the Digital Data-Storage (DDS) recording format for use on computer tape drives based on digital audio tape (DAT) technology. The format is being promoted by a number of

companies as an industry standard. HP and Sony also worked together to develop a first-generation product. (The first one, designed for the OEM marketplace, came out May 22.)

Jim Grosvenor, who manages HP's year-old Japan Relationship Center in Corporate Development, draws upon three years in Japan as a McKinsey consultant. He's often called upon to assist Intercontinental Operations management in facilitating interaction between HP entities and the great Japanese companies, with YHP in the loop.

"We have the opportunity to build on our already strong capabilities to work closely in alliances with Japanese companies," Jim says. "Working effectively in strategic alliances may, in fact, become one of HP's competitive advantages in the '90s."

Popular wisdom is that YHP will hit one billion in annual sales in Japan within a year or two. Given the awesome potential that exists in Japan today, the possibilities for growth are not merely global but stratospheric.

—Betty Gerard

Ken Sasaoka: a pocketful of miracles

Kenzo (Ken) Sasaoka, president and general manager of Yokogawa-Hewlett-Packard (YHP), is a man who believes in miracles.

Oh, he also believes in hard work, determination and the power of people to take on and succeed at giant undertakings. That's how he accounts for YHP's "miraculous" success. And he credits YHP people with the ability to dream great dreams and then work like the dickens to make them come true.

But he doesn't discount miracles. In fact, he points to several in his own life that have dramatically altered its course.

The first took place on August 9th, 1945. It's the miracle, he says with a smile, of his life.

In that summer, Ken's high-school class was sent to Nagasaki to work in a torpedo factory. One day, he received a letter from his father telling him that the family's house in Osaka was destroyed in a bombing raid. He asked his manager for permission to return to Osaka. To his surprise he was allowed to go. That was August 8th.

On August 9th, his train pulled out of the Nagasaki station and passed through a tunnel that took it from Nagasaki into the countryside. At the other end of the tunnel, the train appeared to be hit by a fiery blast that shook the windows and Ken's teeth. "When I looked up," Ken remembers, "the sky had turned from blue to an unearthly red."

Six days later, the war ended and Ken learned that the ghastly red he had seen in the sky was the result of an atomic bomb. "If that train had left Nagasaki five minutes later. . . well,



BOB ISAACS

Surviving the atomic-bomb blast of Nagasaki, Japan, and helping YHP win the prestigious Deming Prize are two of the miracles in the life of Ken Sasaoka, YHP president and GM.

I think of it as my own personal, little miracle," says Ken.

Ken's second miracle centers on a decision: the decision to transfer from Yokogawa Electric Works, the Japanese parent company of HP's joint venture, to the small, fledgling YHP.

In 1972, Ken was manufacturing manager at Yokogawa and had been with the company ever since he graduated from Kyoto University in 1951 with an electrical-engineering degree. He was asked by the head of Yokogawa to take on an R&D-management assignment at YHP. Ken wanted to refuse—after all YHP was much smaller than Yokogawa and he had put all his energies into succeeding at the parent company. But YHP really needed some help at that time, so he consented to transfer temporarily.

It was his wife, Toshiko, who helped Ken decide to transfer. She reminded him that his dream was to learn more about the world. "You'll enjoy working and traveling internationally... this is

your chance to make your own personal dreams come true," she told him. Ken also remembered that he had applied for several Fulbright Scholarships in college so he could study abroad but had failed to win them.

After two years as YHP's R&D manager, it was time to return to Yokogawa. All his colleagues at the parent company encouraged him to come back. And his own instincts supported that. It seemed logical that management opportunities would be better at the larger, established Japanese company.

But Ken wasn't satisfied. He hadn't accomplished what he had set out to do as R&D manager at YHP. And there was something very exciting about the little company... its energy, its youth, its potential. He also hated to leave the young R&D section leaderless.

"After all," says Ken, "Toshiko was right about the move to YHP on a per-

sonal level. And it was a good move on a professional level as well. I've enjoyed the 17 years at YHP so much. I think of it all as a miracle." Ken was appointed facility director of YHP in '73 and president and general manager a year later.

As for the third miracle, that's easy: It was winning the Deming Prize—awarded annually in Japan to the company or plant which achieves significant improvements in quality—in '82.

Certainly Ken has received a great deal of personal acclaim from winning the coveted award. He's become a well-known authority on the subjects of quality and successful joint-venture operations. He was a guest lecturer at Colorado College in Colorado Springs in 1987 on the subject of U.S.-Japan Economic Relations. He's given so many speeches at quality conferences from New Zealand to Washington, D.C., that he refers to himself as a "QC Angia" or quality preacher.

What has most pleased Ken about the prize is not the accolades. It's seeing the YHP product line transform from an ugly duckling—or as Ken puts it, the company booby line—to a beautiful swan. "It was so exciting to see this poor quality product line become a champion in terms of quality and profitability. That's given us all the most satisfaction and pleasure. And preparing and competing for the Deming Prize made that possible," says Ken.

He and the employees of YHP have been an inspiration to other HP divisions which aspire to achieve the highest levels of quality. And the great guru of quality, W. Edwards Deming, has cited the YHP example in textbooks and lectures as a model quality operation. "My visit to YHP," writes Deming in a letter, "was sensational. Mr. Sasaoka is the greatest president, I think."

While it's brought even greater glory to the company and helped turn the entire concept of quality around in HP, Ken acknowledges that winning the Deming Prize was the toughest thing the little joint venture had to do in all its 26 years of history. The toughest... but the most rewarding.

"I admit," says Ken, "it was quite a heavy burden... especially for our managers. Many wondered why we had to



Ken enjoys returning to his YHP roots—the R&D lab at the YHP facility in Hachioji, Japan—to talk with young engineers (from left) Yasuaki Komatsu, Yukinori Sato and Noboru Kaito.

Raising YHP

President Ken Sasaoka has two sons and a daughter.

And another offspring called YHP. He's seen this fourth Japanese-American youngster develop from a small, sometimes shaky child, into a strong, mature, capable adult.

He points to three stages of YHP development:

Childhood: the first 12 years

The first dozen years were the learning years for YHP, according to Ken. The small joint venture was gifted with a coterie of young, ambitious, bright employees from Yokogawa, the parent company, and they absorbed American management practices and American technology quickly and well.

The young YHP achieved good growth as a small company in the instrument business. Then HP's business became broader and widened to include computer systems. Japanese customer-quality expectations were very high in this business, and YHP didn't always meet them. Clearly, says Ken, the joint venture needed to improve its quality to compete successfully in the market. And the solution, adds Ken, had to come from Japan and Japanese efforts.

The innovative years: '75 to '86

These are the years that the growing YHP came into its own and found a unique, personal voice and style. The HP division developed its own innovative quality program called Total Quality Control (TQC) that satisfied customer expectations and helped the entire company focus on quality improvements. And YHP was able to maintain excellent growth in the tough, competitive computer marketplace in Japan. "We changed in this decade," says Ken, "from being a follower to becoming more innovative, to developing our own personality."

The third phase: the YHP adult

Ken feels that YHP is going into a very creative and exciting period in its history. YHP, the professional adult, can be very proud of its accomplishments: a leader in quality, a very profitable contributor to HP's bottom line and a growing division. Now the joint venture can reach out, contribute to HP globally, develop a very international and sweeping vision. "This," says Ken, "is the best stage of all. The most creative, most inspiring time of life for YHP."

Ken Sasaoka

take it on and why we were making so much trouble for ourselves." There were hundreds of detailed charts and graphs to make, a great deal of documentation needed not only from YHP but from divisions in the U.S. YHP employees sometimes seemed to be working around the clock to fulfill the requirements.

But Ken points out that despite the hardships, the Deming Prize judges weren't asking for anything unreasonable. "They required," he says, "that some fundamental procedures be in place for quality... we were just putting our basic business requirements in order... quality requirements that all companies should have."

Ken feels that those who worked hard for the reward now believe the struggle was worthwhile. "It's made every employee in YHP proud... very proud indeed. The good memories in life don't come from the easy wins. They come from the tough experiences, from climbing very high mountains and reaching the top, from having a dream and following it through. You don't get those beautiful moments from sitting at home, watching TV. You get them from working very hard as a team. And we did that."

What do employees in YHP think of Ken's style? They call him aggressive, forceful, yet kind and thoughtful to those who work for him; a man with a *hironi* or broad vision; someone who stands behind his people and who bridges the American and Japanese cultures very well. He's also, they say, a strong and bold leader and a tough manager who takes responsibility for his decisions.

What does Ken think of his own style?

He calls his style very active, very "hands-on." "I never hesitate," says Ken, "to go to the front lines to see and hear for myself what is happening." Ken adds he's not one of those Japanese top managers—some of them very successful—who give employees guidelines and sit behind a desk stamping papers. He likes to get involved, hear the problems of the organization firsthand and speak directly to those affected by the joint venture's challenges.



Quality guru W. Edwards Deming (center) and Nancy Mann, author of *The Keys to Excellence: The Story of the Deming Philosophy*, tour HP's Hachioji facility in 1982 with Ken.

While Ken is remarkably young and energetic-looking, he admits to being close to retirement age. When will he retire? He won't say exactly, but timing, he adds, is very important in life. "I don't want to stay too long. I don't want to kill any opportunities for the next generation to take a leading role in YHP."

What advice will he pass on to his successor to continue the success of YHP's first 26 years?

Two things are of utmost importance according to Ken:

First, YHP can't succeed on its own. It has to reach out and adopt a global focus, use HP's global capabilities to win in worldwide markets. "To sustain our growth, it's crucial to develop an international viewpoint."

Second, make employee *yaruki* or motivation a priority. Ken points out that the employee pool of candidates in Japan is limited so that finding and motivating good people are vital keys to the company's continuing good health. "Every individual should feel happy to work in YHP and should feel good about contributing... it's top management's responsibility to foster that feeling."

Have there been disappointments?

A few, says Ken, and most of them minor. One of the things that has saddened him in the last 15 years of befriending HP people around the world is that a few of the friends he's made at HP have left the company. This doesn't happen often in Japan, he adds.

"Maybe," says Ken, "this shows the dynamism of American business and is a good thing... but I miss the people who left."

This man of action likes action when he isn't working as well. Ken was not hearty as a boy and was encouraged by his parents to play as many sports as possible to build up his strength. As a result, he played rugby in school, climbed mountains and was the captain of his Kyoto University ski team. Now he enjoys hiking and golf. But his greatest delight is traveling.

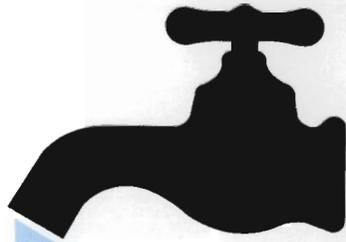
Which brings us to his fourth miracle—his wife, Toshiko, called Tillie by American friends. Toshiko travels extensively with Ken and has made HP friends all over the world. "She's the fourth—and best—miracle of my life," says Ken with a grin.

And that's saying something from a man who believes in a pocketful of miracles.

—Shirley Gilbert

(Shirley Gilbert, communications manager at HP's Cupertino, California, site, last wrote for Measure on the success of YHP's workstation business in the March–April 1989 issue.)

TQC helps HP dispose of a draining problem



HP's problems with wastewater effluents are going down the drain.

HP manufacturing sites have lowered the level of effluents discharged into the sewers by a factor of 40 since 1978.

The company's strong stance in controlling wastewater effluents actually preceded the public's growing concern for the environment and tougher regulations enforced by local governments.

While the definition of wastewater effluents isn't exactly glamorous—water from a manufacturing or lab site that goes into the sewer system—its impact on local water-treatment systems and the communities in which we do business is enormous.

In areas where HP has manufacturing and lab sites across the country, local agencies, under the guidance of state and federal laws, set maximum limits for certain metals and chemicals that can be disposed of in sewer systems.

Without notice, representatives from these agencies can visit HP manufacturing and lab sites at any time to collect water samples. After taking the sample, the agency tests it to determine if HP has exceeded any metal or chemical limits. Exceeding these limits violates wastewater regulations.

HP has operated an internal-monitoring system for a number of years. Manufacturing sites send wastewater samples to a corporate lab for analysis.

For example, in 1978 internal tests found that HP exceeded wastewater limits 279 times. Last year, out of more than 6,000 samples, HP exceeded regulatory limits only seven times. However, HP's goal is to reach and maintain a zero level of wastewater limits.

So how did HP make such a dramatic improvement in the past 11 years?

"During the first five years HP began installing more efficient waste-treatment systems and production processes," explains Larry Holbrook, manager of Corporate Environmental Health and Safety (EHS).

"When we appeared to have reached a plateau, Dean Morton (HP chief operating officer) stepped into the picture."

Unsatisfied with the results, Dean established performance measures for site general managers.

By applying a total-quality-control approach, the number of exceeded limits dropped from 82 in 1983 to seven in 1989. Keeping in mind that regulations have become more rigid the last few years, this is no small feat, Larry says.

"The people at the sites really met the challenge," Larry adds. "Their support of the objectives set forth by corporate resulted in the impressive numbers."

At least once a month an HP environmental specialist takes a sample of the site's wastewater, the specialist analyzes it and compares the results to local standards, then reports the findings to the site's general manager and to Corporate EHS.

EHS combines monthly results from sites across the country and presents the results to HP's Executive Committee. Sites which exceed the wastewater-effluent limits must address the issue immediately.

When a site exceeds the limit, the lab reports the discrepancy to the site general manager. Within a week, the GM must send an explanation and action plan to Hal Edmondson, vice president of manufacturing. This information also goes to the Executive Committee.

Additionally, a troop of corporate environmental specialists conducts annual audits at each entity. This comprehensive audit covers many areas, including wastewater-monitoring performance.

While it's not all glitz and glamour, the task of monitoring wastewater effluents should not be taken lightly, Larry says. In an effort to strive for perfection, HP has taken a proactive approach in its responsibility to the communities where it operates.

"Our performance with regard to the obligation we have to minimize adverse environmental impacts is tightly linked with the overall excellence we hope to achieve as a company," says Dean.

—Donna Jones

(This is the first Measure article by Donna Jones, a writer-editor in HP's product-press group. She says she was "flushed with excitement" writing about wastewater effluents.)

Extra

ORDINARY PEOPLE

They came from Boise, Idaho; Buenos Aires, Argentina; and Beijing, Peoples' Republic of China.

They represented engineering, manufacturing and sales, and symbolized Hewlett-Packard's 93,000-person worldwide work force.

These 109 "ambassadors," chosen by their co-workers to represent them, are special by their participation in "a global celebration"—a three-day event in May to recognize HP's 50th anniversary.

All ambassadors had a story to tell. They told how they joined HP. What they think of the company today and where it's headed. And the role each employee plays in the future of Hewlett-Packard Company.

Measure chose three ambassadors—one each from the United States, Europe and Intercontinental—to focus on for this issue. Here is a glimpse of three of the 109 ExtraOrdinary ambassadors.

Kee Hwa Seng

The 18-hour trip from Penang, Malaysia, to Palo Alto, California, a day earlier didn't seem to faze Kee Hwa Seng.

When he found a few moments and a spare telephone at the Intercontinental headquarters building, he put in a local call to people he had only talked to from 8,000 or so miles away.

"I'll be staying a few days after the 50th-anniversary celebration so I can get to know some of my counterparts at OED (Optoelectronics Division) and MSD (Microwave Semiconductor Division)," Kee explains. "They're building some testers here which will be shipped to Penang, so I'll get a preview of exactly how they look and operate."

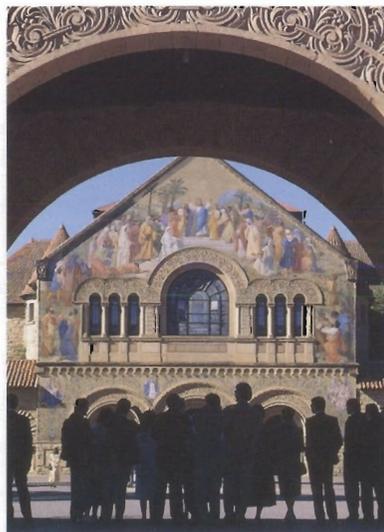
Kee, an HP employee since 1987, is a technical supervisor for electronic test measurement in Penang. How he became an HP employee is another story.

He grew up with three brothers and a sister in a poor family in Penang. His mother, a farmer, supported the family. After finishing secondary school, Kee decided to pursue a childhood ambition of becoming a pilot.

"The closest opportunity was 500 miles away in Singapore," he says, "so I joined the Singapore military. I wasn't selected for pilot school, but they did offer me electronic training."

That lasted about four years. Then the government asked Kee to become a Singapore citizen and sign a contract for four more years in the military.

Instead, he returned to Penang and began a series of electronics jobs: repairing transistor radios for a Hong Kong company; quality-assurance technician for Motorola; computer repair for Texas Instruments in Kuala Lumpur, Malaysia; setting up computer systems for a newspaper company; progressing from an equipment technician to a senior engineer at Mosstek; and more engineering work at Advanced Micro Devices. In March 1987, he joined HP.



Stanford tours and "the garage" dedication highlight the global celebration (page 16).

PHOTOS BY LARRY BRAZIL

"It was a very selective process," Kee says. "I think I interviewed four times or so before I was hired. A number of U.S. companies are expanding in Malaysia, especially in engineering and R&D areas. Openings in the test area were very competitive."

Once inside HP, he noticed things which separate the company from some of his previous employers: a chance to grow in a variety of jobs; a set of values—the HP way—which are the fiber of the company; and a strong management policy which offers training and true opportunities to practice management by objective.

"As a supervisor, I have a lot of freedom to do my job the way I think it

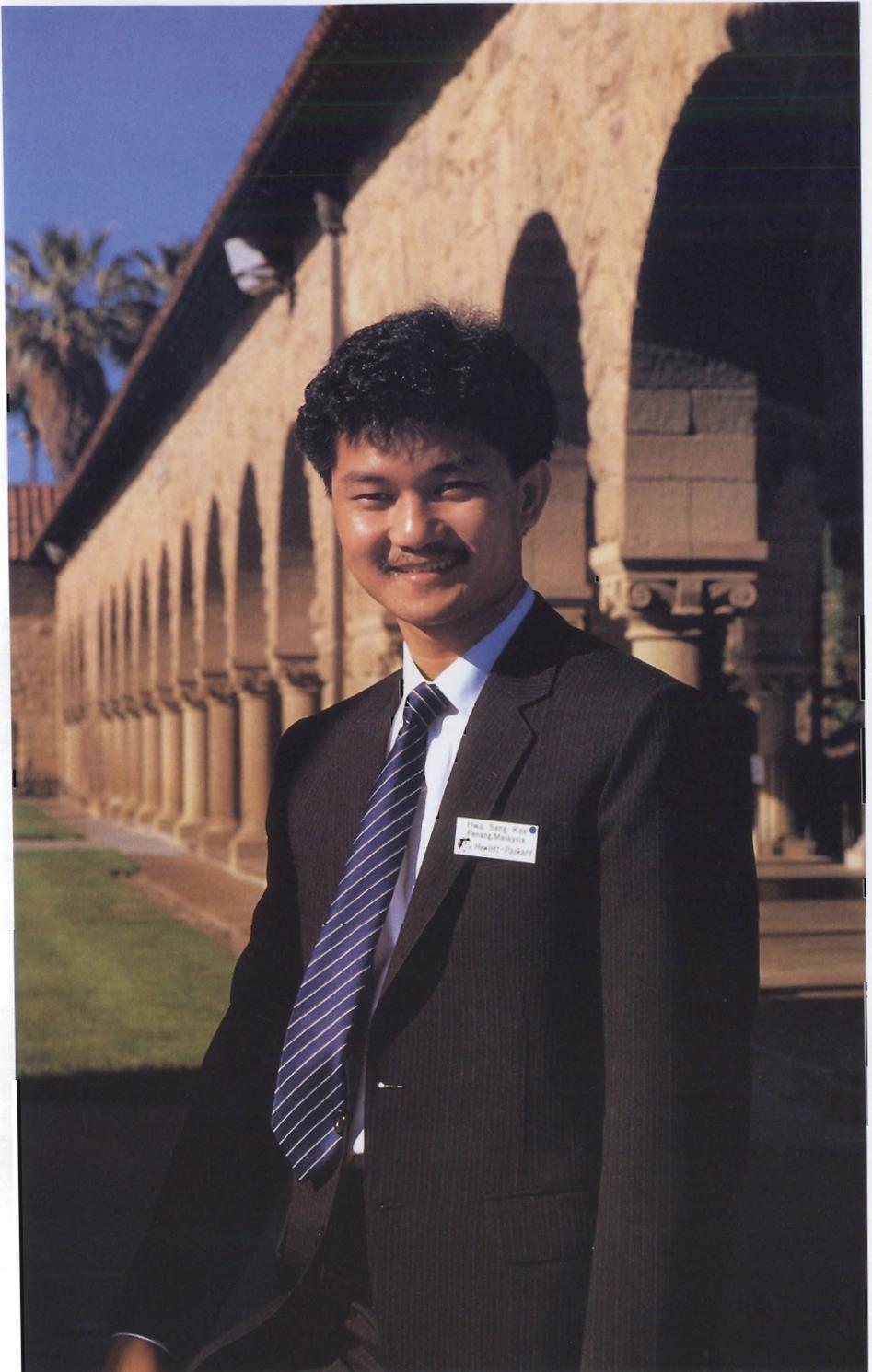
"This has been a great chance to hear and think about trends for the future and what lies ahead."

should be done," Kee says. "If you know the procedures and the style, you take it from there. There's no miscommunication. Then you're judged on your performance: did you accomplish those objectives or not? I appreciate having that freedom and accountability."

Employees from seven departments vied for who would represent HP Malaysia manufacturing for the anniversary event. Kee's name was drawn after the field was narrowed to seven exceptional performers.

"In addition to our jobs, we all participate in company programs," he says. "For example, I'm on the recruitment team which helps interview new people, and I work on public relations for new product lines."

Kee sported a big grin midway through the three-day celebration. The ambassadors had a private dinner the night before and Kee got autographs from co-founder Dave Packard and var-



Kee Hwa Seng, technical supervisor, Penang, Malaysia: "This has been a great chance to hear and think about trends for the future and what lies ahead."

ious members of the board of directors.

"This has been a great chance to hear and think about trends for the future and what lies ahead," he said. "It made me think about my ambition to become a pilot. One day my wife told me, 'You

don't have to be a pilot to fly; you can be just important and sit back and have other people fly the plane for you.'

"So you see, we can meet challenges—and succeed—in different ways."

Extra

ORDINARY PEOPLE

Georges Meyers

Georges Meyers shook his head in disbelief as he thought about his situation. Amazing.

Thirteen years ago he was a student at the University of Brussels who didn't have enough money to buy the newly introduced—and coveted—HP-35 pocket calculator.

Today, not only is he an HP field engineer who covers Belgium and Luxembourg, he's representing employees from throughout those countries as the ambassador to HP's 50th birthday.

"I've been in the United States a few times, but I've never had the opportunity to meet people like the board of directors, and to talk to them face to face. It doesn't seem possible."

Georges remembers those days at the university well. He used HP oscilloscopes in his engineering classes and had a great respect for HP products. One day he asked the local sales office for some help on a school presentation and was shocked by the response.

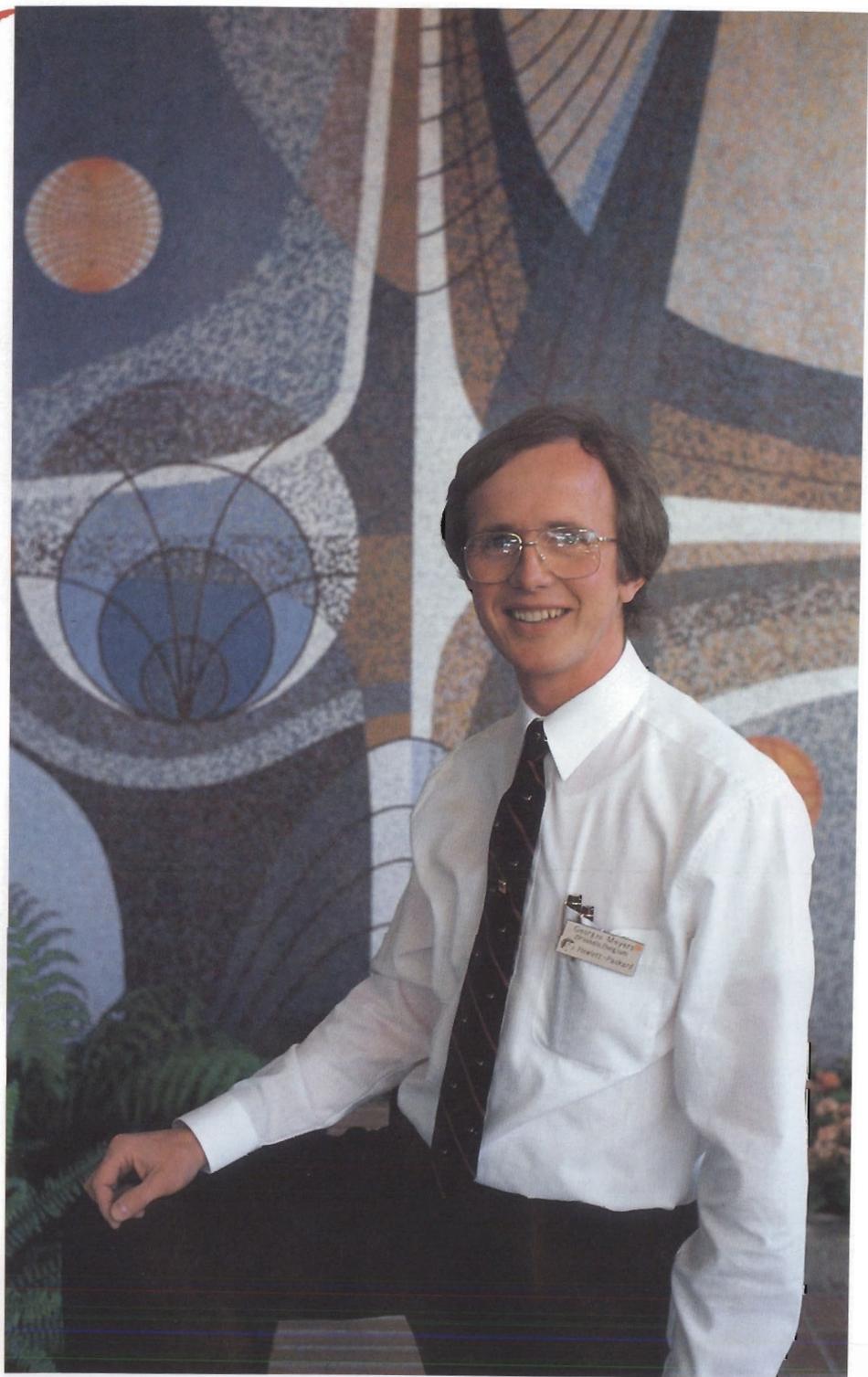
"A field engineer in test and instrumentation spent an hour answering my questions and gave me additional information," Georges says. "Most other companies would say, 'Oh, you're a student? We don't have time for you.' But the people at HP impressed me with their attitude and openness. I decided then that I wanted to work for HP."

Although Georges' degree was in electrical engineering, HP's job offer in 1978 was in sales.

Today he covers a 200-mile territory from Brussels to Luxembourg. The job demands that he speak both native languages—French and Flemish—and he's fluent in English as well. He likes his range of responsibility and the rewards which come with serving his customers well.

"HP gives me the tools and many international resources to make sure my customers are satisfied," Georges says. "My engineering training definitely helps me analyze my customers' needs and provide the best equipment. That's one of the things I enjoy most about HP: I don't just sell instruments, I sell solutions."

Being an ambassador gave Georges "another view of HP." The first full day in Palo Alto was filled with presenta-



Georges Meyers, field engineer, Belgium and Luxembourg: "It is good to know that the Executive Committee is aware of problems . . . and that there is a plan to address (them)."

tions by members of the Executive Committee; topics included "Challenges facing HP" and "Making HP more competitive."

"All of the people, especially the senior officers, were so easy to talk to," Georges said. "There was no big barrier to discussion. It was good to know that the Executive Committee is aware of problems we encounter in the field, and

that there is a plan to address major concerns. I was impressed that they gave us the opportunity to give them feedback. It was an excellent exchange of ideas.

"One of the things I'll remember most about these three days is all the friends I've made in a short time. It's like meeting the whole world in three days. It's an experience I'll cherish."

Phyllis Jones

Addison Avenue, normally a quiet, anonymous tree-lined street in Palo Alto, California, took on a new identity on this warm May day.

Instead of cars parked in front of the houses and the occasional rumble of passing cars, the 300 block was dressed in colorful balloons, ice cream and soft-drink stands, cafe tables covered by striped cloths and a barbershop quartet harmonizing its way through old tunes.

Phyllis Jones sat at a sidewalk table and thought about the words spoken the night before by Bill Hewlett and Dave Packard—the unassuming men who put Addison Avenue on the map.

"I nearly cried just listening to them talk," says Phyllis, sales support supervisor from the Glen Allen, Virginia, sales office. "It wasn't that they merely talked about their close relationship—here, right behind them, is 'the garage'

"When you work in a small sales office 3,000 miles from Palo Alto you sometimes need to see things firsthand."

which symbolizes where we came from and how we need to work together to meet new challenges today and tomorrow. That's what this whole ceremony means to me."

Phyllis felt proud to be one of five ambassadors from the Southern Sales Region. She was a child the last time she visited the San Francisco Bay Area.

"One thing I wanted to see most was the Corporate offices," Phyllis said. "When you work in a small sales office 3,000 miles from Palo Alto you sometimes need to see things first-hand to validate or correct your perceptions.

"I learned a great deal just in the presentations on Thursday from some of the Executive Committee members. For example, we have an aggressive discount program in the field; now I understand we're doing that in select cases to beat the competition and increase customer loyalty. Now I'm even more confident that HP has a



Phyllis Jones, sales support supervisor, Glen Allen, Virginia: "The ambassadors) all shook hands, started talking and were consumed with that HP personality."

good strategy."

Phyllis joined HP in 1974. She immediately was impressed with the friendly people and warm atmosphere.

"It's funny; I heard that some people were concerned that the ambassadors would have trouble mingling at first. But we're all HP people. We all shook hands, started talking and were consumed with that HP personality. This

three-day anniversary celebration is a testimony to that spirit."

How to deal with information overload is one of the best changes in 15 years with HP, Phyllis says.

"Anyone in the field organization has the opportunity to win or lose customers," Phyllis says. "That's a very stimulating—and exciting—challenge."

109 "Mouseketeers" catch the magic

No one knew just what to expect.

Even the HP people who planned the company's 50th anniversary "global celebration" for more than six months had opening-night jitters.

How do you take 109 employees—strangers, really—from a plethora of countries and cultures, throw them together for three days of discussions, tours and assorted festivities, and expect them to return to their HP sites with renewed high spirits and a message for their co-workers of a bright HP future?

Simple. You use magic.

"What did you do to our ambassador?" one site communicator asked after the ambassador reported the results of the three-day event. "We sent you a cynical person and you sent back a Mouseketeer."

What changed that ambassador?

It could've been the chance to hear presentations directly from CEO John Young and other members of the Executive Committee.

Or it could've been the insight gained from tours of Stanford University and HP sites in the Bay Area.

Perhaps it was the dinner with Bill Hewlett, Dave Packard and the HP board of directors.

Maybe it was being part of history—one of 300 people to witness the dedication of "the garage"—Bill and Dave's first workshop—as a California historic landmark and "the birthplace of Silicon Valley."

Several ambassadors said "the HP way" was the thread that tied them together.

Whatever the link—philosophy, history or magic—the global celebration was one its participants will remember for years to come.



Flags representing the countries of all 109 ambassadors brighten the lobby at the Corporate office building. Each ambassador took home a group portrait as a keepsake of the event.

TOM LEA





SAM FORENICH



LARRY BRAZIL



SAM FORENICH



top left

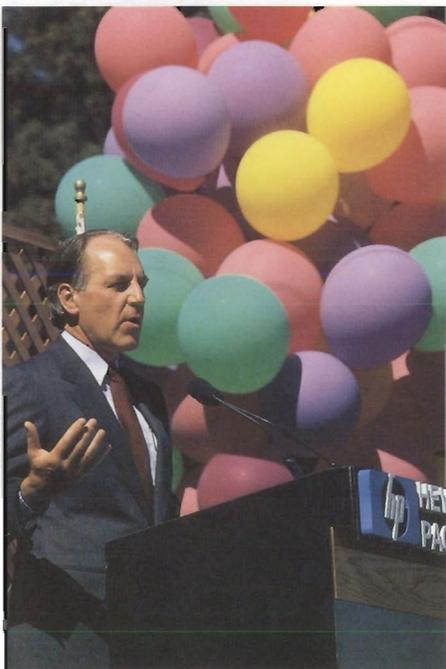
HP co-founders Dave Packard (left) and Bill Hewlett answer questions from the media during a press conference outside the garage where they began their partnership 50 years earlier.

top right

The May 19, 1989, dedication was a special day for Harvey Zieber, HP's first employee, who poses with the plaque designating "the garage" as the birthplace of the world-renowned Silicon Valley.

above

This is how most of the day looked to Bill and Dave as employees, neighbors and invited guests tried to capture a piece of history.



above

In their first visit to “the garage” in 50 years, Bill and Dave recreate the classic pose—the founders tinkering with the audio oscillator, HP’s first product.

far left

John Young, HP president and CEO, says of Bill and Dave’s first workshop, “It stands for risk-taking, for big dreams that start with high hopes and low bank balances.”

left

Barney Oliver, who spearheaded HP’s research and development efforts from 1952 to 1971, reminisces with Bill about the early days.

Share your vision of 2039

Hewlett-Packard establishes its first non-Earth manufacturing facility.

Sales top \$950 zillion, catapulting HP into the Fortune 10.

A new benefits package includes choices of coverage for pet care and plant care.

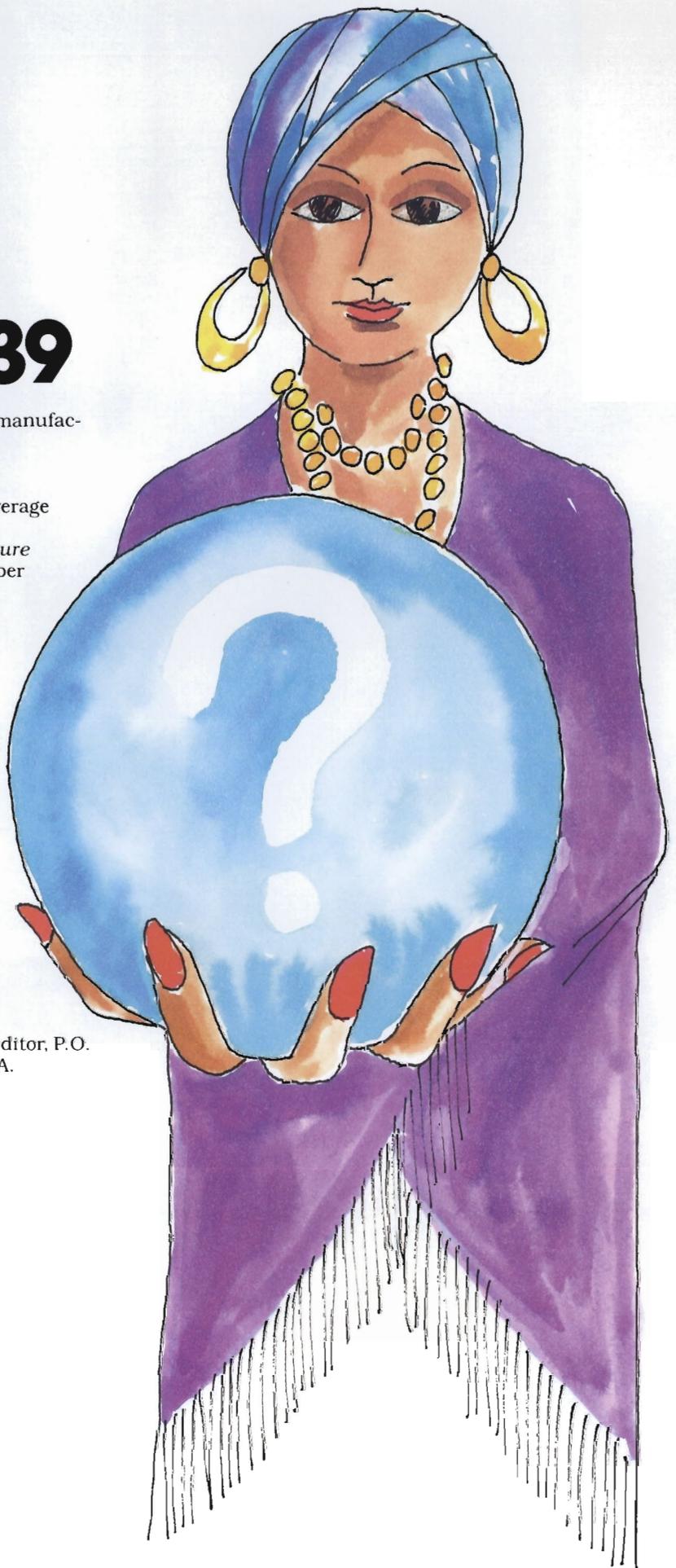
Is that what the year 2039 will look like? *Measure* will devote several pages in its November-December 1989 issue to "Visions of the future," and we invite readers worldwide to contribute their predictions for what life will be like 50 years from now—when Hewlett-Packard celebrates its 100th birthday.

Measure will print employee visions of the future along with those from experts in various fields, including computation and instrumentation, business, science, education and the arts.

Your ideas can be specifically about HP, the country where you live or about the world as a whole. Peek into your crystal ball: what do you see for technology, transportation, space and oceanic exploration, humanity or communication?

Submit your ideas—preferably by HP Desk or typed letter. Please limit your letter to 150 words so we can print as many letters as possible. Letters must be received by August 30 to be considered for the November-December issue.

Send your visions to: Jay Coleman, *Measure* editor, P.O. Box 10301, 20BR, Palo Alto, CA 94303-0890 USA.



LETTER FROM JOHN YOUNG

President John Young discusses the values of the HP way.

As you'll see in this issue of *Measure*, we've updated the text of our corporate objectives to help it better reflect our business today. The changes are small. But one thing we've done is significant. We've restated the introduction called "the organizational framework for our objectives" to clarify and emphasize principles that are so important to us.

This preamble discusses the fundamental beliefs that underlie our objectives and, consequently, everything we do. You can read the complete introduction, but briefly, it describes our values as:

- trust and respect for individuals;
- a high level of achievement and contribution;
- uncompromising integrity;
- teamwork; and
- flexibility and innovation.

These ideas are not new to HP. In fact, that's the point. Our values are an important part of who we are. They've stayed with us throughout our 50-year history. I think it's fair to say these are principles most of us at HP believe in and are committed to.

Focusing on our values also gives some clarity to what makes HP special—that elusive set of characteristics we call the HP way.

HP has grown and changed enormously in 50 years. Some people see changes—like big divisions or a difference in coffee breaks—and they think of them as the demise of the HP way.

I believe that interpretation is mistaken. The HP way has several layers. Some are stable while others are flexible. And we need both.

I see the first layer as our values, the same ones I listed above. These guide the way we behave in conducting our business and dealing with each other, our customers and shareholders.

I believe that HP's values really haven't changed at all over the years. You could think of them like a keel,



John Young (far right) welcomes Apollo Division employees Jack Moher and Rose O'Donnell to HP during the 50th anniversary celebration in May.

giving our ship stability even in times of rapid change.

What's more, our values transcend cultural boundaries. People around the world seem to feel good about working for ideals such as integrity and teamwork. Our values are the foundation on which our company culture is built.

On top of HP's values rest our objectives. These guide our business decisions and they too have changed little over the years since they were first written in 1957.

The final layer to the HP way is our strategies and practices—what HP people do to meet our objectives. As you might imagine, this layer is quite adaptable. It needs to be so we can respond to a changing environment.

But while our practices change, we can keep them consistent with the HP way by continuing to refer to our values. Let me give you a few examples:

Quality has always been one way we carried out our value of contribution and achievement. Before we began our TQC efforts 10 years ago, we pursued quality by finding and fixing problems. Today, we use TQC's process management to help prevent them. Our practices changed; values didn't.

For many years we've shown how much we value flexibility by providing HP engineers with continuing education programs to help them keep abreast of technology changes. More recently, the accelerating pace of

change has required that almost everyone in HP learn new skills. And so we've developed new training courses in manufacturing, marketing, planning, selling and management.

Teamwork is a third value that has always been part of HP's culture. Yet in recent years, we've had to broaden our understanding of who's on "our" team. Developing new products requires the joint efforts of many different functions. Nowadays projects often involve several different HP entities. We're also learning to think of people outside HP as members of our team—especially our suppliers and value-added business partners.

Protecting the HP way is a job that belongs to everyone in the company. The best way you can help is to focus on our values. Make sure we hold tightly to them while, at the same time, we stay adaptable and flexible in terms of practices. That combination will keep the HP way—and HP—strong.

Framework for our objectives

Since 1957, HP's corporate objectives have stood as a lighthouse for employees. Whether the company faced stormy waters or clear sailing, the lighthouse always has been there to show us the way. HP has changed some of the wording slightly during the years to reflect changes in day-to-day business practices. Recent changes, for example, highlight the importance of teaming up with other companies to meet customer needs. The framework section, too, has been modified to more clearly define the underlying values that have helped guide the organization for more than three decades. Despite the minor changes, the framework on this page and the corporate objectives on the following three pages are the same tenets that have been an HP strength for more than 30 years. And, like the lighthouse, they continue to shine.

The achievements of an organization are the result of the combined efforts of each individual in the organization working toward common objectives. These objectives should be realistic, should be clearly understood by everyone in the organization and should reflect the organization's basic character and personality.

At Hewlett-Packard, we have five underlying organizational values that guide us as we work toward our common objectives.

□ **We have trust and respect for individuals.** We approach each situation with the understanding that people want to do a good job and will do so, given the proper tools and support. We attract highly capable, innovative people and recognize their efforts and contributions to the company. HP people contribute enthusiastically and share in the success that they make possible.

□ **We focus on a high level of achievement and contribution.** Our customers expect HP products and services to be of the highest quality and to provide lasting value. To achieve this, all HP people, but especially managers, must be leaders who generate enthusiasm and respond with extra effort to meet customer needs. Techniques and management practices which are effective today may be outdated in the future. For us to remain at the forefront in all our activities, people should always be looking for new and better ways to do their work.

□ **We conduct our business with uncompromising integrity.** We expect HP people to be open and honest in their dealings to earn the trust and loyalty of others. People at every level are expected to adhere to the highest standards of business ethics and must understand that anything less is totally unacceptable. As a practical matter, ethical conduct cannot be assured by written HP policies and codes; it must be an integral part of the organization, a deeply ingrained tradition that is passed from one generation of employees to another.

□ **We achieve our common objectives through teamwork.** We recognize that it is only through effective cooperation within and among organizations that

we can achieve our goals. Our commitment is to work as a worldwide team to fulfill the expectations of our customers, shareholders and others who depend upon us. The benefits and obligations of doing business are shared among all HP people.

□ **We encourage flexibility and innovation.** We create a work environment which supports the diversity of our people and their ideas. We strive for overall objectives which are clearly stated and agreed upon, and allow people flexibility in working toward goals in ways which they help determine are best for the organization. HP people should personally accept responsibility and be encouraged to upgrade their skills and capabilities through ongoing training and development. This is especially important in a technical business where the rate of progress is rapid and where people are expected to adapt to change.

The Hewlett-Packard objectives which follow were initially published in 1957. Since then they have been modified from time to time, reflecting the changing nature of our business and social environment. This version represents the latest updating of our organizational framework and objectives. We hope you will find this informative and will look to these objectives and underlying values to guide your activities as part of the HP team.



Chairman of the Board



Director Emeritus



President and Chief Executive Officer

July 1989

Hewlett-Packard Corporate Objectives

Profit: *To achieve sufficient profit to finance our company growth and to provide the resources we need to achieve our other corporate objectives.*

In our economic system, the profit we generate from our operations is the ultimate source of the funds we need to prosper and grow. It is the one absolutely essential measure of our corporate performance over the long term. Only if we continue to meet our profit objective can we achieve our other corporate objectives.

Our long-standing policy has been to reinvest most of our profits and to depend on this reinvestment, plus funds from employee stock purchases and other cash-flow items, to finance our growth.

Our level of business varies from year to year, reflecting changing economic conditions and varying demands for our products. To deal with these changes, it is important that we be consistently profitable. When our business grows slowly, our profits allow us to accumulate cash reserves for the periods of rapid growth that require more capital to finance. We rely primarily on profits and the cash reserves to fund the growth of our ongoing operations. From time to time, we will use debt to fund our growth when special requirements arise.

Meeting our profit objective requires that we design and develop each and every product so that it is considered a good value by our customers, yet is priced to include an adequate profit. Maintaining this competitiveness in the marketplace also requires that we perform our manufacturing, marketing and administrative functions as economically as possible.

Profit is not something that can be put off until tomorrow; it must be achieved today. It means that myriad jobs be done correctly and efficiently.

The day-to-day performance of each individual adds to—or subtracts from—our profit. Profit is the responsibility of all.

Customers: *To provide products and services of the highest quality and the greatest possible value to our customers, thereby gaining and holding their respect and loyalty.*

HP's view of its relationships with customers has been shaped by two basic beliefs. First, we believe the central purpose of our business—the reason HP exists—is to satisfy real customer needs. Second, we believe those needs can be fully satisfied only with the active participation and dedication of everyone in the company.

The essence of customer satisfaction is a commitment to *quality*, a commitment that begins in the laboratory and extends into every phase of our operations. Products must be designed to provide superior performance and long, trouble-free service. We must work closely with suppliers to ensure that we receive the highest-quality materials in time to meet our production schedules. Once in production, our products must be manufactured at a competitive cost and with superior workmanship.

Careful attention to quality not only enables us to meet or exceed customer expectations, but it also has a direct and substantial effect on our operating costs and profitability. Doing a job properly the first time, and doing it consistently, allows us to employ fewer assets, reduces our costs, and contributes significantly to higher productivity and profits.

Providing innovative, reliable products is a key element in satisfying customer needs, but there are other important elements as well. HP offers many different products to many different customers, and it is imperative that the products recommended to a specific customer are those that will best fulfill the customer's overall, long-term

needs. This requires that our field sales people—operating individually, in teams, or with other companies that add value to HP products and services—work closely with customers to determine the most appropriate, effective solutions to their problems. It requires, as well, that once a product is delivered, it be supported with prompt, efficient services that will optimize its usefulness.

Our fundamental goal is to build positive, long-term relationships with our customers, relationships characterized by mutual respect, by courtesy and integrity, by a helpful, effective response to customer needs and concerns, and by a strong commitment to providing products and services of the highest quality.

Fields of interest: *To participate in those fields of interest that build upon our technology and customer base, that offer opportunities for continuing growth, and that enable us to make a needed and profitable contribution.*

Our company's growth has been generated by a strong commitment to research and development in electronics and computer technology. That growth has been accomplished in two ways—first, by providing a steady flow of new products to markets which we already serve, and second, by expanding into new areas that build upon our existing technology and customer base.

Our first products were electronic measuring instruments used primarily by engineers and scientists. In time, we extended our range of measurement expertise to serve the areas of medicine and chemical analysis. Recognizing our customers' needs to gather and use large quantities of measurement data, we developed a small family of computers which later evolved into a broad line of computer and computer-based

products, including associated software.

By combining and effectively applying its expertise in both measurement and computation, HP is able to serve the growing needs for high-performance business, manufacturing and design systems, test and measurement instrumentation, and medical and analytical products.

HP's basic purpose is to improve our customers' competitiveness and operational performance by providing innovative products and services that help them develop and manage their information environment. We provide products and services that help customers acquire, display, analyze, communicate, store and make information more manageable. Customers' information needs may require a solution where HP must work in partnership with another company to meet those needs. For that reason, our design goal is to provide highly functional, interactive hardware and software that can be assembled easily by HP, customers and other organizations.

Within its broad fields of interest, HP has ample opportunities to pursue a variety of businesses. In evaluating those opportunities, we choose those that have strong links to our existing technology and customer base. In addition, we evaluate those businesses on the basis of their profit potential, long-term stability, our ability to make a distinguishing *contribution*, and their likelihood of generating the cash flow needed to continue HP's tradition of self-financing.

Growth: *To let our growth be limited only by our profits and our ability to develop and produce innovative products that satisfy real customer needs.*

How large should a company become? Some people feel that when it has reached a certain size there is no point in letting it grow further. Others feel

that bigness is an objective in itself. We do not believe that large size is important for its own sake; however, for at least two basic reasons, continuous growth in sales *and* profits is essential for us to achieve our other objectives.

In the first place, we serve a dynamic and rapidly growing segment of our technological society. To remain static would be to lose ground. We cannot maintain a position of strength and leadership in our fields without sustained and profitable growth.

In the second place, growth is important in order to attract and hold high-caliber people. These individuals will align their future only with a company that offers them considerable opportunity for personal progress. Opportunities are greater and more challenging in a growing company.

Our people: *To help HP people share in the company's success which they make possible; to provide employment security based on their performance; to ensure them a safe and pleasant work environment; to recognize their individual achievements; and to help them gain a sense of satisfaction and accomplishment from their work.*

We are proud of the people we have in our organization, their performance, and their attitude toward their jobs and toward the company. The company has been built around the individual, the personal dignity of each, and the recognition of personal achievements.

Relationships within the company depend upon a spirit of cooperation among individuals and groups, a commitment to teamwork, and an attitude of trust and understanding on the part of managers toward their people. These relationships will be good only if employees have faith in the motives and integrity of their peers, managers and the company itself.

On occasion, situations will arise where people have personal problems which temporarily affect their performance or attitude, and it is important

that people in such circumstances be treated with understanding while the problems are being resolved.

HP selects and manages its businesses with a goal of providing long-term employment for its people and opportunities for personal growth and development. In return, HP people are expected to meet certain standards of performance on the job, to adjust to changes in work assignments and schedules when necessary, and to be willing to learn new skills and to apply them where most critically needed. This flexibility is particularly important in our industry where rapid technological change and intensifying worldwide competition compel us all to continually seek better ways to do our jobs.

Another objective of HP's personnel policies is to enable people to share in the company's success. This is reflected in a pay policy and in employee benefit programs that place us among the leaders in our industry.

HP also places a high value on hiring and promoting people of all races, ethnic backgrounds, national origins, ages, genders and those with disabilities. We believe strongly in the principles of equal opportunity and affirmative action for all employees. By tapping the talents and ideas in such a diverse work force, the company can expand its base of knowledge, skills and understanding, and become more responsive to customers' needs.

Advancement from within is based solely upon individual initiative, ability and demonstrated accomplishment. Since we promote from within whenever possible, managers at all levels must concern themselves with the proper development of their people, and should give them ample opportunity—through continuing programs of training and education—to broaden their capabilities and prepare them-

Hewlett-Packard Corporate Objectives

selves for more responsible jobs.

The physical well-being of our people has been another important concern of HP's since the company's founding. With the growing complexity and diversity of our research and manufacturing processes, we must be especially vigilant in maintaining a safe and healthful work environment.

We want people to enjoy their work at HP and to be proud of their accomplishments. This means we must make sure that each person receives the recognition he or she needs and deserves. In the final analysis, people at all levels determine the character and strength of our company.

Management: *To foster initiative and creativity by allowing the individual great freedom of action in attaining well-defined objectives.*

In discussing HP operating policies, we often refer to the concept of "management by objective." By this we mean that, insofar as possible, each individual at each level in the organization should make his or her own plans to achieve company objectives and goals. After receiving managerial approval, each individual should be given a wide degree of freedom to work within the limitations imposed by these plans, and by our general corporate policies. Finally, each person's performance should be judged on the basis of how well these individually established goals have been achieved.

The successful practice of "management by objective" is a two-way street. Management must be sure that each individual understands the immediate objectives, as well as corporate goals and policies. Thus a primary HP management responsibility is communication and mutual understanding. Conversely, employees must take sufficient interest in their work to want to plan it, to propose new solutions to old

problems, to stick their necks out when they have something to contribute.

"Management by objective," as opposed to management by directive, offers opportunity for individual freedom and contribution; it also imposes an obligation for everyone to exercise initiative and enthusiasm.

In this atmosphere it is important to recognize that cooperation between individuals and coordinated efforts among operating units are essential to our growth and success. We are a *single* company whose strength is derived from mutually helpful relationships among units that may be geographically dispersed but are closely linked through common technologies, customers, goals and objectives.

It is important, as well, for everyone to recognize there are some policies which must be established and maintained on a companywide basis. We welcome recommendations on these companywide policies from all levels, but we expect adherence to them at all times.

Citizenship: *To honor our obligations to society by being an economic, intellectual and social asset to each nation and each community in which we operate.*

All of us should strive to improve the environment in which we live. As a corporation operating in many different communities throughout the world, we must make sure that each of these communities is better for our presence. This means identifying our interests with those of the community; it means applying the highest standards of honesty and integrity to all our relationships with individuals and groups; it means enhancing and protecting the physical environment, building attractive plants and offices of which the community can be proud; it means contributing talent, time and financial support to worthwhile community projects.

Each community has its particular set of social problems. Our company must help to solve these problems. As

a major step in this direction, we must strive to provide worthwhile employment opportunities for people of widely different backgrounds. Among other things, this requires positive action to seek out and employ members of disadvantaged groups, and to encourage and guide their progress toward full participation at all position levels.

As citizens of their community, there is much that HP people can and should do to improve it—either working as individuals or through such groups as churches, schools, civic or charitable organizations. In a broader sense, HP's "community" also includes a number of business and professional organizations, such as engineering and scientific societies, whose interests are closely identified with those of the company and its individual employees. These, too, are deserving of our support and participation. In all cases, managers should encourage HP people to fulfill their personal goals and aspirations in the community as well as attain their individual objectives within HP.

At a national level, it is essential that the company be a good corporate citizen of each country in which it operates. Moreover, our employees, as individuals, should be encouraged to help find solutions to national problems by contributing their knowledge and talents.

The betterment of our society is not a job to be left to a few; it is a responsibility to be shared by all.

YOUR TURN

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

"Test of time" receives more passing marks

Thank you! The "Test of time" article in the March-April issue was inspiring. It intensified the feeling of pride and excellence shared by HP people the world over.

HP has not only survived the constant change and challenge of the past 50 years, but has grown into a mature leader in the world marketplace. Indeed, the people of HP thrive on challenge, and this HP-way spirit is unequalled anywhere. It ensures our success in the next 50 years. Keep up the good work, HP!

MARK ANTHONY
Richmond, Virginia

The March-April issue is a terrific compilation of HP history, trivia and memorabilia. I have been with the company only two years, but looking through that issue made me feel like I was looking through an old family album.

Is it possible to get a few reprints of "The test of time" to share with new employees over the next few years?

DAN GOESE
San Diego, California

You can order reprints free in packages of 50 copies from the Literature Distribution Center in Palo Alto, California. Ask for form number 5959-2600.—Ed.

The March-April issue was interesting, especially the decade-by-decade article.

Sometimes I tend to forget the feeling of "anticipating the best" that I felt the day I joined Hewlett-Packard eight years ago. Your article reminded me to think about it again.

PATRICIA A. JOHNSON
Fort Collins, Colorado

Wearing a global hat

I enjoyed the article on globalization in the March-April issue. It was interesting and timely. In my department, Corporate Marketing Administrative Systems, software teams are working hard to meet worldwide needs with sales systems.

Our experience has shown us that globalization is challenging and frustrating at times. In order to succeed, everyone in the organization must think globally and choose the best worldwide solution to a problem. In our project and in HP as a whole, we must keep our "worldwide hats" on at all times.

LISA BURNS
Palo Alto, California

"Globalization will be a natural act" was the main statement of the article. Compared with its competitors, HP offers less-localized documentation.

Here in the German CPO I'm asked every week when a certain manual will be released. I think the production sites hesitate to order translated documentation. But what came first, the chicken or the egg? Many customers ask for localized documentation before buying an HP product. Shouldn't we make this process "natural" by offering a better service?

H.P. HUBERT
Böblingen, West Germany

Thanks for the globalization article.

One major problem in the globalization process is HP's structure. All these nice words and good intentions mean nothing when division managers look at their profit. Divisions talk of return on investment when planning localization. This makes sense. But ROI for whom? The divisions or HP as a company?

In the smaller countries, a project-by-project ROI approach would mean canceling all software projects. But what about the impact on hardware sales if we don't have any localized software? This has to be considered when targeting.

I don't think the term localization will ever disappear from HP's terminology. But hopefully it will be a naturally integrated part of a product, not an add-on.

MICHAEL CHRISTENSEN
Grenoble, France

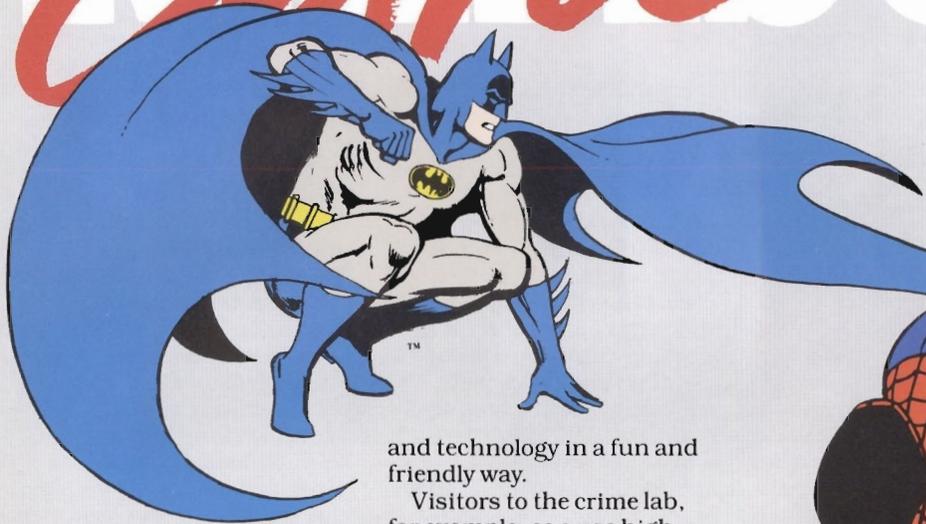
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EXTRA



Holy hall of science: HP joins Batman, Spider-Man

Some favorite comic-book heroes—with help from HP—are teaching kids of all ages more about the marvels of science.

Super Heroes,* a traveling exhibit created by the Oregon Museum of Science and Industry (OMSI), will visit science centers in 10 U.S. cities during the next three years to encourage all age groups to explore science

and technology in a fun and friendly way.

Visitors to the crime lab, for example, can use high-tech tools such as an HP gas chromatograph/workstation to help solve a mystery just like Batman.

An HP Faxitron cabinet will give exhibit visitors X-ray powers like Superman to see through various containers.

With an HP ultrasound system, kids and grownups can see inside mysterious objects which are suspended in water.

And two HP Vectra personal computers help would-be Spider-Man and Wonder Woman test their knowledge of high-tech devices and materials found

in the Super Heroes exhibit.

HP donated more than \$70,000 in equipment for the exhibit, joining co-sponsors Dow Chemical Company, DC Comics Inc. and Marvel Entertainment Group, Inc.

Additionally, HP employees from the Vancouver (Washington) Division worked with OMSI organizers to help arrange the science-awareness exhibit.

The exhibit opened at

OMSI in June. Future destinations include Los Angeles, California; Detroit, Michigan; Tampa, Florida; Indianapolis, Indiana; Nashville, Tennessee; Charlotte, North Carolina; Philadelphia, Pennsylvania; Louisville, Kentucky; and Ft. Worth, Texas.

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HP retiree Jack Goodwin, left, presides over the May Fete Parade.

HP on parade

The city of Palo Alto, California, used its 67th annual May Fete Parade to salute another hometown institution—HP—on its 50th anniversary.

Jack Goodwin, an HP retiree who joined the company in 1942 when it had fewer than 36 employees,

was co-grand marshal for the popular children's parade.

Hundreds of residents and visitors lined the city streets to watch a dozen high school bands and costumed children of all ages. The parade theme was "A salute to science and our ever-expanding horizons."

ILLUSTRATION BY JIM BEAMAN



President George Bush salutes HP's Susan Swarthout.

Read my lips: JA is great

"It's exciting to see that what we do is of interest to other people out there, including the President," says Susan Swarthout after meeting with U.S. President George Bush in March.

Susan, a materials master scheduler at Logic Systems Division in Colorado Springs, Colorado, was singled out for her work with Junior Achievement (JA) during a National JA Business Leadership Conference in Colorado Springs.

"President Bush would like to be known as the education president, so I wasn't surprised that he agreed to be JA's keynote speaker."

Susan says. "I think he is very interested that business is out working with the students. And when I met him, he was very personable and genuinely interested in the students."

Susan has been a JA teacher and adviser for two years. Her 1987 company, the High Rollers, amassed more than \$30,000 in sales—a JA record.

A five-year HP employee, Susan was a JA student in high school. "So this is fun just to be able to return some of that to the community."

—*Jim Scheetz*
Site communicator
Colorado Springs

BOTTOM LINE

Hewlett-Packard Company reported a 15 percent increase in net revenue and less than 1 percent improvement in net earnings for the second quarter of its 1989 fiscal year, ending April 30.

Net revenue totaled \$2.864 billion, compared with \$2.496 billion in the year-ago quarter. Revenue from U.S. sales and service was \$1.282 billion, up 10 percent from the same quarter in 1988; revenue from outside the U.S. totaled \$1.582 billion, up 19 percent.

Net earnings were \$203 million or 86 cents a share on approximately 235 million shares of common stock outstanding; year-ago numbers were \$202 million or 82 cents a share on 248 million shares outstanding.

Orders of \$2.978 billion for the quarter were up 20 percent from \$2.487 billion in the year-ago quarter, with U.S. orders up 21 percent and international up 19 percent.

For the first half, net revenue was \$5.521 billion, up 18 percent over the first half of 1988. Net earnings were \$396 million (\$1.69 per share), up 4 percent from \$381 million (\$1.53 per share) a year ago.

CHART CHANGES

In the Peripherals Group, the Hardcopy Technology Business Unit has formed two new divisions. The Ink-jet Components Division under **Dana Seecombe** as general

manager includes ink-jet activities in Corvallis, Oregon, and San Diego, California. A new Asia Peripherals Division has been formed in Singapore under GM **Koh Boon Hwee**.

The Personal Computer Group has formed a new Asia-Pacific Personal Computer Division in Singapore. It will focus R&D, manufacturing and marketing that has been in Singapore, Hong Kong and Taiwan. The present Asian PC Operation will relocate to Singapore as the division's R&D function. GM is **Steve Cakebread**.

HP Turkey (Hewlett-Packard Bilgisayar Ve Olcum Sistemleri AS) officially opened April 10 under GM **Tayfun Ugur**. Headquarters are in Istanbul.

The Cupertino Manufacturing Operation and Roseville Manufacturing Operation, both in California, will be consolidated in Roseville as the new Networked Computer Manufacturing Operation under **Wade Clowes** as operations manager.

The Optoelectronics Division has formed an Electrophotographic Products Operation under **Steve Cooper**.

Within Networked Systems Marketing, **Dennis McGinn** heads a new Industry and Account Marketing Operations to win and implement big deals. Included is a newly formed Complementary Integration Operation under **Tom Steipp**.



Sprechen Sie deutsch? The new HP catalog does.

HP catalog now speaks German

For years, the HP Test and Measurement catalog has been considered the most comprehensive publication of its kind in the market. But as an English-only catalog, its importance was minimized outside the U.S.

That changed earlier this year when HP's sales marketing staff in Bad Homburg, West Germany, completed a near two-year project to translate the catalog into German.

"The catalog is the 'Bible' of HP products, and, after nearly 30 years of HP presence in West Germany it was

time for a translation," says Wolfgang Selling, test and measurement sales-development manager in Bad Homburg.

The German-language text is about 20 percent longer than English, so Wolfgang chose a slightly smaller typeface to maintain the 750-page length.

HP began distributing about 23,000 copies of the German version of the catalog in February at the Jungholz Meeting—the German equivalent to the HP general managers' meeting—and to employees and customers in West Germany, Austria and Switzerland.

YHP and Nissan off to the races

Yokogawa-Hewlett-Packard (YHP) and Nissan have teamed up for an important race-car sponsorship which is giving YHP a lot of mileage for its money.

In addition to financial backing, YHP has loaned three engineering workstations to Nissan to improve its competitiveness on the World Sports-Prototype Championship circuit.

Nissan collects data on fuel consumption, water temperature, boost pressure and other factors during a race on an HP 9000 series 300 engineering workstation.

In the pit area, crew members read information on the workstation screen and inform the driver when to return to the pits for repairs or adjustments.

Major challenges for the YHP-Nissan team included the 24 hours of Le Mans (France) in June and the



YHP gets good mileage and visibility from its sponsorship of a Nissan race car in Japan.

Fuji 500 in late July.

Nissan, one of YHP's top customers, uses HP 1000 minicomputers to test engines, transmissions, brakes and other performance features at its automobile production factories. It also uses some 70 engineering worksta-

tions at its central laboratory and design department.

The Nissan racing sponsorship has increased YHP's visibility as a total supplier of computer systems. It's a beneficial relationship, YHP people add, because car racing is extremely popular in Japan, the sponsorship

enhances YHP's relationship with Nissan, the cost is one-third that of television advertising and it helps college recruiting because racing is popular among college-age students.



Franco Mariotti, left, confers with HP-Switzerland GM Mario Fontana.

Taking stock in Europe

HP expanded its worldwide visibility and impact in April when it began listing its common stock on exchanges in London, England; Zurich, Switzerland; Paris, France; and Frankfurt, West Germany.

Senior HP executives met with members of the financial community in each city and presented a videotape in the local language explaining HP's commitment to the rapidly expanding European market. HP executives included John Young, president and CEO; Bob Wayman, senior VP and

chief financial officer; and Franco Mariotti, senior VP for Europe, Middle East Operations and Africa.

Each country required that HP prepare a detailed prospectus in the local language and get a bank sponsor from that country to list on its exchange. The Zurich listing automatically includes listings on the exchanges in Geneva and Basel as well.

One highlight of the Euro listings was a speech on global marketing by former West German Chancellor Helmut Schmidt at a dinner meeting of 100 industry leaders and HP customers.

NEW HATS

Rich Sevcik to GM, Commercial Systems Division ... **Tan Bian Ee** to managing director, HP Malaysia manufacturing ... **John Toppel** to GM, Microcomputadoras HP in Guadalajara, Mexico ... **Gary Egan** to operations manager, Ink-jet Components Operation, Corvallis.

APOLLO LANDING

Apollo Computer Inc., a leading manufacturer of engineering workstations, was officially acquired by HP May 18—the company's largest-ever acquisition. Based in Chelmsford, Massachusetts, Apollo has 4,450 employees, plants in New Hampshire and Scotland, and 106 sales and service offices worldwide. It now becomes the Apollo Division within the Workstation Group. GM is **Dave Perozek**.

NEW PRODUCTS

The Medical Products Group's **HP CareVue 9000** clinical-information system automates



HP CareVue 9000

the charting process at bedside, freeing nurses from time-consuming paperwork.

The **HP Vectra GS/16S** personal computer from the Personal Computer Group is based on the Intel386SX microprocessor. It offers high-performance at a low price of US \$3,295.

Latest Peripherals Group offerings include two 5 1/4-inch rewritable optical-storage products for OEMs, the **HP C1710A** and **HP C1711A**; and an **HP DeskJet PLUS** printer that has faster printing speeds and larger fonts than the original.

The Analytical Group's **HP 3365 ChemStation**, for use with gas or liquid chromatographic analysis, combines analytical software with the HP Vectra PC or other IBM PC/AT compatibles ... The **HP ME10d** from the Engineering Applications Group is a high-end software package for mechanical design and drafting that runs on IBM and Compaq PCs as well as the HP Vectra PC.

A new version of **HP AdvanceLink** datacom software from the Information Systems Group allows control of PC-based tasks from a central host computer, among other enhancements ... For companywide in-house networks, the Information Networks Group now offers a major new **T-1 multiplexer support** program and added **HP X.25 Private Packet Network** product capabilities.



An HP 9000 computer is a winner at the Trump Plaza.

Casino chooses HP as its Trump card

When the Trump Plaza Casino and Hotel in Atlantic City, New Jersey, needed a computer to handle its security system and complex scheduling for card dealers, officials didn't gamble on a long shot, they chose a proven winner — the HP 9000.

With a Trump-issued identification card as a timecard, hourly employees can enter various parts of

the building. A beam of light "reads" the ID card, allows access to a room and automatically records the employees' ID number to track hours worked.

The HP 9000 also automates dealer scheduling, a time-consuming task which used to be done by hand. The computer sets the schedule for dealers who work nine-hour shifts — one-hour on-duty periods alternating with 20-minute breaks.



First the good news: We won't have to add a visitors' entrance.



HP "celebrities" pose on the Amstel Hotel staircase.

Seminars include a royal touch

An international group of HP experts demonstrated how well the company understands engineering-design processes and how those processes integrated into HP's overall manufacturing environment during three engineering seminars in Amsterdam, the Netherlands.

Nearly 150 participants — including members of the press, industry watchers, management consultants

and HP employees from the U.S. and Europe — attended the seminars on engineering and design automation.

The attendees took advantage of the Amstel Hotel's stately staircase to pose for "royal" photos. For years, the official portraits for many European royal families — including Queen Elizabeth of the U.K., the Shah of Persia, and the Scandinavian, Belgian and Dutch kings and queens — have been taken on the staircase.

PARTING SHOT

Sweet taste of success

Six years ago, Jo Robertson left her job as a buyer at HP's Data Systems Division to stay home with her newborn son, Bryan.

When Bryan turned four, Jo thought about returning to work, but instead decided to pursue a fantasy: to turn a 100-year-old recipe for pecan pralines into a thriving business.

Today, Jo and her husband, Mel, who works in on-line support for the Commercial Systems Division in Cupertino, California, are the principal owners of Jo Babys'—a gourmet candy that's available in more than two dozen San Francisco Bay Area locations, including upscale supermarkets and the San Jose and San Francisco airport gift shops.

Jo Baby is the nickname Jo got years ago from her grandfather, the recipe's originator. It takes about three hours to make the sweet confection by hand, and Grandpa Boliver only made it at special times.

With automation, the Hayward, California, factory which produces Jo Babys' (the misplaced apostrophe is an attention-getting device) has reduced the time to 20 minutes. It churns out 1,000 pounds

of candy each week in 5.35-ounce boxes that sell for \$3.99 and up.

"Nobody knows the secret recipe except me, Mel, our partner and the candy maker, and he's legally sworn to secrecy," Jo says. "You can read the ingredients on the box, but the secrets are in the exact amounts and how they're cooked."

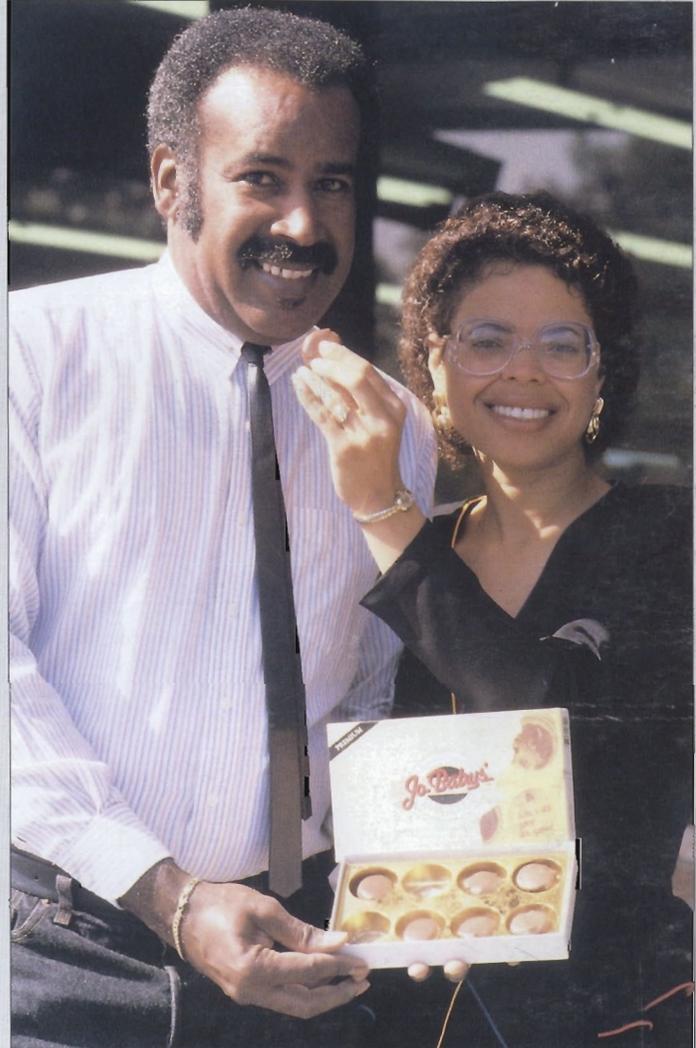
The success of Jo Babys' has allowed Jo to stay home with Bryan and run the business. Mel helps after work and on weekends, along with their partner, who doubles as a salesman. Jo and Mel say their HP experience has helped them in the business.

"Famous Amos, the cookie man, was an inspiration to us," Mel says. "He said he couldn't make our business a success, but he told us what worked for him. He also loves Jo Babys'."

(In an unscientific, yet revealing poll, two boxes of Jo Babys' lasted less than 10 minutes in the Measure office before being eaten.)

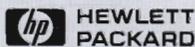
"I brought a few cases to an HP Christmas faire one year and ended up selling 210 boxes in two days," Jo says.

"Once people taste Jo Babys', they just eat 'em up. As our slogan says, 'When it's good, it's gone.'"



Mel and Jo Robertson turned a 100-year-old recipe for pecan pralines into a thriving business called Jo Babys'. Even cookie mogul "Famous Amos" loves the candy treats.

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



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