

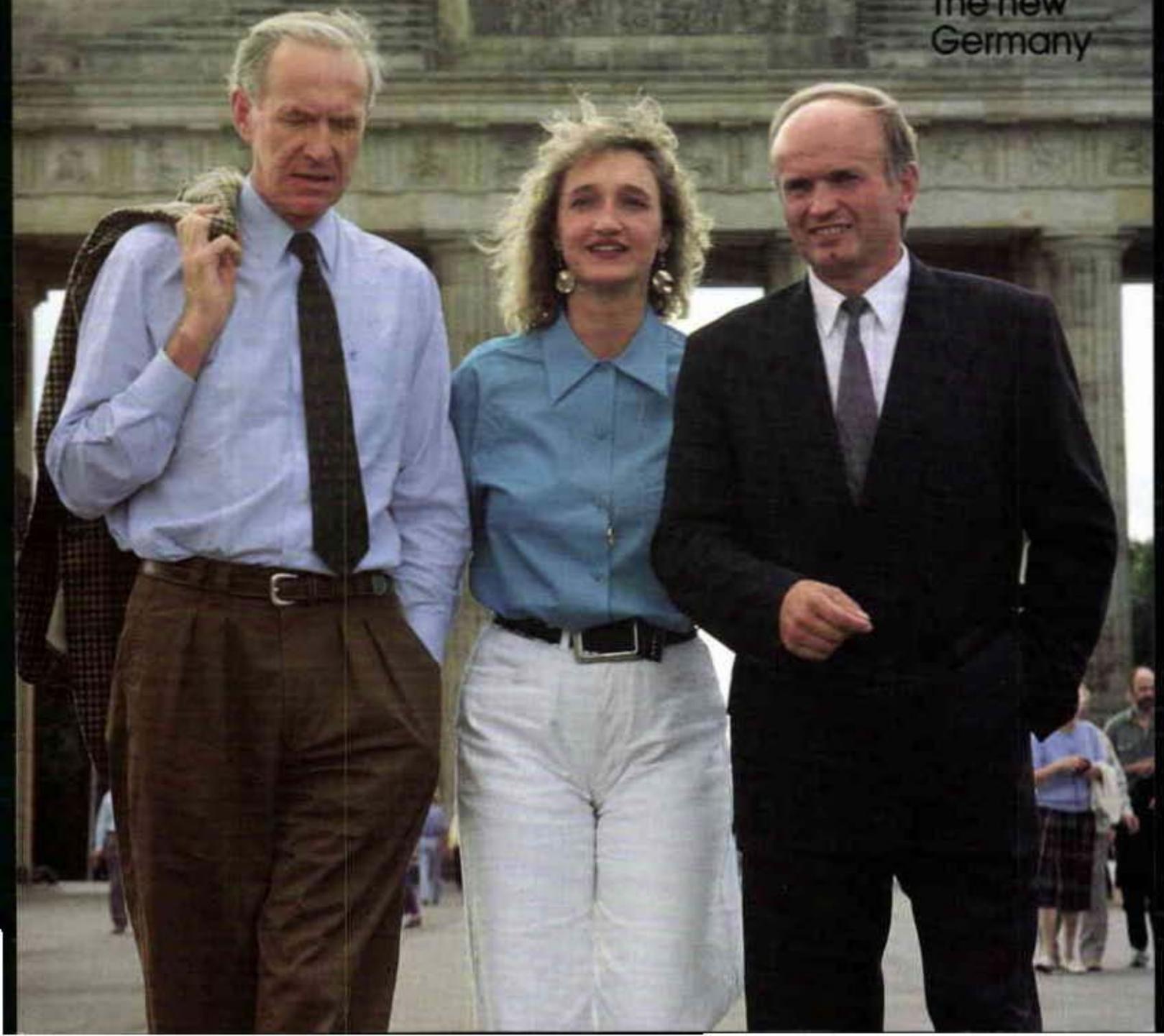
For the people of Hewlett-Packard

November-December 1991

MEASURE



The new
Germany





page 12



page 28



On the cover: In Berlin, HP employees Ernst von Glasow, Petra Wetzstein and Klaus Stamer walk through the historic Brandenburg Gate, which had been a symbol of Germany's division. Photo by Bernd Arnold.

Together again: The two Germans unite 3

HP's German Region now includes eastern Germany—a market of 16 million people with a gross national product of \$158 billion and a strong potential.

Biblio-file 8

HP's network of libraries no longer conducts business "by the book." Today, it's a high-tech gold mine of valuable information.

The wanderings of a Renaissance man 12

John Doyle, the father of MBWA, reflects on 33 years with HP, retirement and the "capricious spontaneity" it could bring.

Learning technology *with* technology 15

Removing technical barriers to teaching is the primary motivation behind COLOS—the HP-created conceptual learning of science project.

Frankly excellent 16

It takes an army of people, some HP technology and an amazing organization for Federal Express to perform its nightly wide-bodied ballet.

Benny Garcia: taking a chance 20

Whether it's competitive swimming, working with Hispanic community groups or accepting a new job, he never shies away from a challenge.

Your Turn 23

Letter from John Young 24

ExtraMeasure 26

MEASURE

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Together again:

The two Germanys unite



Replacing the flag of the former East Germany, the flag of a united Germany flies atop the Reichstag (parliament) in Berlin. This is the view from BIT, a new HP joint venture.

By Betty Gerard

By coincidence, I was a tourist in Berlin on October 3, 1990, and was caught up in the euphoria of Reunification Day

I joined thousands of Germans in a quiet pilgrimage down the Unter den Linden Boulevard to pass through the historic Brandenburg Gate, touching its grooved stone pillars for luck. A year later, how have things worked out? Here are some impressions from a return visit this fall.

Until last year, Hewlett-Packard's German Region—one of the company's most successful in the world—was actually responsible for sales and manufacturing in West Germany only.

East Germany was another country entirely. For 40 years, the German Democratic Republic (GDR) had been occupied by U.S.S.R. troops, walled off from the west and subject to all the trade restrictions applied to East Bloc countries. What sales that HP was allowed to make—mostly analytical equipment—were handled out of the Vienna, Austria, office.

Combining the two Germanys within the HP organization was something German Region management had thought about for many years. "We always watched what HP was doing in the GDR and felt close to the people there, wanting to help," says Managing Director Eberhard Knoblauch. "As soon as we could, we consolidated the two sales forces."

With reunification for the country in the air, the region made its move just three days before July 1, when West Germany's strong deutsche mark became the monetary unit for East Germany.

Five new states were formed in the east as it became part of a unified Germany. The old COCOM restrictions on imports to the East Bloc went out the window, and any HP goods now could be sold in eastern Germany.

To cover this new market, with its 16 million people and gross national product of \$158 billion, HP's German Region added staff

to the West Berlin office and began selling in the eastern German city of Leipzig in September 1990.

Gert Deiss, who handles region development activities, remembers going through the streets in Leipzig, trying to find an official with whom to register to do business. He was shown a map of the GDR that was completely white to the west. "The world stopped at the border for them," he recalls.

To coordinate the region's thrust into the east, Klaus Stamer moved from area general manager for northern Germany to a transitional role as general manager in eastern Germany.

Klaus is a realist about the eastern German economy, which has been jolted by the effects of reunification: high unemployment (in some areas, up to 50 percent) as businesses go through a wrenching change from state to private ownership. Huge *kombinates* breaking up into mid-size companies. Polluting factories shut down. Loss of markets as goods were priced in the new hard currency.

But Klaus, convinced of eastern Germany's inherent strength, looks at

"The world stopped at the border for them."

the bright side. It's a wide-open market, he points out. "HP is very highly regarded—where we're known—or else is completely unknown. We win at least 80 percent of the orders we go after."

Edmund Mästele, computer sales manager and branch manager in the



Two HP sales offices serve eastern Germany (lighter green area).

Berlin office, believes that "If you go in a door and a customer sends you out, you have to go in a window."

When he read that the Ministry of Internal Affairs was about to commission Siemens to put in a system to manage the issuance of license plates for the new states, he asked that HP have a chance to offer its solution.

"I sat in that long hall for hours until I finally received a hearing," he recalls. Result: HP Berlin's first major sale of the year, for 120 HP 3000 business computers, more than half of the licensing system.

Another satisfying success for the office was getting an order to supply a network of 42 HP computers linking all universities in the east to the Deutsches Forschungsnetz (DFN) of western German universities.

The new customers in the east hope their computer vendor will be a real partner, Edmund says. "In the beginning, it is absolutely important to listen, hear and give them a hand to go through deep

water." The environment calls for sales people who are "farmers, not hunters."

In addition to responding to HP's products and open-systems strategy,

"I have money to train my people, but what do they need?"

these new customers in eastern Germany like the HP way, an appealing new concept.

Klaus admits that sales reps face some challenges. The infrastructure of eastern Germany was weakened by years of indifferent Soviet occupation. Many roads need repair. Phones are still unreliable, making it hard to schedule customer calls or make hotel reservations. Facsimile and photocopy machines are still rarities. But the Federal Government is investing heavily in infrastructure. "Next year eastern Germany will install a state-of-the-art digital phone system that will be the best in the world," he points out.

There can be a genuine advantage to starting fresh.

In local government, targeted by HP as its top market in eastern Germany, there has been a turnover in officials. Most Communists are out, new leaders are in and money is available for modernization.

Other promising markets for HP are the areas of mechanical engineering (a special strength in eastern Germany), electronics, environment, construction and universities.

The situation is changing very fast, Klaus says. "Last year, customers were



BERND ARNOLD

In Leipzig, which has a housing shortage, Nico Glowinski leaves the HP villa where some sales reps live during the week.

wide open and interested, but didn't know what they needed. Coming from a state-controlled economy, they weren't skilled in negotiating." Some unethical western companies cheated them. "Now these customers have grown up and are more critical."

The east has a number of universities that offer a high level of theoretical technical education. For teaching purposes, the German Region has given computer systems to schools in Rostock, Berlin, Magdeburg, Halle, Dresden, Leipzig and Chemnitz, and outfitted an environmental center at the University of Leipzig.

HP has also become a partner in two joint ventures in Berlin that serve eastern Germany.

The region acted quickly to establish a joint venture with an affiliate of Daimler Benz in July 1990. Known as *sfi* (Systemhaus für Informationsverarbeitung), it designs, sells and supports application solutions for the machine tool, automotive and electronics industries and for governments.

Since eastern Germany needs training urgently, another joint venture, BIT Akademie für Bildung, Information und Technologie GmbH, has been formed with Kammer der Technik, with which BIT shares a building overlooking the Brandenburg Gate and Reichstag.

BIT must first help eastern German prospects sort out their priorities. "Managers say to us, 'I have money to train my people, but what do they need?'" says Marketing Manager Hannelore Guttek.

Rudi Speier, region admin manager, says, "From a German perspective, it's hard to view this just as a business opportunity. You want to help these people develop themselves as they go through this extraordinary experience."

"But along with acting as a good citizen, HP has a genuine chance to develop a future market of importance." Predictions are that eastern Germany will emerge as the bridge to East Central Europe markets. And as part

of a unified Germany, it now belongs to the European Community.

Klaus brought in Ernst von Glasow, formerly head of HP public relations in West Germany, to establish strong ties to the media and the communities in eastern Germany. With his family home in former East Prussia now absorbed into the Russian republic, Ernst wants to contribute personally to the development of HP in eastern Germany.

For the interest of *Measure* readers, Ernst set up visits with customers in eastern Germany and the Leipzig office. He often acted as an interpreter, since his American visitor spoke no German and East Germans had been required to learn Russian, not English, as their second language.

Driving to Potsdam, the first call, Ernst was pleased that a road which had been rough two months before was now smoothly resurfaced. Potsdam itself is beginning to struggle back from years

Together

of neglect while it was used as a major Soviet military headquarters. The grimy palaces of King Frederic II that housed the post-World War II conference are being renovated, starting with the bright golden trim.

The lab of chemical engineer Renate Wildgrube at the Environmental Control Administration for the state of Brandenburg is a block from the River Havel, which flows through Potsdam.

Under Soviet occupation, great stretches of land and water became polluted in the GDR. Western Germany, on the other hand, has been deeply concerned about the environment.

The lab already monitors 20 samples of water daily from the river—into which factories still dump their waste—and some lakes. Pending regulations will require the lab to monitor the ground and air as well.

To do more thorough evaluations, it's now equipped with products from all of HP's analytical product lines. The combination of a computer and capillary

"Eastern German companies have to do five steps at a time."

system is new, "something we knew about only from the literature."

"We lived in the Stone Age and now we've changed to the New Age," Renate says cheerfully.

By contrast, SKET *Schwermaschinebau Magdeburg GmbH* in Magdeburg has been out in the world, operating in international markets. During the last 100 years, the firm, a former Krupp



affiliate, has installed hundreds of its hot rolling lines and cold rolling mills in industrial plants in more than 40 countries.

Since the changeover, SKET is looking for replacements for its former East Bloc markets. A former combine, SKET immediately restructured after July 1 and is among 7,000 firms still waiting to be sold to private buyers.

The firm already has reduced from 12,000 employees to 6,000, offering early retirement and retraining. To increase productivity, SKET has invested in HP's computer-aided-design (CAD) systems and is looking at manufacturing control.

"Eastern German companies have to do five steps at a time," explains Dr. Jörg Scharf, technical director of the Rolling Mill Division.

SKET chose HP as a long-term vendor because it "understands our decentralized company and our need for open systems," he says. International representation was another plus.

HP Berlin sales rep Franz-Joseph Wolf is one of the "farmers" patiently



In Freiberg's 800-year-old city hall, (above) Mayor Konrad Heinze and Sabina Peter use a new HP system with software developed by Volker Heim of the Leipzig office.

At the SKET factory in Magdeburg Dr. Jörg Scharf (left), talks with HP sales rep Franz-Joseph Wolf.

tilling the soil of the eastern German market. He joined HP a year ago after five years as an R&D engineer with Volkswagen. The SKET sale of 18 workstations, 38 personal computers, mechanical-engineering and other software, and network services is his first-ever order and HP's first major equipment sale to industry in eastern Germany.

The next customer stop is at the town hall on the 800-year-old central square in Freiberg, a county seat. Mayor Konrad Heinze, who is also the city manager, had to either hire more employees or go with a modern computer system.

A physicist before going into government, he chose to buy an HP 3000 with special software for local administration—developed by Volker Heim, HP Leipzig sales rep, who is an expert in municipal management. The Freiberg solution is a first for governments in the new states.

First use is for budget and payroll administration, but other needs are

emerging. "While you eat, you get more appetite," says the mayor.

There have been difficulties. The post office has a monopoly on cabling. And trying to phone an HP response center is still almost impossible. But Sabina Peter, who manages information technology, persisted in making the conversion from an old personal computer.

"Our new hardware is nice but it is even better to have interested and engaged people and the right software," says Mayor Heinze.

In Leipzig, the new HP office is directly across the street from the Nicolai Church, where the East German revolution had started.

Opening the office took some ingenuity. Three sales reps, including Branch Manager Nico Glowinski, began selling commercial computers out of a flat in September 1990. When office space was located in November, equipment for the bathroom had to be brought in from Berlin by the staff. Affordable housing was impossible to find, so HP rented a

"We lived in the Stone Age and now we've changed to the New Age."

villa where seven sales reps could live during the work week.

Now HP Leipzig has four sales staffs with 15 sales reps. It often cooperates with the Berlin office on a major sale such as several HP 9000 Series 800 multiuser systems ordered by Dresden-based WISMUT.

The Leipzig office arranges training in finance, budgeting and marketing techniques for customers. "They know the words but not the meaning," Nico says.



ERNST VON GLASOW

Chemical engineer Renate Wilgrube gathers a sample of river water that she will test with new HP analytical equipment in her environmental-control lab in Potsdam.

Joachim Diers, one of the original three, made the move from HP Stuttgart to Leipzig "because I didn't want to sit in front of the television and watch the world turn around."

His colleague Thomas Cohen, who calls himself "a typical East German," taught in an institute after studying electronics and computer science in Dresden. When the Berlin Wall fell, he considered starting his own business, but decided to join a high-tech company for more technical and personal development.

"When I joined HP in 1990, I had never been in a western company," he says.

Many faculty members at his former institute have left for jobs in the electronics industry in the west.

"For an easier life, it is better to go to western Germany," Thomas says, "but for development of the area and people here, it's better to stay here."

Viewed from German Region headquarters in Böblingen, the pioneering move eastward has been positive and has added to the region's momentum.

"We expect excellent sales in both the region and eastern Germany," says Eberhard Knoblauch. "Both should double in 1992 and double again in 1993."

"We're there on new grounds," Eberhard adds. "If we do our job right, we won't have to fight an uphill battle to make inroads."

Startup activities in East Germany are so well under way that Klaus Stamer has now moved on to manage sales of HP CADE, a newly acquired software company in electrical CAD.

Eberhard is holding the door open for future HP incentives in eastern Germany. Some government customers will look closely at who has local R&D and manufacturing, he predicts. "We'll continue to watch for opportunities."

Overall, Eberhard foresees a strong resurgence for eastern Germany. "People there are very well educated and willing to work," he says.

"It will take longer than was first predicted, but it will happen." ■

BIBLIO-FILE

HP's network of libraries no longer does things "by the book." Today, it's a high-tech gold mine of valuable information.

By Travis Ross



Before he discovered HP libraries, Jean-Paul Livieux, quality consultant for the French Sales Region, spent considerable time searching bookstores in Paris for information.

Not long ago, Jean-Paul Livieux, quality consultant for the French Sales Region in Evry, France, was helping region Managing Director Kleber Beauvillain gather information on focus groups.

Jean-Paul sent a message to HP's Corporate Library asking for a bibliography. Simultaneously, he sent the same message to Ecole Supérieure de Commerce

de Paris, a famous business school.

"I received the information first from the Corporate Library," Jean-Paul says, "and gave it to the woman who runs the university bookshop before she ever heard from a professor."

The HP Laboratories Library (still known to many as the Corporate

Library) in Palo Alto, California, receives thousands of requests each month from more than 70 Hewlett-Packard entities. Just one of 30-plus HP libraries, it serves as the hub of a group stretching from Chelmsford, Massachusetts, to Tokyo, Japan.

Although they often deal with printed matter, HP libraries are not the libraries that you remember from school. They are modern electronic information centers staffed with highly trained information consultants. They save their clients countless hours and millions of dollars, helping HP compete in tough marketplaces.

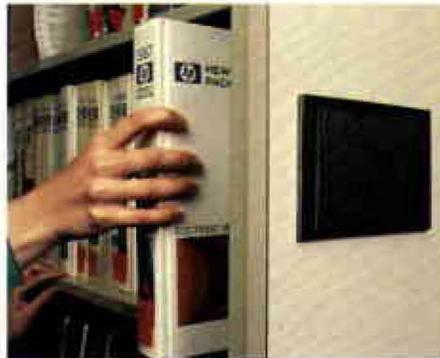
"A librarian helping a patron find a book is about one percent of what we do these days," says Lorene Hall, manager of HP Labs Library information services and technical publications. "We specialize in knowing where information can be found, how it's organized,

"It's time for employees... to start mining the gold mine..."

how to extract it, how to reorganize it so it's useful to our clients and, most importantly, how to ask the right questions of our clients in the first place."

And the HP information centers have the tools to provide the answers to just about every question their clients ask.

"It's time for employees who have a need for information to start mining the gold mine that exists in their own back-



Volumes of HP historical publications complement the library's computer files.

yard, whether they're decision-makers, researchers, engineers, salespeople or whatever," says HP Labs Library Manager Eugenie Prime.

HP libraries are well-stocked with books, journals, technical reports, conference papers and periodicals, but traditional library materials are the least of their resources. The libraries can access information that would fill any of the world's great libraries to overflowing.

In one small space at the HP Labs Library, the Compact Disclosure database provides access to information extracted from Securities and Exchange Commission documents filed by more than 12,000 public companies.

Just feet away, the CorpTech database contains extensive data on approximately 23,000 high-technology companies, both public and private. A quick turn and a few steps away, a complete CD-ROM collection of most IEEE and IEE publications since 1988 allows users to locate and print articles quickly.

Access to hundreds of on-line data bases through vendors such as Dialog, Nexis and Dow Jones extends the reach of the library far beyond its walls. Inter-library loan agreements and other programs ensure that, if the library doesn't have something on hand, the staff can

almost always get it—from anywhere in the world.

The resources in HP libraries are impressive, but most patrons agree that the expert staff is the critical resource.

"Information and the methods to access it are increasing all the time," Eugenie says. "People who don't work

"They found magazines for me that I didn't even know existed!"

with information resources regularly cannot be expected to jump in and find what they need efficiently and effectively. It's like trying to take a drink from a fire hose."

Corporate Development, a regular client of HP libraries, uses HP's information resources extensively, as the 1989 acquisition of Apollo Computer Inc. demonstrates.

"Corporate Development often has us research possible technology partners and acquisition candidates," says Shari Morwood, a senior research consultant at the Market Research and Information Center in Cupertino, California.

"They disguise their intentions quite well, though. It wasn't until we heard about the Apollo deal that we realized we helped make it happen."

HP libraries also helped Corporate Development after the acquisition. "They asked us to provide an information package on all areas of merger

Biblio-file

integration," says Liz Vugrinecz, a business-information analyst at the HP Labs Library. "We pulled articles and case studies from the Stanford Business Library. We also included studies of the psychology involved in a merger and tips on how to avoid pitfalls, along with information describing Apollo's corporate culture."

Ralph Olson of Colorado Computer Manufacturing Operation asked the Fort Collins site library to help with his research into acquisitions of a smaller scale. He was trying to find new ways to recover duties HP pays when it imports parts into the United States. Fort Collins librarians helped him identify circumstances that brought more than \$600,000 back to HP.

"When I started looking into this, it was unfamiliar territory to me," Ralph says. "There are so many subtleties in the regulations that it's really difficult to get a grasp on it. Jane St. Germain and

"We save about \$20,000 to \$50,000 on each notice..."

her crew at the library gave me materials that really helped me understand what was going on.

"They found magazines for me that I didn't even know existed! I still have them run my key words every quarter to keep current."

Familiarizing people with new fields, keeping them current in their present fields and helping them follow developments are some of the HP libraries'



HP Labs Library Manager Eugenie Prime (right) discusses the features of the CorpTech database with Derek Proudian, HP Labs project manager.

major tasks. Without the libraries, many clients would find it impossible to keep up with the torrent of information produced daily. The libraries help them stay on the cutting edge and avoid duplicating work.

Susan Dyer-Preston and Sharon Williams at the Business and Technical Information Center (BTIC) in Corvallis, Oregon, helped Norm Pawlowski avoid duplication that would have cost much more than time and money.

"Susan and Sharon routinely save me between one and two month's work every year," says Norm, who works at the Ink-Jet Components Division in Corvallis. "Thanks to them, HP has been filing required notices for the Toxic Substances Control Act without doing biological and live-animal testing; we can find related data in the scientific literature. We save about \$20,000 to \$50,000 on each notice, not even counting the moral implications."

Hardware reliability engineer Ed Aoki, a regular user of the HP Labs Library, put a twist on one of the library's traditional roles: He uses it to place volume book orders, racking up big savings.

"We purchase reference books for engineers," says Ed. "One buy produced orders for more than 100 books, normally costing more than \$11,000. Through the library, however, we were able to make the purchase at a 60 percent discount."

Terry Tallis of Dealer Channel Marketing uses HP libraries to save money on research that ultimately saves even more money.

"I was asked to lead a project to establish the supplies-distribution strategy for HP over the next five years," Terry says. "A missing component to all previous research was competitive information. We were guessing what our competition offered to dealers."

Terry told BTIC what he needed, including a complex list of search criteria that Susan shaped into a manageable and meaningful search process. She collected valuable public-disclosure information on key HP competitors. The next day, Terry received a Federal Express package containing documentation that allowed his group to complete its research and gain a good understanding

of the marketplace. The total cost: less than \$3,000.

"A parallel project by another entity using an outside research firm cost from \$35,000 to \$50,000 for each search—and took much longer," Terry says.

Despite their many success stories, however, most HP librarians agree that they still have a lot to accomplish.

Lake Stevens, Washington, librarian Ruth Van Dyke has instituted a program called Catalyst, which electronically consolidates divisional marketing information that used to be scattered at individual desks. It dramatically increases information available to each employee.

HP librarians would like to do this throughout the company.

"To survive, we must be a connection—not a collection—connecting HP employees to worldwide information resources," Ruth says. "There is an enormous amount of leverage available to HP through its quality information centers throughout the world. There will be no leverage, however, until HP takes a broader view about the role of its information centers.

"To the best of my knowledge," Ruth continues, "there is no commitment or plan by HP to provide information services to all employees."

Says Shari Morwood, "At HP, we want to create everything ourselves, but we're missing an opportunity to create when we have to reinvent the wheel. We should learn to make information a tool in everything we do." ■

(Travis Ross, a Stanford University student, was a 1991 summer intern in HP's Corporate Communications department.—Editor)



HP equipment helps run Moscow's Lenin Library, one of the world's best.

The Moscow connection

Just as libraries help keep Hewlett-Packard from wasting time, money and opportunities, HP equipment helps libraries worldwide organize their collections and meet their patrons' needs.

One of the largest libraries in the world, the Order of Lenin State Library of the USSR, has used HP equipment extensively since 1986.

The Lenin library was founded in 1862 as Moscow's first free public library. It eventually became the Soviet counterpart to America's Library of Congress, collecting obligatory copies of everything published in the Soviet Union.

Donated and private collections that were nationalized after the October Revolution helped the library's stocks reach their present size—more than 36 million items.

The collection includes thousands of rare or unique manuscripts and early editions of Russian authors; more than 700 archives of historically important Russians and Soviets; an extensive assortment of autographs; and a large stock of rare sheet music and sound recordings.

The Lenin library is more than just a massive archive of Russian and Soviet history, however. It's a vital, circulating library, lending more than 12 million books annually.

The library's holdings also are widely varied in national origin.

They encompass materials in 247 languages. Regular acquisitions of foreign literature since 1921 have boosted the number of items of foreign origin in the library's collection to more than 11 million.

A few of the items of foreign origin there come from HP. And although they're probably not listed in the library's card catalog, they help keep it in order. The library uses HP equipment for cataloging, on-line catalog-searching and record retrieval, circulation, serials control, statistical and management reporting.

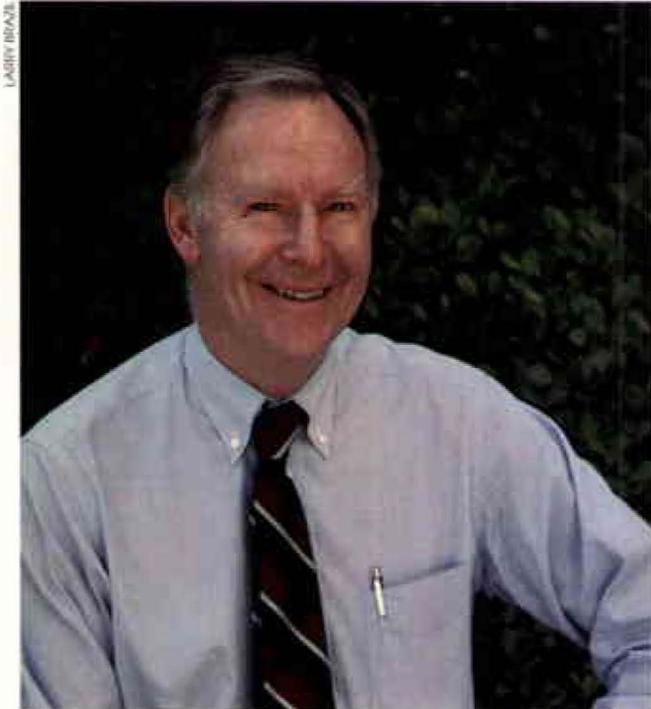
HP equipment probably will see even more use once the Lenin library implements the applications software it obtained through IIP from Virginia Tech Library System Inc.

Equipment currently in place includes three HP 3000 minicomputers with about 100 terminals and 30 HP Vectra personal computers. The library also uses many HP peripherals, including an HP Laser Station 2000, line printers and a number of HP DeskJet and HP LaserJet printers.

There may be more HP equipment in the Lenin library's future, according to HP Moscow sales rep Anatoly Repin. "The library plans to renovate all its buildings and drastically improve efficiency and productivity. The estimated cost for the project is U.S. \$150 million. We hope to be one of the main hardware vendors."

The wanderings of a

Renaissance man



LARRY BEAZLE

"I don't know if I shall like (retirement)," says John Doyle, "but I'm delighted with the opportunity to try it."

The father of MBWA reflects on 33 years with HP, retirement and the "capricious spontaneity" it could bring.

By Jay Coleman

There ought to be a picture of John Doyle in the dictionary next to the words "Renaissance man."

Friends and colleagues describe him as a creative engineer, connoisseur of fine wines, gifted writer and orator, steely negotiator, insightful businessman, intellectual, wordsmith, and avid pilot and sportsman.

He has shunned the spotlight while simultaneously making his mark on a number of HP organizations. In a 33-year Hewlett-Packard career that ended with his retirement in October John has:

- Traversed the "career maze" while holding the company's highest positions in such diverse jobs as head of Corporate Development, Personnel and Research and Development.
- Elevated the Personnel function to a highly professional level and instituted HP's first comprehensive employee survey—now an HP staple.
- Championed many fundamental HP management concepts such as the 10-step planning process, total quality control, the product-definition process, imaginative understanding of user needs and competitive-analysis tools.
- Led the transition of HP's RISC (reduced-instruction-set-computing) architecture—code-named Spectrum—from HP Labs to production. Today the architecture is the foundation of the company's computer business.

- Spearheaded HP business alliances with companies such as Canon, Hitachi and Oki.

- And coined the now-famous term "management by wandering around" (MBWA).

"John has solidly and permanently put his stamp on a number of significant items that are part of the fabric of Hewlett-Packard," says Dean Morton, chief operating officer.

In an age when management buzzwords flit in and out of the lexicon of the business world, MBWA endures as a lasting legacy.

It all came about during a speech on manufacturing at HP's 1967 General Managers' meeting. John told the assembled executives that employees were missing management's direct attention.

"What we need is not so much MBA, but more MBWA—management by wandering around," the then manufacturing manager for the Microwave Division said.

Nearly a quarter-century later, John sits in his Palo Alto, California, office

"MBWA was a catchy way of making a point."

a month before his retirement and discusses the rich heritage he leaves.

"MBWA was a catchy way of making a point," he says. "It just popped into my head. I should have copyrighted the phrase, but who knew how popular it would become?"

Wandering might be the ideal word to describe John's eclectic career.

Born in Devon, England, he attended Glasgow University in Scotland and



LARRY BICAZIL

John, who once owned an airplane with HP President and CEO John Young, plans to fly his Beechcraft Duke aircraft to Europe.

served in the Royal Air Force (RAF). He very well could have lived his whole life in England were it not for a personal philosophy which says "Go where opportunity takes you."

That philosophy took him to Stanford University where he worked his way through school by washing windows at the Top of the Mark in San Francisco, and by holding other part-time jobs.

"In three weeks I went from being an officer in the RAF with a batman (servant) to a 'hasher' waiting tables and a janitor."

In 1956, John earned a bachelor's degree in mechanical engineering from Stanford, the university where he would later receive a master's degree in engineering science through the HP honors program.

With degree in hand, he went to work for an aeronautics company in Southern California. When a recession hit the industry that year, John became one of 4,000 unemployed engineers.

He lived on the beach a few weeks before opportunity took him to Northern California.

"I knew little about Hewlett-Packard until I walked into the door," John says. "I didn't think they would hire an aerothermodynamics engineer with a background in naval architecture. Actually, I was hoping to get lunch."

He got an interview that morning, a sandwich and a phone call that afternoon asking him to start work the next week as a manufacturing engineer.

"John has had an impact on every facet of HP in which he has been involved," says Clyde Coombs, manager of external marketing for the Printed Circuit Division and a colleague for 32 years.

"He introduced numerical-control machines to HP manufacturing in 1959 and set the tone for the whole manufacturing strategy in the mid- to late 1960s," Clyde adds.

When HP decided to establish a manufacturing facility in England in 1961, John was among the five-person core

management team of the new HP Ltd.

"John was at his best when he was relating to people in the factory," says George Newman, the controller for HP Ltd. and today HP's corporate treasurer. "He was a bit of a maverick for an Englishman because he had spent the past seven years in the U.S. But he always related to the troops well."

"That was terrifically good fun," John says. "I had made four major transitions in my life—to the United States, to California, to the electronics industry and to the HP style of management—and it was interesting to transplant what I had learned back into British factory life."

In 1963, John was faced with the choice of staying with HP when the factory relocated to Scotland or returning to HP in the States. It was an easy decision.

"California offered, both literally and metaphorically, the wide, open spaces,"

Renaissance

he explains. "There were no limits there. It freed me from convention."

John became the production manager—and a year later the manufacturing manager—at the Microwave Division in Palo Alto. There he worked for an equally young and aggressive division manager named John Young, who would become HP's president and CEO some 14 years later.

There were always new opportunities to "wander around" HP for John Doyle. In 1968, he was promoted to general manager of the Manufacturing Division; in 1969, G.M. of the Systems Division; and in 1970, G.M. of the Automatic Measurement Division.

In 1971, John's former college roommate convinced him to leave HP to help him with a new business, Aerotherm, which later would become known as Acurex.

"I helped found the company, my old roommate ran it and I thought I might enjoy running a company," he says. "After a year, I was ready to return to Hewlett-Packard."

Given his experience with HP Ltd.—and as part of a 1969 team that recommended HP establish a manufacturing

"I was surrounded by brilliant and creative people."

facility in Singapore—HP hired John back as the director of Corporate Development in 1972. In 1976, the company promoted him to vice president of Personnel.

Proving that "people can do virtually anything they want to," John was



Retirement will give John and his wife, Judy, more time for climbing Matterhorn Peak in the Sierra Mountains.

named V.P. of Research and Development and head of HP Laboratories in 1984. While in that post, he helped establish the first extension of HP Labs outside of Palo Alto—in Bristol, England. During his tenure in Labs, John encouraged a multitude of new HP technologies, including reduced-instruction-set computing, thermal ink-jet technology and a host of medical and analytical products.

"John had the vision to support HP's RISC program, and it's only clear now how important RISC is," says Wim Roelandts, vice president and general manager of the Networked Systems Group. "Those qualities—vision and strong strategic management—typify John Doyle."

"I was surrounded by brilliant and creative people," John says. "All I did was to figure out ways to turn those creative, new ideas loose on the company and align them with business needs."

John became an executive vice president later that year and head of the Systems Technology Sector, charged with bringing the Spectrum computer program to market, and with looking over

peripherals, integrated circuits and networks. In 1988, he took on additional duties as the chairman of the board of the Open Software Foundation (OSF), a consortium of major computer companies dedicated to meeting customer needs by developing open and standard software systems.

"I'm very pleased with what the OSF team managed to do," John says. "It was a great technical and sociological achievement to bring all of these companies together. OSF has been a real triumph."

In retirement, John plans to pursue his love of sports, fly his Beechcraft Duke aircraft to Europe, use his season tickets to the San Francisco Symphony

"Retirement means capricious spontaneity."

more regularly and spend more time with his wife, Judy. He says he may write, following his father's lead.

"Retirement will mean a chance to change to an asynchronous life," John says. "I went to boarding school at age 8 and ever since then, I've lived a highly synchronized life. I've always been on some exogenous clock."

"Now I won't even have to synchronize with the sun. I can get up at midnight and go to bed at noon if I choose. Retirement means capricious spontaneity."

"I don't know if I shall like it, but I'm delighted with the opportunity to try it." ■

Learning technology with technology

Seven visiting European professors and graduate students walked into their temporary work area in HP Labs in August and immediately made one request:

Please remove the partitions which separate our offices.

The request—however practical—was richly symbolic as well.

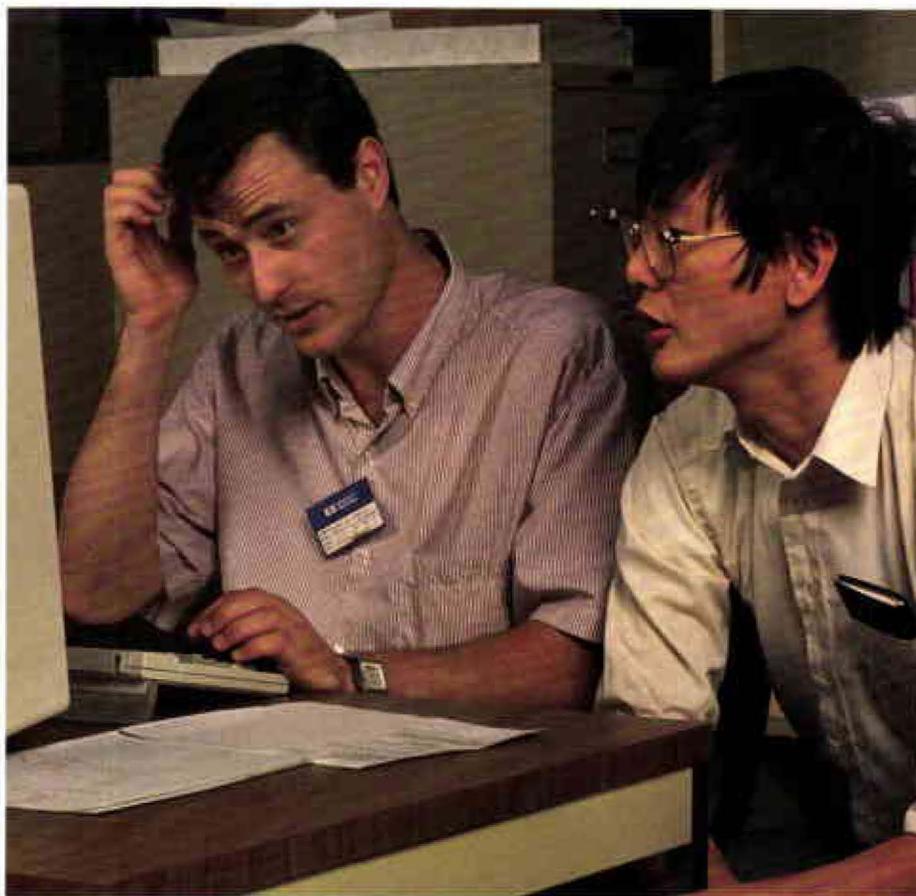
The university instructors were in Palo Alto, California, for one month to continue their work on COLOS—the conceptual learning of science project created by Zvonko Fazarinc, HP Labs' senior science adviser.

COLOS' prime objective is to use computers to teach complex scientific principles in easy-to-understand ways. During the summer project, the university instructors from France, Germany, Italy and Spain used HP workstations to develop software tools that other instructors ultimately can use in the classroom.

Funded by the European Community since 1988, COLOS is important for at least three reasons, Zvonko says, because it:

- Reinforces HP's image as a good citizen in Europe.
- Enhances the company's research and manufacturing activities there.
- Establishes HP computers and software as tools for teaching science.

"Our task is to develop tools which enable teachers to write programs with-



HP Labs' Charles Young (right), who wrote the original COLOS software, helps Francesco Esquembre of Spain's Universidad de Murcia with a programming question.

out being programmers," says Daniel Muller, an electrical-engineering instructor at Ecole Centrale de Lyon (France) University and the summer project leader.

"The first week we had to learn how to divide the tasks among us," Daniel explains. "We are all programmers, but we don't have a lot of experience working in groups. Removing the office partitions was the first step in building a team."

With the physical barriers out of the way, the team concentrated on the real challenge: removing the technological barriers that make science and physics concepts difficult for many people to learn—and for many instructors to teach.

Zvonko and HP Labs' Charles Young, who wrote the original COLOS software, helped the instructors develop a new generation of software tools based on the UNIX* system/X11/Motif platform.

Learning can be intuitive, Zvonko says, and computer simulation is an excellent visual way to explain scientific principles.

"I'm testing my ideas on my 6-year-old grandson," Zvonko says. "For instance, he can convincingly explain how friction converts to heat after seeing a demonstration of molecules moving on the computer screen. He intuitively understands some concepts that even university professors often find difficult to explain." ■

*UNIX is a registered trademark of UNIX Systems Laboratories Inc. in the U.S.A. and other countries.

FRANKLY EXCELLENT

MEMPHIS, Tennessee—It's midnight and the wide-bodied ballet has begun.

For the next two hours, an army of planes, trucks, "tugs" and troops will resemble an ant colony gone amuck. It may look like chaos at first, but this invasion is as tactical as any precision military maneuver.

When these people say they're "absolutely, positively" going to deliver your package on time, it's more than an advertising slogan—it's an obsession.

This is Federal Express, one of the world's great—if improbable—business success stories.

Since its birth in 1973, "FedEx" has been an innovator in the package-delivery business. Its "hub-and-spokes" concept—fly all packages to major sorting facilities, then on to their final destination—was a stroke of brilliant simplicity.

And it works.

Each day, an army of employees, airplanes and ground-support equipment handles a staggering 1.5 million packages through various sorting hubs

Hewlett-Packard will play a role in helping FedEx keep its on-time promise.

around the world. At midnight here in Memphis, the pride of the fleet—the SuperHub sorting facility—becomes a city unto itself. In roughly three hours the SuperHub will receive, unload, sort, reload and relaunch the majority of FedEx's MD-11, DC-10, 747 and 727 trunk aircraft fleet.

And Hewlett-Packard will play a role in helping FedEx keep its on-time promise to customers.

FedEx is using a series of HP Apollo 9000 Model 720 workstations and X stations—lower-priced computer terminals that can perform many of the same applications as workstations—to develop the first phase of FedEx's new Command and Control system.

The system will address new approaches to scheduling challenges, including flight and truck planning, crew management, weather monitoring, maintenance control, freight destination and aircraft location.

FedEx is using the HP gear to cover the gambit of high-quality, high-technology development. According to FedEx officials, HP products are handling all aspects—from computer-aided-software-engineering (CASE) tools environment through software development—superbly.

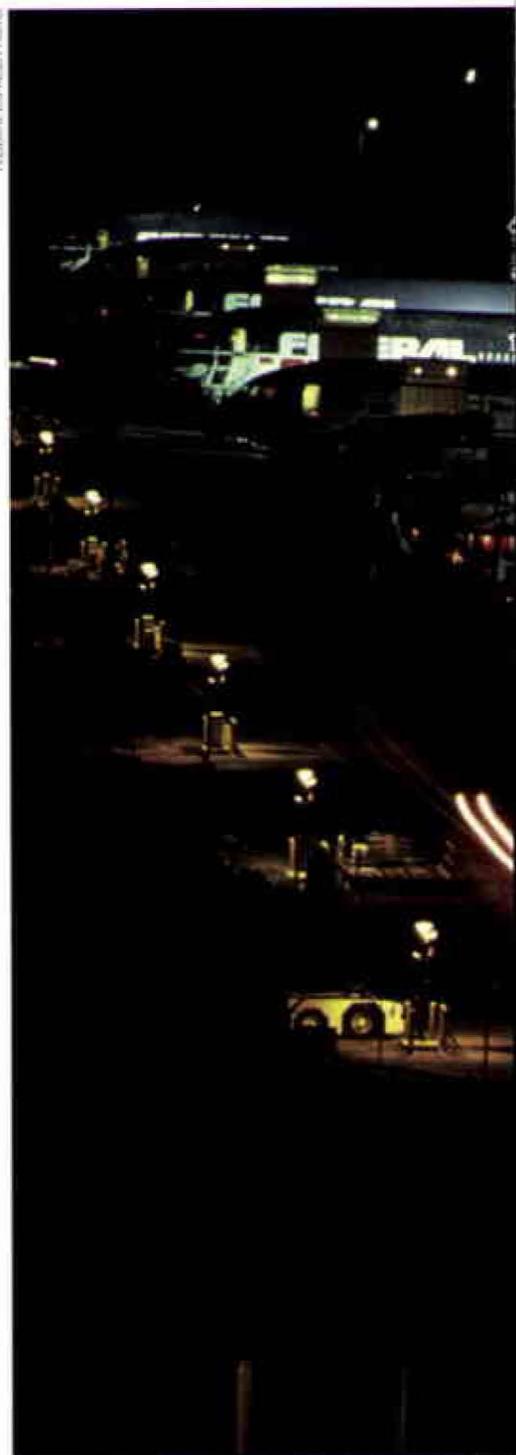
"Our technical staff is pleased with the performance of the HP workstations and X terminals," says Jon Ricker, FedEx director of Command and Control Integrated Systems.

"The 700 series X terminal combination has the potential to reduce the cost per seat of our new Command and Control system," he adds. "That means we can put more computing power on the desk of a greater population of users than we could have imagined a year ago."

HP's relationship with FedEx also takes two other forms:

- HP is one of FedEx's largest customers. In addition to next-day package service, HP contracts with FedEx for transportation and customized logistics services.
- A few years ago, FedEx invited Dennis Colard and Chuck Marr from

FEDERAL EXPRESS/PHOTO



HP's Corporate Logistics organization to speak to its senior managers on how to become more customer-focused in their process re-engineering efforts.

FedEx's "quest for quality" paid off in 1990 when the company received the



prestigious Malcolm Baldrige National Quality Award.

Back at the SuperHub, it's 2 a.m.—about three hours after the “ballet” began. FedEx workers have unloaded, sorted and loaded 10 times more packages than major airlines carry passengers in a 24-hour period.

Later today, 1.5 million packages will arrive at their destination on time. But there's little time for rest. Another 1.5 million packages will arrive here some 21 hours from now. And the ballet will begin again. ■—*Jay Coleman*

Like an ant colony gone amuck, the Federal Express SuperHub in Memphis, Tennessee, comes alive after midnight when employees receive, unload, sort, reload and launch hundreds of FedEx airplanes.

FRANKLY EXCELLENT



left

A staff of FedEx meteorologists constantly monitors conditions to help anticipate—and avoid—weather-related delays.

right

Federal Express's "hub-and-spokes" concept—flying packages to major sorting facilities, then on to their final destinations—was a stroke of brilliant simplicity.



left

An army of FedEx employees handles a staggering 1.5 million packages between 11 p.m. and 2 a.m. with an obsessive commitment of "absolutely, positively" delivering packages on time.

right

HP district sales manager Allen Stegall (left) discusses the performance of an HP workstation with FedEx's (from left) Bill Conley and Jon Ricker.

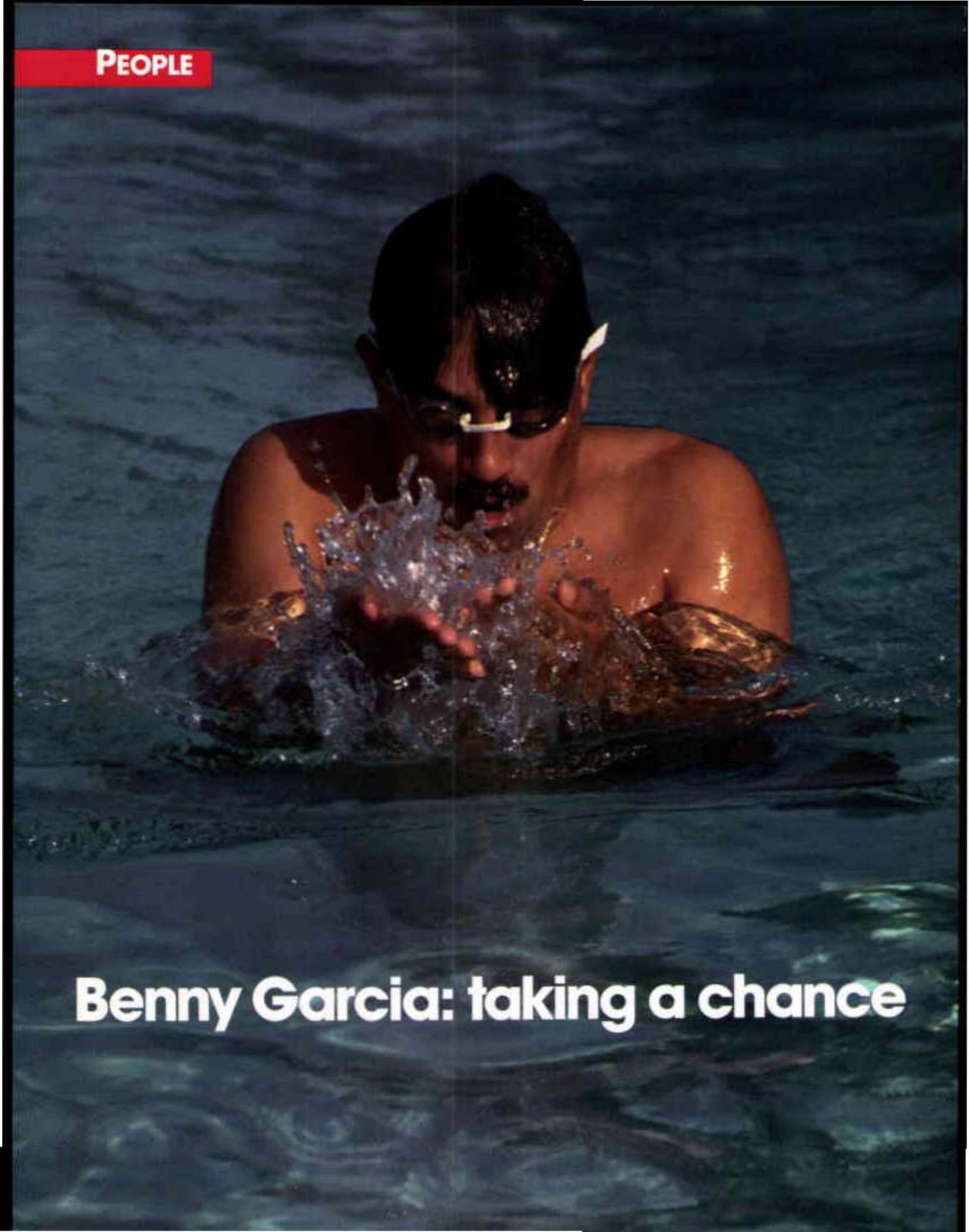


right

Federal Express's 1989 acquisition of Flying Tiger International made FedEx the world's largest full-service, all-cargo airline, serving 135 countries, including some out-of-the-way locations.



PEOPLE

A man with dark hair and a mustache is splashing water in a pool. He is wearing dark goggles with white straps. The water is dark blue, and the splash is captured in mid-air, creating a large, dynamic splash of water droplets. The man's face is partially obscured by the water and his goggles.

Benny Garcia: taking a chance

By Robert Bouzon

Buenaventura—"Good venture" in Spanish. With that as your first name, you might lead a charmed life.

But the word "venture" connotes an element of risk or chance, as in the maxim, "Nothing ventured, nothing gained."

For Buenaventura Garcia, as chance would have it, working at HP has been a good venture.

Like most of life, one's HP career is not a sure thing. For young Buenaventura (his first manager soon shortened that to Benny) what started as a summer job back in 1962 turned into an odyssey of growth that hasn't stopped yet.

As a 19-year-old Latin American swimming star, Benny Garcia had just finished an associate degree in electronics at a technical school in New York.

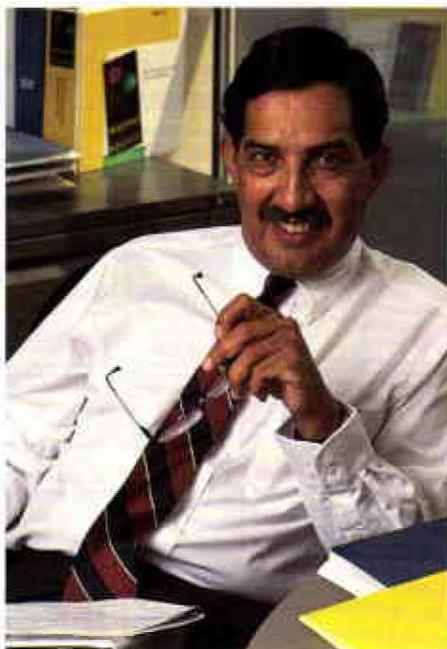
"HP helped me get a green card and hired me full time."

With only a student visa, the native of Ecuador was not sure what was coming next.

"My family had lived in various places—Jamaica, the Dominican Republic and Guatemala, where I finished high school—so I wasn't tied to one home," Benny recalls. "I think I wanted to go to Mexico—where my brother was in college—to continue my education."

Then HP intervened. It's been Benny's "home" ever since.

That summer, Benny inspected signal generators on the production line at Boonton Radio in Rockaway, New Jersey. Unknown to him, Boonton was in



"The HP way means giving people the opportunity to develop," Benny says.

the process of being acquired by a small California firm—Hewlett-Packard.

One thing led to another. "HP helped me get a green card and hired me full time. I started working on my engineering degree part time. And in the process, I married a girl from Latin America," Benny recounts.

But this isn't just a story about life's chances. It's about what Benny Garcia brings to those chances.

"Benny gets things done," says Bob Shultz, business manager of HP's New York Area, where until August Benny was quality manager. "He also makes people feel good about being at HP."

"His approach to quality was not as though it's some esoteric exercise," Shultz continues. "You would find Benny, with his glasses up on his head, working directly with individuals."

The New York Area felt Benny's impact. When the company did its first quality-maturity survey, the New York Area received one of the highest scores in HP worldwide.

Expertise in quality management was just one of the things that Benny applied for the betterment of the local community.

He spearheaded health and human-services outreach programs for the minority Hispanic community, espe-

cially for the elderly, in Bergen County, New Jersey, where the New York Area is headquartered.

"Benny ensured that people who had no access to services—due to age, language or culture—would not be left out," says Adrienne Feltman, executive

"Benny ensured that people who had no access to services... would not be left out."

director of the Community Resource Council in Bergen County.

One accomplishment was the first Spanish-language resource manual for area residents. Benny guided the project, obtaining grant money for research and publication. He also brought TQC—total quality control—to the endeavor.

"Management practices that we use at HP, like structured decision-making and working in groups, are skills welcomed by community groups," he explains. "We applied Hoshin-type planning to the community projects and programs. The company also granted or loaned HP computers, and we taught groups how to use them."

Benny also advised students at Ramapo College in Bergen County, and was recognized for his teaching and involvement in the school's Minority Achievement Program.

But there's another dimension to Benny Garcia besides work at HP and involvement in his community: he likes to swim. And does he ever!

A national breaststroke champion in Ecuador at age 13, Benny has been involved in U.S. Masters Swimming competitions for many years. Last summer, he competed in the biennial Inter-

A competitive drive has made Benny Garcia a champion swimmer and successful manager.

Benny

national Masters meet, ranking 12th in the world for the 200-meter breast stroke in his age bracket. He ranks fifth in the U.S., where he routinely competes against former Olympic team members.

On casual meeting, Benny could be mistaken for a typical, out-of-shape, middle-aged manager, not the athlete he is. An illustration: disbelief registered as colleagues heard that, on a trip to California two summers ago, Benny swam the Golden Gate—the icy entrance to San Francisco Bay.

"I got interested in the open-water part of Masters competition a few years ago," Benny says. "Last summer we swam Chesapeake Bay."

The Chesapeake swim, at 4.5 miles, was the tougher, he says. Both swims are very cold, and ocean currents slice across the Golden Gate. "But it's only a mile and a quarter wide," he notes modestly.

At the international meet in Rio de Janeiro, Brazil, Benny finished ninth in

"His approach to quality was not...some esoteric exercise."

a field of 400 swimmers who competed in the 4-mile splash around lovely Copacabana Bay.

Once, Benny even found a way to combine his swimming and community service interests. For a leukemia charity, Benny got HP employees to contribute a certain amount for each pool lap he would swim. HP agreed to match the total employee donation.

Though Benny suggested 5 cents per lap, the HP office manager insisted on a



Benny meets with (from left) Augusto Cabana, sales manager, and Carly Crain, senior contracts administrator, at the Latin America Sales Region headquarters in Miami, Florida.

35-cent-per-lap minimum. Little did he know Benny would swim for more than four hours, raising more than \$800 for the charity in one afternoon!

Today, Benny is embarking on a new adventure for HP. Once again, life's twists and turns proved unpredictable.

Benny has just become the commercial-services manager for HP's Latin America Region. Relocated to Miami, Florida, he has sales-admin and distribution responsibilities for such growing markets as Mexico, Brazil, Argentina and Venezuela.

Although Benny was interested for more than 20 years in having a Latin American assignment for HP, he never took the plunge. He chose to grow with the Eastern sales team, where he held various customer-support and sales-admin management roles before becoming quality manager.

But he was forced to broaden his horizons when the sales-area-level quality-management role disappeared

during recent downsizing.

"We've had more change in the last few years than in the previous two decades," Benny observes. "And yet, HP still makes sure that people are the key asset."

As Benny sees it, "The HP way means giving people the opportunity to develop." He looks on his new assignment—like his first HP job—as just such an opportunity.

And, though he's been seen in a sombrero singing "La Bamba" at New York Area beer busts, Benny avers that the HP way "is not parties and picnics."

Thus, Benny Garcia continues on his "good venture" at HP. Certainly he, and the company, are better for it. ■

(Robert Bouzon is HP's East Coast Public Affairs manager. He last wrote for Measure in the September-October 1991 issue on the Computer Systems Policy Project.—Editor)

That Pentagon feeling

John Young says (July-August *Measure*) that the HP way is alive and well "only if we model it in our daily lives," and I couldn't agree more. But every day I see more signs that the HP way is in danger.

For example, a friend recently moved to a new assignment within Hewlett-Packard and was laying out offices for himself and his staff. He gave himself a 10-foot x 10-foot office, and the secretary 10 feet x 14 feet, because that's where the files, slide plotters and paraphernalia were stored.

But he hadn't reckoned with the HP Bureau of Office-Size Equalization, which apparently edicts office sizes by job level. And the upshot is that my friend lost the battle. It almost feels like the Pentagon.

True, the incident isn't important in its impact on selling something, but it's another nagging reminder that this company isn't the same one where office sizes were assigned locally and had something to do with the job that needed doing. (I guess it has always been true that window assignments may have favored managers. But they still could choose size and location.)

It's hard to confirm these facts, but the first-person account is sobering to me—and disappointing. I know bigness brings inevitable rigidity and homogenization. But one would like to think that local decisions still count. Is there any way left to resist such things? I wish.

JOHN MINCK
Palo Alto, California

Doggone good story

Having just read the "Puppy love" article in the September-October issue, I just thought I'd write to say how much I enjoyed the article.

I am often pleasantly surprised when I hear of how HP and its employees are helping the community, but this was just great: people devoting their time to raising such great dogs, only to give them to people in the Canine Companions for Independence program to make their lives that much better.

The way that HP allows the dogs to go to work with both the trainers and the eventual recipients is truly commendable.

Congratulations to everyone involved, and keep up the good work.

ANTHONY STUBBS
Bristol, England

A simple measure

What is the reason for continuing to send *Measure* magazine via the U.S. Postal Service directly to employee homes, rather than in bulk mailings to HP sites?

I understand continuing direct mail for retired HP employees. It seems that bulk mailing to active employees would be a simple "measure" to take to reduce costs.

LIZ EBY
Loveland, Colorado

Mailing the magazine to employees' homes is a fairly reliable way to guarantee that most employees and their families receive consistent and timely information on topics such as company strategy, business direction, employee recognition and what's going

on at HP sites worldwide. (We send bulk copies of Measure to HP locations outside the United States because of the complications of international postal regulations.)

Yes, sending bulk copies through the HP mail system in the United States would save the cost of postage. However, that would mean the additional time and money to ship the magazine to more than 100 HP manufacturing and sales locations, as well as the administrative costs of keeping track of how many copies go to each site. Sending Measure by third-class mail helps keep mailing costs to a minimum. —Editor

Please send mail

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

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

HP's president and CEO discusses the changes which made 1991 a tough year.



HP President and CEO John Young talks with Janet Russo and other Santa Clara (California) Division employees during a recent 10X quality-award presentation at the site.

October 31 marked the end of our 1991 fiscal year. While the accounting and finance people are still analyzing our year-end results for a mid-November announcement, we don't need those numbers to describe how the year felt to most HP employees. It was a tough one.

We began the year constrained by hiring and expense controls. Many jobs became "excess" and redeployment meant some were moved to distant cities. We realigned and reduced levels of management. Approximately 2,850 U.S. employees left HP as part of the Enhanced Early Retirement and Voluntary Severance Incentive programs. In other countries, other measures were taken to achieve work-force reductions.

We used these measures to address some of the most imposing challenges we've faced in our 52-year history. HP has always responded to business

downturns in order to maintain our strength. At the same time, we've sought to embrace change while preserving the basic character and values of the company. And this year was no exception.

A look at today's challenges, however, indicates fundamental changes in our business, not just the business cycles we experienced in the past. For example:

- Growth of the electronics industry in general has slowed. And Test and Measurement, as well as some parts of the computer business, have seen even slower growth due to major reductions in defense spending in many countries. As a result, we can no longer expect our revenue to grow 15 to 20 percent or more each year from market growth alone. Instead, we must have well-aimed strategies to achieve higher growth in this environment.

- Unprecedented competitive pressures have been brought about by rapidly shrinking product life

cycles, dramatic hardware-technology advances such as RISC (reduced-instruction-set computing), the movement toward open systems and more commodity-like products. As the price/performance ratio of our products continues to improve, we need to sell many more units each year just to keep our revenue constant.

■ The related movement toward indirect channels of distribution increases our discounts while putting pressure on our field selling costs. This pressure made the field organization—both administration and sales—a real issue and forced us to control our biggest expense driver—employees.

■ These same pressures affect product costs and require us to find more efficient, less-costly ways to manufacture our products. Solutions so far include consolidating some operations, using less-costly methods like surface mount and sometimes buying significant parts of our products from outside vendors instead of manufacturing them ourselves.

These changes are unlike the periods of difficulty we've encountered in the past. And they're quite unlike the period

HP has always responded to business downturns in order to maintain our strength.

in the early '70s that some people often use for comparison. At that time, a temporary recession led HP to introduce the nine-day fortnight, in which employees took every other Friday off without pay. Although a hardship for employees,

it allowed HP to avoid layoffs. It was perceived as equitable, but in fact several divisions did not participate since their orders exceeded their ability to produce products. A few divisions even worked overtime when contracting to other IIP activities wasn't practical.

Perhaps the breadth and intensity of current changes have prompted some people to ask if we're addressing them in ways consistent with the IIP way. Dave, Bill and I have discussed this question a number of times and we've concluded the answer is a very clear "yes." We simply have to make the changes necessary to keep our organization in balance and preserve its vitality.

This is the only way we can achieve long-term security and opportunity for

One of HP's greatest strengths is the balance between change and constancy.

our employees. One only has to look around the industry to see what has happened to those who have ignored this lesson.

I make this comparison between 1991 and 1970 because it illustrates one of HP's greatest strengths—something HP does better than any company in our industry: balance between the two forces of change and constancy. Our other formidable strength is the combined talent, flexibility and enthusiasm of HP people.

Because of these attributes, in 1991 we've been able to adjust our expense structure to continue to earn profits to

invest in our future, even in today's difficult environment.

We've made progress in holding down expenses and reducing our number of people. In fact, we're performing admirably compared to our competitors.

1991 has been hard for many people—for those who had to find new jobs

In 1992 we should see a real payoff for all our hard work and pain of the past few years.

and for those who had to adjust to doing the same job—or a bigger one—with fewer resources.

I'm proud of what we accomplished this year. My thanks to everyone for your cooperation and support.

I'm confident about the future. We are in an excellent position compared to most companies in our industry to participate in the exciting opportunities ahead. In 1992, we should see a real payoff for all our hard work and pain of the past few years.



Making the Difference

More than 100 years ago, a gentleman named Charles Babbage designed a calculator and called it "Babbage's Difference Engine No. 2"—not quite as punchy a name as "the HP 12C."

Maybe that's why Babbage's Difference never got built—at least not until 1991, when the Science Museum of London and five corporate sponsors, including HP, finally constructed the machine from designs that date back to 1847.

It's on display for six months in the Museum's computing gallery. In addition to assisting with construction expertise, HP donated an HP Vectra PC with 3D animation software that displays illustrations of the basic mechanisms, so visitors from around the world can see how the engine works.

As you can see in the photo, Babbage's Difference was *not* a handheld model!



HP support enabled the Science Museum of London to build Babbage's Difference Engine No. 2—the first calculator.



Tim Figge and his teammate, Homer, sprint to a record victory.

Llama-rama

Just when you thought roller-blading was the hottest new sport in the U.S., along comes llama racing.

At least that's the opinion of three HP employees from Colorado Springs, Colorado, who, along with their furry teammates, recently won first, second and fifth place in a Rocky Mountain competition.

Tim Figge, Kenny Johnson and Cliff Harrison all crossed the finish line of the Fairplay, Colorado, Pack Llama Race, with Tim and his llama beating the old record by a scorching 4 minutes.

For *Measure* readers unfamiliar with llama racing, here's a primer: After the crack of the starter's gun, runners and llamas dash to the center of town where

the llama is saddled with 30-pound weights—often the most entertaining and challenging part of the race.

Then it's up to the speed and coordination of runner and llama to conquer the grueling obstacle course, which covers 3 miles and features jumps, tunnels, river crossings, loose rocks and a 300-yard dash to the finish line.

Competitors say the altitude is the toughest part. "At 10,000 feet, everyone's panting after just a few minutes," says Cliff. Although llama racing may not be in Olympic competition anytime soon, folks in Colorado say it's just a matter of time!

Terminal fame

Movie goers with sharp eyes might spot some HP equipment in the blockbuster TriStar release, "Terminator 2: Judgment Day." But you have to look fast—it's not on screen long before it gets blown up.

TriStar hired Lightstorm Entertainment to provide a realistic look to the computer equipment that ultimately gets destroyed in the movie. Lightstorm came to HP for some computers and peripherals.

Bill Brennan of the Finance and Remarketing Division says HP provided hardware that otherwise would have been scrapped.

"Even though the equipment had no market value, HP got some excellent exposure by having our products appear in a film that is associated with high-tech."



LADY ROSENTHAL/CAROLCO PRODUCTIONS

Arnold Schwarzenegger looks like he's having a bad day at the office in this scene from "Terminator 2." HP's Finance and Remarketing Division provided gear for the movie.



Exeter first for ISO 9002

While some people are just now learning about the importance of ISO certification, the HP folks from the Exeter (New Hampshire) Computer Manufacturing Operation (ECMO) completed the year-long process in September.

ECMO became the first HP entity in North America to earn ISO 9002 certification—the stamp of approval

by the International Standards Organization (ISO) that the entity surpasses certain quality standards.

The single European market in 1992 is the impetus for ISO standards, Executive Vice President John Doyle said prior to retirement in September. "The ISO 9000 standard is totally consistent with HP's commitment to good process management through the use of TQC (total quality control) methods," he said.

"Some customers have asked us what we're doing to investigate ISO certification, and they're impressed when we tell them that we've

already been certified," says Jim Kelly, ECMO site quality productivity manager. "We expect this will give us a definite competitive advantage with some customers."

The Queensferry Microwave Operation, the U.K. Customer Engineering Organization and the Dublin, Ireland, sales office were among the first HP entities in Europe to receive ISO certification.



Hiroaki Sakai belts out "Gomenyo namida" ("I'm sorry tears") during YHP's employee-wide karaoke contest.

YHP's own "Star Search"

Employees at Yokogawa-Hewlett-Packard (YHP) joined the nationwide craze of karaoke singing this year with a companywide contest to select the best performer in YHP.

Karaoke singing, which is gaining popularity in the United States and elsewhere, is the sometimes embarrassing pastime of singing songs solo in front of friends and strangers.

Most karaoke bars provide a microphone, music and lyrics. All that aspiring

performers need is nerve and a voice.

YHP employees from throughout Japan selected their local champions—many times after a beer bust karaoke party.

Some entrants dressed in costume and imitated popular Japanese singers, much to the amusement of fans. Employee judges chose the HP karaoke champion in October.

BOTTOM LINE

Hewlett-Packard Company reported a 9 percent increase in net revenue and an 8 percent growth in net earnings in its FY91 third quarter, which ended July 31. Earnings from operations grew 20 percent.

Net revenue totaled \$3.5 billion, up from \$3.2 billion in the year-ago quarter.

Net earnings were \$192 million or \$.76 per share on approximately 252 million shares of common stock outstanding, compared with \$178 million or \$.73 per share on 242 million shares in the third quarter of FY90.

Earnings from operations were \$303 million for the quarter compared with \$276 million in the year-ago quarter.

Orders for the third quarter totaled \$3.5 billion, up 8 percent from \$3.3 billion in the year-ago quarter.

CHART CHANGES

With the retirement of Executive V.P. **John Doyle** September 30 (see page 12), the Business Development activities that had reported to him have been reassigned:

- The Circuit Technology

Group now reports directly to President and CEO John Young.

- **Bill Kay** manages Corporate Engineering, Corporate Quality, Corporate Education, HP-TV and activities in the former Corporate Manufacturing department, now restructured. (Reporting directly to Kay are Procurement, Environmental Health and Safety, Change Management, and the Product Generation Process.)

- Corporate Development reports to CFO Bob Wayman.

SAN DIEGO SITE

In the Ink-Jet Products Group, structural and management changes have been announced for two divisions at the San Diego, California, site.

The San Diego Technical Graphics Division (STG) will be restructured, comprising R&D and marketing functions. All other functions on the site for the two divisions will be consolidated within the San Diego Color Imaging Division under G.M. **Larry Brown**.

Antonio Perez becomes G.M. of STG.



"Some things are clearly built for speed. Others aren't so obvious," reads a print ad for the new HP LaserJet III Si printer.

Ad campaign focuses on "Real Life"

Last year, HP went to the dogs with a highly successful LaserJet printer advertising campaign featuring Dalmatians.

This year, the HP hard-copy products groups have a new campaign that revolves around "Real Life."

HP tested three campaigns and "Real Life" was the most persuasive in moving customers to buy HP products. The campaign uses everyday situations to showcase various HP products and their benefits.

"'Real Life' uses a soft, subtle approach," explains Derrith Lambka, advertising manager for HP's hardcopy groups. "The research showed that 'soft sell' is 'hard sell.' Consumers are tired of '80s hype.

"Overconsumption is out; more balanced, simpler lifestyles are in. The 'Real Life' campaign reflects this trend."

The new HP LaserJet printer ads focus on people

working on ideas; the message is that HP LaserJet printers are the solutions people need to make their ideas look their best on paper.

High-visibility TV ads during college and professional football games and on selected cable TV stations began in September and continue through December. The TV commercials complement a newspaper and magazine campaign in more than two dozen publications, including *The Wall Street Journal*, *USA Today*, *Time*, *Fortune*, *Business Week*, *MacWeek* and *PC Magazine*.

The HP LaserJet printer TV ad campaign works in tandem with new fall print and radio ads in the "Real Life" campaign that promote other HP hardcopy printer and scanner products, Derrith says.

OTHER CHART CHANGES

Intercontinental Operations has created a new Northeast Asia region (China, Taiwan and Hong Kong) under G.M. **Lee Ting**. Headquarters are in Hong Kong.

In the Networked Systems Group, the former Workstation Systems Division has been renamed the Workstation Business Unit. The Panacom Automation Division continues to report into it. G.M. of the business unit is **Gary Eichhorn**. . . . The Grenoble Networks Division in France has formed a new Telecommunication Networks Operation. **Andre Meyer** is G.M. of both entities.

In Guadalajara, Mexico, **Mike Forster** is site general manager for both the Guadalajara Operation and a restructured Microcomputadoras HP (MHP). **Jose Luis Ortega** manages MHP, redefined as manufacturing and distribution.

NEW HATS



Joel Birnbaum has become V.P. of R&D and director of HP Labs, continuing to serve as G.M. of the Information Architecture Group.

Chung Tung to G.M., Software Engineering

Systems Division. . . . **Werner Huettemann** to G.M., Böblingen Instrument Division.

PRESIDENTIAL VISIT

President Carlos Salinas de Gortari of Mexico was co-hosted by David Packard at a luncheon held in HP's Corporate Offices in Palo Alto on September 29 under auspices of the David and Lucile Packard Foundation.

Government and business leaders from Mexico met with industry executives from the San Francisco Bay Area.

WORTH NOTING

Oki Electric Industry Co. has licensed HP's PA-RISC technology for use in embedded-control applications.

The Open Software Foundation has selected three HP products as core components of its Distributed Management Environment: two key elements of the Open-View Network Management Server, HP Software Distribution Utilities and NetLS. HP also was involved in the print technology selected (Paladium print system, developed by MIT with IBM, Digital and HP).

To market, to market

Hewlett-Packard manufactures some 12,000 different products each year and continually feeds the pipeline with innovative ideas.

These two pages showcase some significant new products HP introduced in 1991. Omitted are products that *Measure* featured earlier this year, such as the HP 95LX palmtop computer.



HP 75000 Model D20

The scalable architecture of the HP 75000 Model D20 digital functional test system offers customers the ability to buy only the capability they need. This low-priced system is based on the VXIbus, and features comprehensive triggering, on-the-fly timing changes, and multiple timing and control signals. From the Loveland (Colorado) Instrument Division.



HP FAX-300

HP's first stand-alone facsimile machine, the HP FAX-300, uses plain paper for high-quality, permanent documents. The paper tray

holds 100 sheets of letter-size paper, and the plain paper eliminates many of the costs and inconveniences associated with thermal-paper fax devices. From the Vancouver (Washington) Division.



HP SONOS 1500

Breakthrough technology provided by HP Acoustic Quantification (HP AQ) makes the HP SONOS 1500 cardiovascular-imaging system the first echocardiography system to offer the cardiologist superior image quality and quantitative capabilities. HP AQ is a new way to process ultrasound echoes. From the Medical Products Group.



HP 8504A

For precise measurement of reflections in high-performance lightwave components and connectors, HP offers the HP 8504A precision reflectometer, with up to 100 times better performance than other available solutions. From the Network Measurements Division.



HP systems and servers

Sixteen new business systems and servers, additions to the HP 9000 and HP 3000 computer families, outperform comparably-priced competitive products by up to six times. Powered by the same Precision Architecture-RISC (PA-RISC*) chips

used in the world's fastest workstations announced by HP in March, (featured in the May-June *Measure* cover story), the systems are used in enterprise-computing environments. From the Commercial Systems Division and General Systems Division.



HP OpenView Interconnect Manager

To build and manage enterprisewide local-area networks, HP OpenView Interconnect Manager is a UNIX* system-based network-management software for hubs, bridges and routers. It runs on the HP 9000 workstation, offers remote capabilities and provides a powerful set of configuration, fault, diagnostic and performance-analysis tools. From the Roseville (California) Networks Division.



HP DeskJet 500J

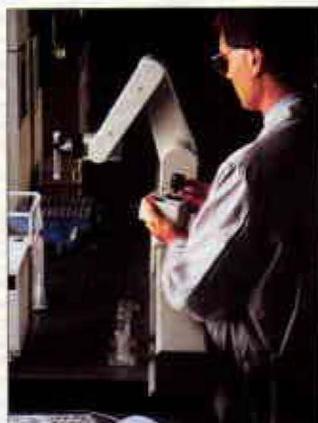
A Japanese-language printer designed exclusively for the Japan market, the HP DeskJet 500J uses HP-developed, drop-on-demand thermal ink-jet technology and offers built-in Kanji and Roman Latin typefaces. The Asia Pacific Peripherals Division in Singapore developed the printer, and is manufacturing and marketing it.



HP SCSI-2 disk drives

A new family of high-performance, high-capacity Small Computer System Interface-2 (SCSI-2) 5¼- and 3½-inch drives has been designed by HP's Disk Storage Systems Division specifically for integration in the

Macintosh Quadra 900 system. The drives offer capacities from 422 Mbytes to 1.355 Gbytes, and provide additional internal mass storage for data-intensive applications in a Macintosh environment.



HP ORCA

A laboratory robotics system designed to provide custom automation of complete sample-analysis processes, the HP Optimized Robot for Chemical Analysis (ORCA) is a product for groups which develop automated analytical applications using robotics technology for laboratories in the chemical and pharmaceutical industries. From the Avondale (Pennsylvania) Operation.



HP RTAP/Plus

Industrial-automation problems are a snap to solve with Release 5.1 of HP RTAP/Plus industrial-automation enabler. New features include HP-UX 8.0 compatibility, with a user interface based on OSF/Motif 1.1; a display server that interconnects schematics, control panels and the RTAP database; and compatibility with HP workstations and non-HP X terminals. From the Calgary (Canada) Product Development Center.



HP DeskWriter C printer

Laser-quality color printing is now available with the HP DeskWriter C printer. The new printer produces black or color output with excellent resolution. To change from monochrome to color,

the user simply swaps the black-ink print cartridge with a new trichamber, color-ink cartridge. Virtually any color can be created. From the Vancouver (Washington) Division.



HP ScanJet IIc printer

Vivid color also is available with the new HP ScanJet IIc scanner, a flatbed desktop scanner featuring 24-bit, single-pass color scanning. It has 8-bit grey-scale image scanning and 400-dots-per-inch resolution for fast, high-quality image and text scanning. From the Greeley (Colorado) Hardcopy Division.

**UNIX is a registered trademark of UNIX Systems Laboratories Inc. in the U.S.A. and other countries.*

**Precision Architecture-RISC (reduced-instruction-set computing)*

Moon over Boise

BOISE, Idaho—Clif Hampel had gone up on Table Rock Mountain for years looking for just the right shot.

In July, everything clicked for the process technician for Disk Storage Systems Division.

"I wasn't even thinking about the moon that night, but I turned around and it was there," Clif says. "I exposed for the moon, then turned around and shot the sunset."



Double exposure of a full moon and sunset over Boise, Idaho

Give us your best shot

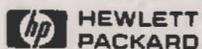
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