

A magazine for Hewlett-Packard people

September-October 1998

MEASURE

Designing relationships from the ground up



If you've been with HP less than 15 years—and that's true for thousands of us—the company's current financial situation may seem a little scary.

To that, I suggest a simple reply: It's all relative.

Just look at a company like GE, which we're profiling in this edition of *MEASURE* in a new series called Best of the Best (see pages 4–7). GE said, "We're going to be either No. 1 or No. 2 in each of our businesses or we're going to get out of those businesses." Along the way, one-third of the employees left the company—one way or another—at the same time GE acquired more than 600 companies.

Scary? There's a new definition.

And yet, GE is America's most-admired company, according to *Fortune* magazine's most recent poll.

For many of us, 1990 was the closest we've seen to a downturn in business. In that year, earnings decreased in all four quarters compared with 1989 earnings, HP stock hit a five-year low and nearly 800 employees left the company under an Enhanced Early Retirement (EER) program.

Five years earlier, some 1,600 HP employees took either the EER or Voluntary Severance Incentive option. Those programs helped trim a work force that had grown to 85,000 employees—20,000 of them hired between 1981 and '85.

Today, HP has an all-time high of 127,200 employees and is exploring ways to reduce that number.

HP also is looking at other ways to reduce operating expenses (see Lew Platt's letter on pages 26–27). Employees did a great job in the third quarter—expenses grew only 4 percent, compared with 17 percent in the first half.

One quarter is a good start, but how do we sustain those frugal practices long term?

One way is by truly accepting personal responsibility for expense controls. For example, I typically use airport long-term parking lots when leaving on a business trip. A few months ago, I parked in short-term. I had a 6 a.m. flight and I was only going to be gone for two days. Sure, the fee was more expensive, but my time is valuable, too, I rationalized. A few days ago, I learned that Lew Platt always parks in long-term lots, and he—I imagine—earns more money than I do. If Lew can park in long-term, I can, too.

We can all find ways to reduce expenses—the question is, do we have to do it at the expense of our character? In other words, if HP's people, products and operating philosophy are the things that have made us so special for 59 years, how important are they today? Training and development, R&D and philanthropy, for example, come with a price tag. How about diversity, ergonomics and employee recognition? Can we afford them and still compete in today's bottom-line businesses?

The answer, again, is that it's all relative. Despite the ever-growing competitive pressures on HP, we can still fund a great many programs—maybe not as generously as in the past.

Your creative ideas for reducing expenses in your own organization will help us work through this scary time. Share your creativity with other employees by sending your ideas to *MEASURE* or the HP.Now Web site at <http://hpnow.corp.hp.com>.

HP's still a great company—with room for improvement. What's your idea?

—Jay Coleman



On the cover: It takes about 2 million parts and components to manufacture an Airbus Industrie plane. HP is the strategic hardware partner for technical applications of Airbus, a consortium of four European aerospace companies. The story begins on page 10.

Cover photo by Erol Gurian.

FEATURES



Page 4



Page 17



Page 18

4 **The house that Jack built**

From light bulbs to loans, General Electric has reinvented itself countless times under the leadership of CEO Jack Welch. What can HP learn from GE?

8 **All you had to do was ask**

How can HP improve? When the company invited employees to share their ideas, it opened the floodgates of creativity.

10 **Soaring toward the third dimension**

With HP as a strategic partner, European aircraft manufacturer Airbus Industrie is designing new models of aircraft using concurrent engineering and 3-dimensional CAD.

14 **Building relationships one by one**

HP Argentina's famous rooftop *asados*—barbecues—help build sales and friendships.

17 **The tax man cometh**

If you think your taxes are difficult to compute, try HP's nine-binder behemoth.

18 **Every minute counts**

The odds of surviving sudden cardiac arrest dramatically increase with the aid of the HP Heartstream portable defibrillator.

24 **Score one for HP**

A "flawless" record at World Cup 98 proved to the world that when it comes to performance, HP is a winner.

DEPARTMENTS

22 **Web-wise**

Dr. Cyberspace plugs into expense controls.

26 **Letter from Lew Platt**

HP's chairman, president and CEO discusses expense reductions as a long-term solution.

28 **Your turn**

MEASURE readers share their views on matters of importance.

29 **ExtraMEASURE**

News from around the HP world.

32 **Parting shot**

HP's Eric Becker crosses a bridge to the past in Prague.

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Hewlett-Packard Company is a global manufacturer of computing, communications and measurement products and services recognized for excellence in quality and support. HP has 127,200 employees worldwide and had revenue of \$42.9 billion in its 1997 fiscal year.

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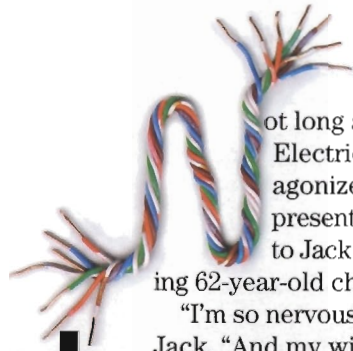


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The house that Jack built

From light bulbs to loans, General Electric has reinvented itself countless times under the leadership of CEO Jack Welch.

By Jay Coleman



Not long ago, a General Electric Company manager agonized for weeks over a presentation he was to give to Jack Welch, GE's demanding 62-year-old chief executive officer.

"I'm so nervous," the manager told Jack. "And my wife has told me she'll throw me out of the house if I can't get through this presentation."

That afternoon, back on the corporate plane and headed for his next destination, Jack arranged to have a dozen roses and a bottle of Dom Perignon champagne delivered to the manager's wife, along with one of Jack's famous—and coveted—handwritten notes. The note read, "Your husband did a fantastic job today. We're sorry we put him and you through this for a couple of weeks."

That story, told in a June 8 *Business Week* article ("Jack: A Close-up Look at How America's #1 Manager Runs GE") sums up one side of the tough-but-fair CEO. The other side is a no-nonsense busi-

nessman who, since becoming CEO 17 years ago, has orchestrated massive changes, including selling businesses and laying off a third of GE's employees while making more than 600 acquisitions.

Today, 120 years after incandescent-light-bulb inventor Thomas Edison founded GE, the company's revenue (\$90.84 billion) and number of employees (276,000) are more than twice as large as HP's. And, according to *Fortune* magazine, GE is America's most-admired company (HP was No. 5).

It's as diverse a company as you'll find, spanning everything from financial services (now about 40 percent of GE's revenue) and electronic commerce to plastics, power systems, aircraft engines, medical systems, appliances, lighting and broadcasting (NBC-TV).

How has Jack—who gained the nickname Neutron Jack in the 1980s and who GE Chief Financial Officer Dennis Dammerman lovingly calls an anarchist—molded GE into a visionary company during his 17 years as CEO?

First, he announced that GE would become "better than the best." GE, Jack said, will be "No. 1 or No. 2 in every one of its businesses" or the businesses will be closed or sold.

GE will be "No. 1 or No. 2 in every one of its businesses" or the businesses will be closed or sold.

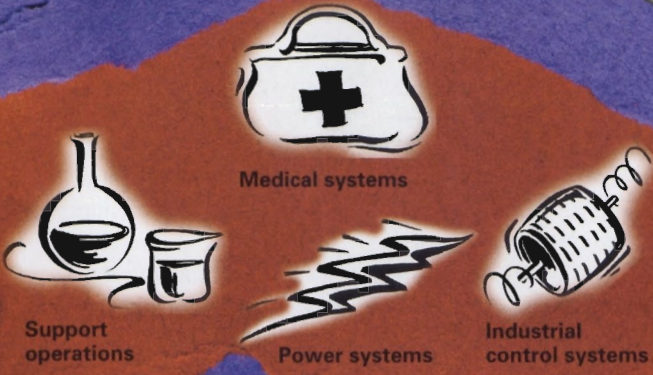
Best of the Best



There's no doubt about it: At HP we have a tendency to focus inwardly too much—what we're doing right and what needs to improve. This article launches a new MEASURE series on the Best of the Best, focusing on what we can learn from studying some of the world's best companies.

These companies are masters at customer satisfaction, improving business processes and creating new businesses—the three initiatives HP CEO Lew Platt announced at the 1998 HP General Managers Meeting.

Look for more Best of the Best stories in future editions of MEASURE.

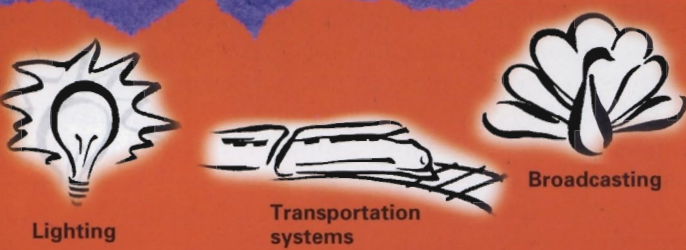


Medical systems

Support operations

Power systems

Industrial control systems



Lighting

Transportation systems

Broadcasting



Electrical distribution & control

Plastics

Information services



Aircraft engines

Capital services

Appliances

TVs, small appliances and other “family heirlooms” were unceremoniously disposed of. “How the hell could he sell the electric-potato-peeler business?” Dennis remembers the howls from disbelieving employees.

Next was a mid-1980s program called Work-Out. People of all ranks and functions—managers, secretaries, engineers, line workers and sometimes customers and suppliers—gathered to focus on a problem or opportunity and its solution. This openness created a Boundaryless Learning Culture, as GE calls it.

For example, GE Medical Systems is a world leader in remote diagnostics. Service people can monitor, detect and repair an impending malfunction while a CT scanner operates in a hospital. Medical Systems shared the technology with GE’s jet-engine business. Today, GE produces remote diagnostics to monitor a jet engine’s performance in flight.

“This Boundaryless Learning Culture killed any view that assumed the ‘GE way’ was the only way or even the best way,” Jack says. “The operative assumption today is that someone, somewhere, has a better idea; and the operative compulsion is to find who has that better idea, learn it and put it into action.”

The most revolutionary change that Jack has led is instituting an obsession with quality through the

SPOT IMAGES: KATHLEEN MITCHELL

House that Jack built

"In the next century," Jack says, "we will neither accept nor keep anyone without a quality mindset, a quality focus. The stakes are just too high."

the process and the materials used during production. When a process reaches Six Sigma, there are only 3.4 defects per million opportunities—a mere three errors for every 1 million shipments, for example.

One Six Sigma success story involves GE Lighting. That business's billing system didn't mesh well electronically with the purchasing system of giant U.S. retailer Wal-Mart, one of GE Lighting's best customers. A

Six Sigma concept, which Motorola developed. The ultimate goal of Six Sigma is to improve performance and product yield by reducing the number of defects inherent in

Six Sigma team spent \$30,000 to redesign the system from Wal-Mart's perspective. In four months, defects had been reduced by 98 percent.

"In the next century," Jack says, "we will neither accept nor keep anyone without a quality mindset, a quality focus. The stakes are just too high."

Jack figures that GE invested \$400 million in Six Sigma in 1997, with a payback of \$600 million. By the year 2000—five years after launching Six Sigma—he expects the bottom-line impact to be billions of dollars.

Although he keeps one eye riveted on the bottom line, Jack still spends more than 50 percent of his time on people issues. Literally hundreds of employees each year receive handwritten notes from Jack (faxed initially, then the original arrives two days later).

After all, GE's greatest strength—demonstrated over and over again—is its willingness to change.

HP CEO Lew Platt, who has known Jack for several years through the Business Council and other organizations, received a congratulatory note from Jack in 1995 when Lew was named CEO of the Year by *Financial World* magazine. "That note is one of my most prized possessions," Lew says.

As much as GE is a reflection of its CEO, you get the distinct impression that the company will continue to

reinvent itself after Jack reaches the mandatory retirement age of 65 in December 2000. After all, GE's greatest strength—demonstrated over and over again—is its willingness to change.

So although customer focus, innovation and improved internal processes sound like familiar refrains at both GE and HP, GE has taken quantum leaps in the realm of change. And will continue to do so.

In 1997, the French business magazine *L'Expansion* asked Jack if GE has achieved the best possible organizational model. Jack replied, "Our organization is splendid, but it will die if it doesn't adapt in the future. If you want to know when we'll have the perfect model, the answer is 'never.'" **M**



GE at a glance

Name: General Electric (GE)

Number of employees: 276,000
(165,000 in the United States)

Founded: 1878 as the Edison Electric Light Company by Thomas A. Edison

Profile: Diversified technology, manufacturing and services company

Major businesses: Aircraft engines, appliances, broadcasting (NBC-TV), capital services, electrical distribution and control, industrial control systems, information services, lighting, medical systems, plastics, power systems and transportation systems

1997 revenue: \$90.84 billion

Net earnings: \$8.203 billion (\$2.50 per share)

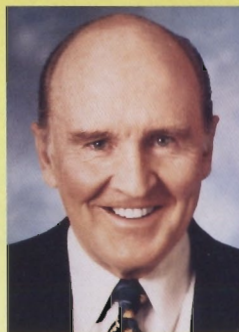
R&D expenditures: \$1.9 billion

Total assets: \$304 billion

Fortune 500 ranking: 5th (If ranked independently, eight of GE's businesses would be in the *Fortune* 500.)

Also: GE is the only company listed in the Dow Jones Industrial Index today that was also in the original index in 1896.

GE share owners have approved four 2-for-1 stock splits since 1983, most recently in 1997. One GE share purchased before 1926 is worth 1,536 shares today.



Jack Welch, CEO

GE values its values

As at HP, core values lie at the heart of GE's operating philosophy. The GE values statement says:

GE leaders, always with unyielding integrity:

- Have a passion for excellence and hate bureaucracy;
- Are open to ideas from anywhere and committed to Work-Out (an internally focused program to share best practices, simplify procedures and "get the work out of the system");
- Live quality and drive cost and speed for competitive advantage;
- Have the self-confidence to involve everyone and behave in a boundaryless fashion;
- Create a clear, simple, reality-based vision and communicate it to all constituencies;
- Have enormous energy and the ability to energize others;
- Stretch, set aggressive goals and reward progress, yet understand accountability and commitment;
- See change as opportunity, not threat; and
- Have global brains and build diverse and global teams.

All you had to do was ask

How can HP improve? When the company invited employees to share their ideas, it opened the floodgates of creativity.

While HP's primary focus has shifted in recent weeks to reducing operating expenses (see the Letter from Lew Platt on pages 26–27), the company is still committed to pursuing the three change initiatives announced at the 1998 General Managers Meeting: increasing customer intensity, improving execution and creating new business.

Here are just a few of the hundreds of ideas that employees have submitted to the Power of One, Best of Many internal Web site <http://hpnow.corp.hp.com/news/features/power/index.htm>.

Stocking stuffer

Build a stocking warehouse adjacent to, and feeding directly into, the FedEx distribution center in Memphis, Tennessee. Allow telephone orders through HP Direct until midnight for delivery by 8 a.m. the following morning. Locating a warehouse next to FedEx allows midnight and later pickups. FedEx guarantees this delivery for a price.

I think that many people have been caught in the situation of needing a product in a hurry, but were unable to even place an order until the following day.

CHRIS MOHR
San Jose, California

Drop by our shop

Open HP franchise stores. The shop should look like a shop of the future, but be inviting to all customer segments. Customers will get better advice, we can build personal rela-

tionships and potential customers can touch and see how our products work. We can get direct feedback from our customers and see consumer trends.

We also could demonstrate our large-format printers for a small fee and have a small Internet café.



BIRGIT SCHMIDL
Vienna, Austria

Call 1-800-HEWLETT

Have one customer-service number that ties to our identity, such as 1-800-HEWLETT. Provide free technical support and allow the customer to feel like a partner.

I feel betrayed when I call other companies, such as Adobe, with a simple question but can't get help until I give up a charge-card number.



HEIDI PAULSEN
Vancouver, Washington

A whole new ballgame

Instead of 100 percent selling through resellers, HP should create a parallel channel to sell directly to end customers—be it through the Internet or phone.

It's contradictory for HP to push for E-commerce, yet none of HP's products can be purchased directly online. This is especially true for PCs, where Dell has created a whole new ballgame.

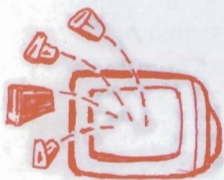
CHOP SAM TAN
Singapore

Cut out the middleman

Inkjet cartridges: direct sales and quick distribution. Advantage to customer: convenient, won't forget and will get right cartridge. Advantage to HP: no middleman, cuts out the competition.

Idea (maybe already exists): as cartridge runs out, e-mail or Web page opens up with all order info correctly inserted, user adds credit card number, address and sends. Next-day delivery. Same could be applied to other consumables: slides, etc.—part of the driver.

COLIN MURPHY
Leixlip, Ireland



From port to port

Almost all ports of a PC are on the back panel now. We can design a new model PC and locate some ports, such as the keyboard and mouse port, to the front panel, so it is easy to connect.



ALLAN WU
Shanghai, China

Home (but not) alone

HP creates a "HoPA" (Home Palmtop Assistant) which controls all of our home stuff—washing machines, ovens, heating, air conditioning, TV and radio. I see a large, worldwide market, similar to printers.

This is a great challenge for HP, to develop a technology that could be used in almost every home.

HANS-PETER BAMBERGER
Waldbronn, Germany

Beam me over, Scotty

Have special inkjet printers geared to receive transmitted digital images from digital cameras, which could be located miles away. These images could be automatically printed the instant the camera is clicked.

YIN WONG
Bracknell, England

On the light-er side

Last year I read with some interest about the development of the "white" LED. If traditional light bulbs consume approximately 66 percent of the world's energy production, and LEDs can cut that usage significantly, why not get into the light-bulb business?



ROLVIN LENTSCH
Atlanta, Georgia

I brake for HP

Join an outside manufacturer to create amber and red replacement lamps for automobiles. Multiples of our best and brightest LEDs adapted to the standard sockets in cars—even dual-filament models where some of the LEDs light up for parking lights and all of them light up for brake lights—might just be popular since they'd never burn out!

Engines can go 100,000 miles without a tuneup, so why can't the tail lights?

ALAN FALK
Cupertino, California

Smile for the binoculars

HP makes digital cameras so why don't we make binoculars that take pictures? Either integrate the two or build an adapter that works with standard binoculars.

LEE BENTZ
Palo Alto, California



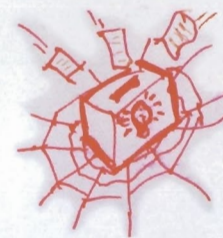
Who's calling?

Add caller identification to every PC. For a very small cost, we could add a convenience that a lot of people want.

DENNIS ATTAR
Santa Rosa, California

The power of suggestion

Why not unleash the power of many people by developing a Web-based employee suggestion box application that is distributed over PC COE?



Encourage employees at all levels to contribute. Or foster true organizational learning by developing an application that

can foster true HP-wide brainstorming and idea-sharing, or combine both in a single application.

DENNIS HONG
Palo Alto, California

Why not personalize printing?

High-volume printing in multiple languages is feasible on demand. This is similar to just-in-time printing in large-scale mass-customization business processes. In the global mass market, the printing associated with the products and services comes in various languages and the content varies.

These printed materials could be printed at the point of sale or just a few process steps before, possibly at the point just before delivery to the customer. The printing content also could be personalized.

IT TEE CHEAH
Bayan Lepas, Malaysia



Soaring toward the third dimension

With HP as a strategic partner, European aircraft manufacturer Airbus Industrie is designing new models of aircraft using concurrent engineering and 3-dimensional CAD.

By Horst-Joachim Hoffmann

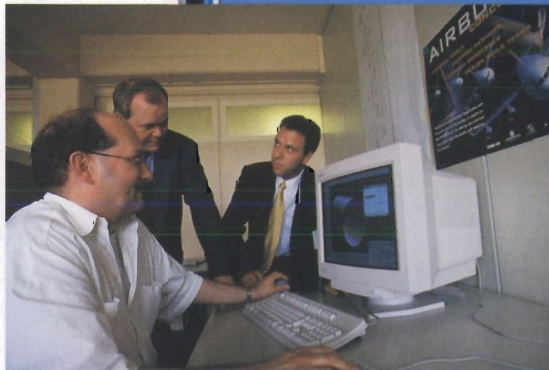
Photos by Erol Gurian

Top: An Airbus 300-600 ST, nicknamed "Beluga," lifts off from Daimler-Benz, carrying wings, fuselages and other large parts to its partner companies.

Right: Using HP workstations and 3-dimensional

computer-aided design, engineers from the four Airbus Industrie partners can create a digital version of any part of the giant aircraft, such as the Airbus A340-600 (pictured).

Airbus's Uwe Farker (from left) talks with co-worker Klaus Wiese and HP's Andreas Schmäing.



HAMBURG, Germany—Walk into an Airbus Industrie assembly plant and you immediately are aware of just how enormous these flying giants are.

And yet, the beauty of these flying fortresses lies in the minuscule. An aircraft such as the Airbus has about two million parts and components that have to be assembled.

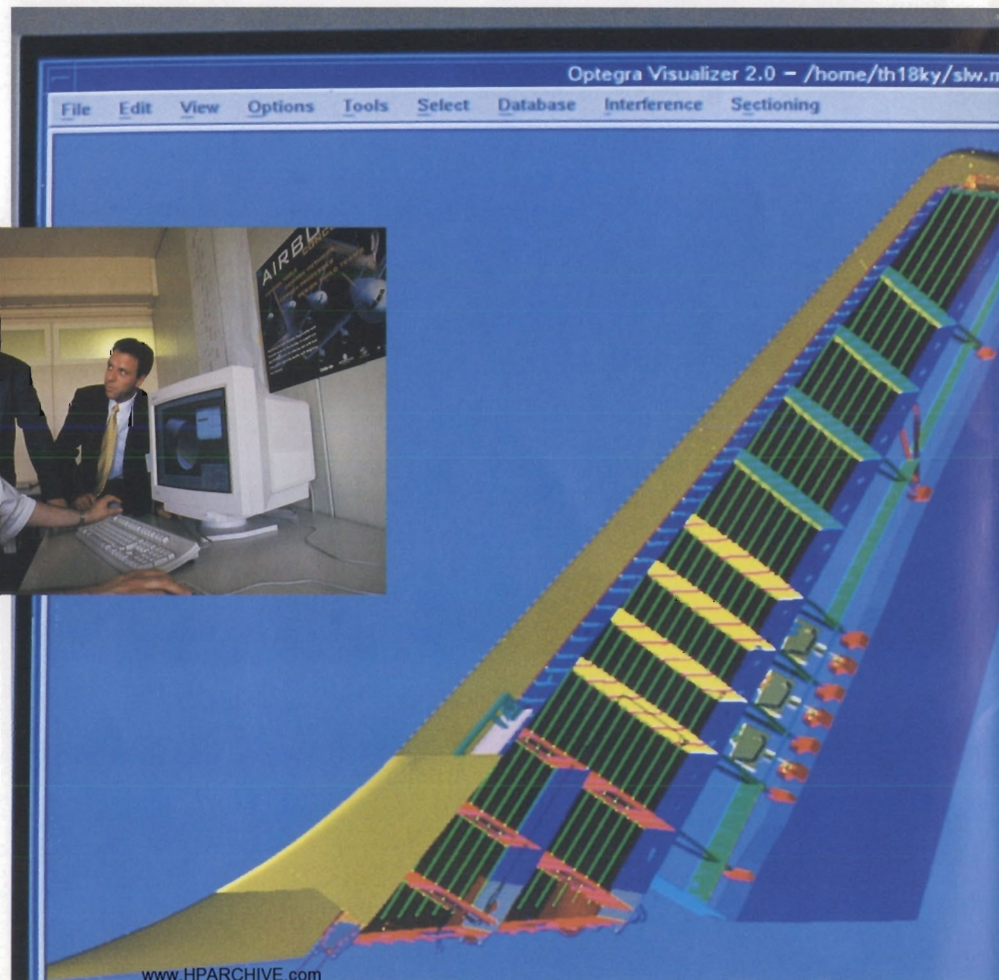
Constructing these monsters requires a highly complex system. Extensive testing takes place during design, manufacture and assembly to guarantee that the maze of parts and components functions correctly when the plane flies.

It's impossible to design a new model economically without high-powered computational and graphics systems. The systems manipulate and display the large and complex calcula-

tions and support computer-aided-design (CAD) applications. It takes about three terabytes of data—equal to a stack of pages about 135 kilometers (about 84 miles) high—to describe precisely today's aircraft.

The European manufacturer Airbus Industrie (AI) is one of the major global players in the highly competitive civil-aircraft market. To compete in this challenging market, Airbus is implementing a concept called ACE (Airbus Concurrent Engineering) to smooth workflow. As part of ACE, Airbus also is switching to 3-dimensional CAD (3D-CAD) design.

Airbus is a consortium of four European aerospace companies: the French Aerospatiale, British Aerospace, the Spanish CASA and German Daimler-Benz Aerospace





Airbus (DASA). It faces special obstacles to achieve its strategic twin goals of producing better, cheaper aircraft and reducing the time to market for new models. Once a model has been licensed by the authorities, the gap from ordering to delivery will be cut to less than six months.

Airbus partners are working separately on the different components. Each of the four Airbus partners handles its own design, manufacturing and pre-assembly in their respective plants. Then the sections are transported to a final assembly location.

In the past, the various technical disciplines in this workflow used dif-

ferent programs and data formats. Concurrent engineering will harmonize programs and data to use the same data formats and structures throughout the process.

It's impossible to design a new model economically without high-powered computational and graphics systems.

Daimler-Benz suppliers face a great challenge to support the ACE project. Hewlett-Packard is the strategic hardware partner for technical applications of Airbus and the ACE project.

"In Germany, we already have installed about 200 workstations," says Andreas Schmäing, HP's key account manager for Daimler-Benz in Hannover. "These are mostly high-end HP 9000 Series 700 workstations, especially the C200 and C240."

Tools and configurations have to be adapted precisely to the needs of Airbus departments and its partner companies. With the launch of ACE, Airbus manufacturing partner companies committed to install and implement the same tools to better integrate the technical workflow.

HP established a special ACE lab in Toulouse, France, to support this commitment to the ACE project. New software releases and programs are pre-installed, then fine-tuned so that all partners get the same tested software. Only very specific user-defined changes have to be made at the partners' plants. A special HP task force in Germany supports DASA.

"Having been involved in the ACE project for more than a year, we have achieved very effective cooperation," Andreas says. Andreas, along with Phil Morel of HP United Kingdom and Yves Cadoux of HP France, belongs to the European project team responsible for Airbus.

Airbus partner companies are integrating rapidly.

"We are developing a new model, the A3xx, which will be totally designed and manufactured using the ACE concept," says Roland Lange, ACE project leader.

Airbus committed very early to the latest design and construction technology. It was the first manufacturer worldwide to completely design an aircraft—the A310—using computer-aided design. But the design was

On the "soft" side

Airbus uses CADD5 CAD software from Computervision, a subsidiary of Parametric Technology Corp. (PTC). Additionally, it uses "pro engineer" by PTC for its parametric functionality. The benefit of CADD5 is that it can be used to assemble huge parts with long-distance coordinates.

The Product Data Management System is Optegra from Computervision.



Third dimension

processed mostly in two-dimensional CAD. Then all of the Airbus partners met to review design progress and study a physical prototype. This took several days to complete. Any changes from the meeting were carried out off-line after the review.

ACE is a step into the third dimension. Reviewing any design in the virtual world provides the ability to

make changes real-time and allows the review team to see the results immediately. When totally implemented, ACE will include video conferencing and an intensive use of data exchange through high-speed fiber-optic networking.

Even at this early stage, the benefits of a strategic partnership with global Daimler-Benz suppliers like

Hewlett-Packard are evident. When engineers meet their colleagues, they can use the same Daimler-Benz equipment anywhere.

"The high quality of our products and the European-wide support certainly were important reasons to sign the strategic partnership with HP," Andreas says.

The first practical results of ACE are clear. "The first aircraft of the world completely designed with

Airbus Industrie

Airbus Industrie has reported constantly growing market share. The European manufacturer of civil aircraft now holds more than 40 percent of the worldwide market. Orders signed in 1997 promise further growth. AI won 671 orders from 55 customers in 1997, worth U.S. \$44.2 billion.

Airbuses are designed and manufactured by four companies in four European countries—Aerospatiale in France, British Aerospace, the Spanish CASA and the German Daimler-Benz Aerospace Airbus (DASA). These companies have partly overlapping functions that are coordinated by Airbus Industrie, with its headquarters in Toulouse, France.

Airbus Industrie offers a complete family of airplanes from 125 to 440 seats and distance ranges from 3,500 to 14,850 kilometers.



Walter Uhl, global account manager from Daimler-Benz AG, inspects an engine on an Airbus A319 plane.

3D-CAD linked to a product data-management system is the 'stretched' version of the A340—the A340-600," Roland says.

Roland points out the link between the CAD tool and a single-product data-management system. The input of data to a single store already creates an enormous effect from the beginning. As a step in design or con-

struction takes place, the next step can be set up and easily and quickly processed after verifying the first step.

"Using ACE, we expect savings of 50 percent and more for the complete workflow," Roland says. "Today, a construction engineer, a calculating engineer and an assembly specialist can meet in front of a screen to directly discuss components and ask questions."

Running on high-end workstations, three-dimensional visualization has a large effect on workflow, too. Airbus is working on designing in modules. This benefits new aircraft design such as the projected large carrier A3xx, which will have 500 to 600 seats. For example, all the possible locations for passenger restrooms are integrated in an early design phase. Special airline requirements can be met quickly and without great effort.

The use of common data allows the 3D-CAD system to be used for testing.





(From left) Rainer Erlat, general manager of HP's Enterprise Accounts Organization in Germany; Klaus Wiese, head of IT infrastructure at Airbus; Daimler-Benz's Walter Uhl; and Andreas Schmäing, HP's key account manager for Daimler-Benz in Hannover, Germany, get a firsthand look at the inner workings of an Airbus A340.

Airbus does not have to build expensive one-to-one models anymore. This has benefits for assembly and aircraft-maintenance workers.

"We now think completely in three dimensions," Roland says. Virtual-maintenance engineers now model the accessibility of special parts of the aircraft in the 3D model. Costly one-

to-one models formerly had to be built to prove functionality and safety, as well as to see how the plane could be maintained.

The aircraft of the next millennium will be designed on HP workstations. High-performance HP hardware

makes it possible to fly with even more comfort than in today's comfortable and safe Airbuses.

Just make a reservation on an Airbus A3xx seat and get the feeling of tomorrow. **M**

(Horst-Joachim Hoffmann is a free-lance writer based in Hamburg, Germany.—Editor)

Building relationships one by one

HP Argentina's famous rooftop *asados*—barbecues—help build sales and friendships.

By Todd Shapera



Sales—and spirits—are up for HP in Argentina, where Sales Manager Fernando Mollon presides over the celebratory *asado* (top photo), frolics with co-workers Graciela Canavero and Ricardo Janches (bottom) and grabs a quick breakfast at home with his son, Manuel, and wife, Paula Lahorca (right).

BUENOS AIRES, Argentina

—As smoke from HP's rooftop barbecue wafts

into the Buenos Aires sky, Sales Manager Fernando Mollon and about a dozen HP colleagues entertain guests from the city's electric utility, Edesur.

Over appetizers of Argentine sausage and Andean wine, Hugo Strachan, general manager of HP Argentina, offers greetings that set an informal tone for the midday gathering. Then he asks for brief introductions from each person. Many have worked closely for years, but never met.

Soon, they move inside to the relaxed setting of the *quincho* or dining room to feast on a classic Argentine *asado* of barbecued beef and pork. Little business is discussed; the agenda is bonding and friendship.

A few days later, over breakfast in his two-bedroom apartment in Buenos Aires' fashionable Recoleta section, Fernando explains that the *asado* allowed for bonding beyond what might occur during a business meal in one of Buenos Aires' numerous *parillas*, or barbecue restaurants: "In Argentina, if you invite someone to your house, it is very much appreciated."

The rooftop parties have gained notoriety as "the famous *asados* of HP," Fernando says. "Clients call and ask: 'When are you are going to make an *asado* for our company?'"

Later that morning, Fernando makes a more traditional visit to Edesur's headquarters. He checks on a cavalry of 30 HP 9000 servers. They bill 2.3 million customers in southern Buenos Aires each month—more than 60,000 customers per day. Simply running the weekly backup for the system takes 35 hours.

"Clients call and ask: 'When are you going to make an asado for our company?'"

During the visit, Miguel Kurlatt, Edesur's chief information officer,

amplified on his team's rapport with HP: "Things like the *asado* are part of our close human relationship. I wouldn't call it 'cozy' because that would indicate something not professional. This is professional. Solving the problems comes before anything else in the relationship. But there is a human side to it."

It turns out that Edesur's evolution as a client mirrored dramatic change and growth in Argentina in recent years. HP was well-positioned to benefit from this transformation. Beginning in September 1992, Argentina's electricity sector became part of a third wave of privatization of government-owned businesses, after the telephone companies and airlines.

When Miguel joined Edesur in 1993, the power company was still trying to milk its mainframe computers to handle billing. Miguel felt this was costly and unwieldy, and oversaw Edesur's conversion to the largest utility in the world that uses open (non-proprietary) systems for billing.

The shift to HP technology enabled Edesur to lower IT costs, improve customer service (with phone agents having computer access to billing records) and help attack a culture where customers often stole power from the utility. Squatters and private homeowners jury-rigged hookups to main lines, often because they could not get electric-company service. Meanwhile, corporate customers from





HP's Leonardo Gonzalez Bordes (left) and Fernando discuss an impending sales call in the Puerto Madero section of Buenos Aires, Argentina.

airports to schools simply ignored bills from the government agency.

HP technology allowed newly privatized Edesur to improve its collections. The company had to be "really nasty," Miguel says. It even publicly humiliated some deadbeat customers with blackouts. Today, losses have declined from 26 percent of the power distributed to 8 percent.

The power company's woes were indicative of a dysfunctional economy that was in shambles. With inflation racing in excess of 100 percent per month, waiting to purchase family groceries after payday meant having less buying power. Through it all, the economy was stagnant, with virtually no economic growth for a quarter of a century. And the government was broke, with individuals and companies no more inclined to pay their taxes than their power bills. This environment, combined with high import tariffs, hardly inspired local companies to leap ahead with investments in technology—HP's or anyone else's.

Beginning in 1990, the year that Fernando joined HP, Argentine President Carlos Menem ushered in dramatic reforms. They produced currency and price stability, solid economic growth and an environment in which businesses and individuals could plan for the future. Integral to this transformation was the rapid sell-off of hundreds of inefficient state-run companies to the private sector. Everything went under the gavel: airlines and airports, railroads and toll roads, utilities—even the Buenos Aires zoo.

For many companies, it was as if a neutron bomb had been dropped, with only the shells of old enterprises left standing. The managers who replaced government bureaucrats were people with whom HP could do business. Moreover, corresponding with the bullish economy and privatizations were shifts in the IT marketplace to HP's open-computing environments.

"I was in the right place at the right time," Fernando says of his own fortunes within the company. "Many

things happened here that helped me to have good results."

Indeed, from \$14 million in 1990, HP's country revenue multiplied more than 18-fold, with revenue projected to reach \$250 million this year. The results reflect 55 percent sales gains in each of the past two years.

Fernando had been an IBM marketing trainee for two years while completing his university degree as a systems engineer. At the time, IBM was dominant, controlling 80 percent of the Argentine market, with more than 700 employees. Even so, upon graduation, HP appealed to Fernando precisely because it was less established and seemed to offer greater growth potential. It was a wise move, although no one could have

Moreover, corresponding with the bullish economy and privatizations were shifts in the IT marketplace to HP's open-computing environments.

Relationships

SERGIO BANDUREK PHOTOS



Competitive both at and away from work, Fernando maneuvers for a possible goal during play in an evening five-on-five soccer league in Buenos Aires.

imagined that HP was on the cusp of such explosive growth.

From his roots as a trainee, Fernando rose to become a sales manager in his fifth year, at age 31. His teams have exceeded sales targets every year since then. In 1995, they were 323 percent over quota. The results helped Fernando earn membership in HP's President's Club as one of the region's top salespersons.

Fernando readily offers that success had everything to do with building a dynamic team and fostering an open-door, consensus-management style. The team often lunches together out of the office, joined by other HP colleagues. They play five-on-five soccer matches after work against other HP teams. And Victor Derbapyan, a three-year team member, says when the group needs to brainstorm, Fernando is not averse to meeting in a neighborhood café.

This management style may be ingrained in HP's global culture, but Fernando says it is cutting edge in Argentina. Former colleagues who have switched firms tell Fernando that "working in HP is very different." G.M. Hugo Strachan adds that managers from Argentine companies even visit HP to observe the culture.

The four accounts that Fernando and team oversee are all formerly

state-owned companies. Notably, HP had no accounts with them when they were government-run, partly because of concerns over their business practices. The companies will generate about \$22 million in revenue for HP this year—63 percent more than HP Argentina's total revenue when Fernando joined in 1990. In addition to Edesur, they include Telecom and Telefonica, two phone companies. The Spanish national phone company, in partnership with Citibank, purchased Telefonica.

"Don't talk about the proposal any more. You won."

Hugo Strachan says the account was a key breakthrough in 1994 because it validated both HP and open-system technology. YPF, the former state oil company, was Argentina's top revenue producer with \$6 billion last year. Like Edesur, YPF's privatization ended "monumental inefficiencies" that included reducing full-time employees from about 55,000 to 5,300 people today. (Perhaps it was good medicine, although the cumulative effects of these corporate actions have more than doubled unemployment in Argentina to more than 16 percent.) Local surveys rate YPF's management, service and overall image among the top Argentine companies.

Fernando says YPF surprised the local market by selecting HP over bids from IBM and Sun Microsystems. News of the victory also surprised Fernando, because it came without ceremony nine months into the proposal review. During a meeting with team members Graciela Canavero and Ricardo Janches, YPF director Ruben Perez interrupted Fernando to say: "Don't talk about the proposal any more. You won."

Fernando says they were stunned and "tried to act professional for the remainder of the meeting." They returned to the office with champagne, although Fernando worried that celebrating might be premature. "I wanted to have the order on paper first," he recalls.

The following day, YPF's \$4 million order arrived in writing: 11 HP 9000s, Symmetrix disc systems, IT management software, as well as professional and operational services.

"In Argentina, that's a big order," Fernando says. He credits the victory to a strategy of virtually living at YPF during the review and "a lot of teamwork." Manuel Diaz, HP vice president of Customer Advocacy, even flew to Buenos Aires to demonstrate global commitment. Edesur's Miguel Kurlatt was one of several influential local references. "Through many actions, we gave YPF security with the commitment, presence and know-how of HP," Fernando says.

Fernando believes they were helped by possible complacency of Sun Microsystems. "If you talked with people in the industry even three months ago, all the people said this project was going to Sun. They may have felt that this would be their project. We were very aggressive."

In a congratulatory e-mail to the HP Argentina team, G.M. Hugo Strachan wrote: "YPF is a most important account in Argentina and the third or fourth most important in Latin America. Other companies will take note." At an internal *asado* for team members shortly after the win, Fernando was understandably upbeat: "It is a great time to be working here. I made a good choice." **M**

(Todd Shapera is a free-lance writer who lives in the Hudson Valley of New York.—Editor)



At Edesur, Buenos Aires' electric-utility company, Fernando calls on IT Operations Manager Carlos Bonneu.

The tax man cometh

If you think your taxes are difficult to compute, try HP's nine-binder behemoth.

SAN JOSE, California—Rich Dohemann takes his place in line at the Internal Revenue Service (IRS) in downtown San Jose. It's a hot day in mid-July—nearing the deadline for 1997 tax extensions—as people scramble to file their tax returns.

Amid a sea of serious—even dour—faces, Rich, from HP's Corporate Tax compliance section, flashes a multimillion-dollar smile.

For while many people are here to try to negotiate a lower tax settlement, Rich is delivering HP's 1997 U.S. Federal income tax return. Avoiding being too specific, Rich says that HP's



annual tax liability falls somewhere in the range between \$100 million and \$400 million. HP is careful not to underpay its taxes—that would mean costly penalties—so it commonly receives a tax refund in the tens of millions of dollars.

If you've ever agonized over your tax return—and who hasn't?—you can appreciate HP's challenge. The 1997 return is contained in nine 3-inch-thick binders, representing thousands of pages of intricate detail. Detailing HP's contributions to charitable organizations takes four binders alone.

"We devote the equivalent of three full-time people from January through June to handle the compliance portion of the tax return," says David Seltzer, who manages the five-person Corporate section.

Top: Marsha Lee, Rich Dohemann (center) and David Seltzer load HP's nine-binder tax return into the back of Rich's truck for the trip to the San Jose, California, tax office. Lower left: At the tax office, an overwhelmed clerk prepares to process the San Jose district's largest tax filer.

HP actually is the envy of the business world when it comes to tax preparation because it only takes the equivalent of three people to complete the job, David says. The two big advantages HP has are a worldwide general ledger, which ensures consistent reporting, and a wealth of automated systems that many companies don't have. HP's worldwide controllership community also plays a key role.

"That's important," David adds, "because we have 130 tax-reporting entities worldwide, and because of the intricacies of the tax code. Foreign operations are a big driver of our tax liability."

HP, like other U.S.-based companies, estimates and pays its tax liability each quarter. So the company didn't have to write a huge check in July. Nor did it get back a multimillion-dollar refund check. That money usually is applied to the next year's tax payment. In effect, it's an invisible transaction.

"The IRS is encouraging individuals to file their tax returns electronically," David says, "but it hasn't developed a system to handle huge company returns yet."

In the meantime, HP—the largest tax filer in the San Jose district—will continue to wheel its nine-binder paper mountain to the IRS office each year.

It's a taxing job, but somebody's got to do it. **M**

"We devote the equivalent of three full-time people from January through June to handle the compliance portion of the tax return."



This year, more than 350,000 people in the United States alone will experience two stages in sudden cardiac arrest: first, their heart stops beating. Second, in 8 to 10 minutes, they're dead. But the odds of survival dramatically increase with the aid of the HP Heartstream ForeRunner portable defibrillator.

Every minute counts

By Grace Razo



Sudden cardiac arrest survivor Bob Adams remembers daily that you can't take life for granted when he walks through Grand Central Station. He collapsed here in July 1997.

When New York attorney Bob Adams regained consciousness in New York City's Bellevue Hospital, he had no clue why he was there.

One minute he was walking to the commuter train from his 42nd Street midtown Manhattan office. The next minute he was lying unconscious in Grand Central Station.

Luckily, the terminal's fire brigade rushed to rescue Bob, a victim of sudden cardiac arrest (SCA). Even luckily for him, the crew was trained to

operate a newly purchased automatic external defibrillator (AED)—the HP Heartstream ForeRunner—which had arrived on July 2, 1997, the day before Bob collapsed. The 4.4-pound (2-kilogram) little machine that shocked Bob's heart back to a normal rhythm was, in fact, still in the box when the rescue team responded to Bob's collapse.

"I'm alive today because of two things," Bob says. "Technology and the people who came to my aid."

The ForeRunner AED—about the size of a hardcover novel—doesn't



PORTER GIFFORD

“The ForeRunner has a very sophisticated algorithm, called SMART Analysis,” says Wendy Katzman, worldwide marketing communications manager for the Cardiology Products Division. “This ensures the correct decision is made whether or not to advise a shock. To validate its accuracy, SMART Analysis was compared to the shock/no shock decisions of three cardiologists for approximately 3,000 different ECG rhythms.”

Although sudden cardiac arrest often is confused with massive heart attack—a blockage of the coronary arteries that decreases the blood supply to the heart—the terms are not synonymous.

“I’m alive today because of two things: technology and the people who came to my aid.”

Usually, a heart-attack victim is given some type of warning sign, such as chest pain or shortness of breath. SCA is usually the result of an electrical malfunction of

HP HEARTSTREAM

resemble the bulky defibrillators depicted on television dramas. There are no paddles or beeping monitors. Instead, the ForeRunner is a portable, lightweight, easy-to-use device with adhesive pads instead of paddles and few buttons to push—two, in fact. All you have to do is turn on the machine, attach the pads to the victim’s chest and follow the instructions.

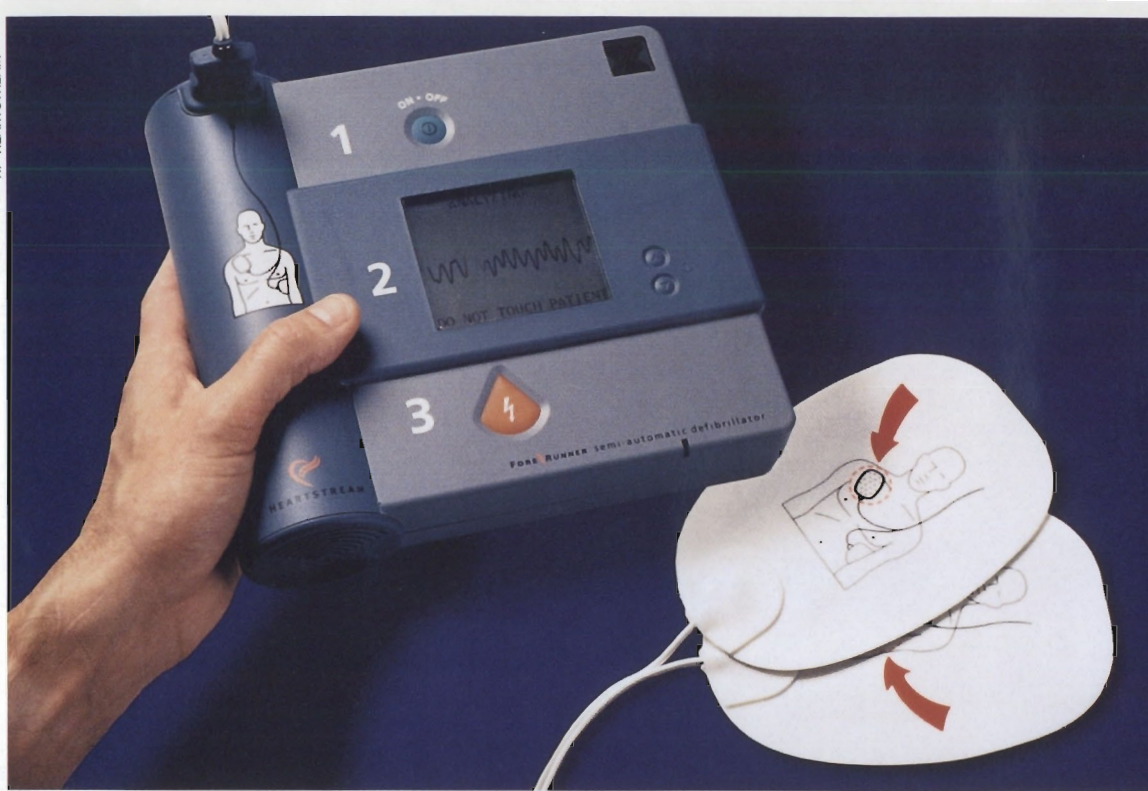
Voice prompts guide you step-by-step until it says, “No shock advised” or “Deliver shock.” Before suggesting another shock, the machine automatically checks the patient’s heart again.

Quite the rugged machine, the ForeRunner is the only U.S. Food and

Drug Administration-approved AED that uses the low-energy, impedance-compensating SMART Biphasic waveform. In lay talk, that means the ForeRunner instantaneously measures impedance—the body’s electrical resistance—and, based on that measurement, delivers a low-energy shock precisely tailored to the individual patient. It is the most effective method of defibrillating out-of-hospital SCA that has been documented in published studies.

During a simulated cardiac arrest, a rescuer proves that the rough and tough HP Heartstream ForeRunner AED is easy to use.





Despite its size, HP's portable defibrillator is a mighty machine that has saved dozens of lives.

the heart, called ventricular fibrillation, and is totally unexpected. Like Bob Adams, victims may not show signs of heart disease prior to SCA. Bob says

what happened to him was "inexplicable."

A 42-year-old partner in a prestigious law firm, Bob's always been in perfect health with a fit physique to match. In college, Bob was captain of Colgate University's Division I basketball team. Then he played professional basketball in Europe for three years. Today, Bob's

a nationally recognized NCAA Division I college basketball referee. Many people would agree Bob seemed an unlikely victim.

"I was shocked that this happened to me," Bob says. "I always felt like the healthiest person alive. I don't even drink coffee!"

In most cases, it's all but impossible to predict who will have a sudden cardiac arrest, or where and when it will happen, says the American Heart Association (AHA). Out of the approximately 1,000 SCA victims a day in the United States, fewer than 5 percent survive because defibrillators don't reach them in time.

Robert Giggey, 52, was on an American Airlines flight from Fort Worth, Texas, to Mexico with his wife when he slumped over in his seat. Flight attendants quickly responded with an on-board ForeRunner AED and delivered the life-saving shock that returned his heart to a normal rhythm. Robert is the first person ever to be saved from SCA with a defibrillator aboard a U.S. airline.

In-flight SCA emergencies are cause for alarm. If flight crews don't have immediate access to an AED, the passing of time could mean death.

For every minute a victim's heart is stopped, chances of survival decrease 10 percent. The victim's only hope is defibrillation.

A woman whose 37-year-old husband died from SCA on board a United Airlines flight from Boston to San Francisco filed a negligence lawsuit against the airline. She charged that the airline didn't have an AED on board, which could have saved her husband's life.

Delta Air Lines, Aloha, Finnair and Swiss Air have joined American Airlines in equipping their fleets with ForeRunner AEDs. Other companies are adding the life-saving equipment



Inter-arresting

Become better informed about sudden cardiac arrest at these Web sites:

<http://www.heartstream.com>
<http://www.americanheart.org>
<http://www.interactive.hp.com/mpgcpd/index.html>
<http://www.chainofsurvival.com>

Rigged and ready to rescue

The Medical Products Group (MPG) in Andover, Massachusetts, is prepared for the worst—in a positive way.

Along with having 12 AEDs and a qualified emergency medical response team on site, more than 650 MPG employees are trained to deliver cardiac emergency first aid as a result of CPR Day last year.

During the day-long event, sponsored by the Cardiology Products Division, the group used 140 mannequins, 280 faces and airways, 720 disposable face shields and skill sheets, and 2,160 wipes as they learned to recognize and respond to signs of cardiac arrest.

In-flight medical emergencies

- More U.S. passengers die each year for medical reasons than are killed in airplane crashes in the country.
- Cardiac-related events are the leading cause of in-flight deaths.
- One-third of 557 emergency landings for medical reasons in 1996 were for cardiovascular problems.
- The average time to land a plane is approximately one minute per 1,000 feet descending at lower altitudes; planes generally fly at altitudes of 30,000 to 40,000.

to their emergency first-aid kits as well.

The Michelin Tire Co. installed ForeRunners in its North American manufacturing plant in Greenville, South Carolina, last December. Just days after they were in service, two employees collapsed within minutes of each other. The first victim was in sudden cardiac arrest and was shocked with the ForeRunner and survived. When the AED was applied

victim until EMTs (emergency medical technicians) arrive to provide top-level medical care.”

HP sites in Andover, Massachusetts, and Vancouver, Washington, have installed AEDs after completing pilot programs that included training, response-time measurements and risk assessments.

Judy Goodnow, HP's Occupational Health Program manager, says what follows the pilots is the development of HP standards. This ensures that sites that install AEDs do it in a safe, effective and efficient manner. But she adds, each site will assess its risks and emergency response needs to determine if on-site AEDs are necessary.

With the acquisition of Heartstream in March, HP's defibrillator line—the CodeMaster series and the ForeRunner AED—sent shock waves through the competition. HP now provides defibrillator solutions wherever life is on the line.

But despite fail-safe AEDs, including the HP Heartstream ForeRunner, there are still legal and bureaucratic hurdles to wider AED availability. The American Heart Association estimates that 100,000 peo-

ple could be saved each year if legislation were expanded to include emergency first responders, such as police officers, security personnel and others in a position to respond.

But the biggest advocates for the innovative technology are those whose lives it has saved.

SCA survivor Bob Adams, who now has an implantable defibrillator, agrees. After taking a tour of what was then the Heartstream manufacturing floor in Seattle, Washington, Bob later addressed the 350 people attending Heartstream's end-of-the-year banquet. “What I do for a living is inconsequential,” he said. “If it weren't for you people, I wouldn't be alive today.” **M**



How you can be a lifesaver

In an emergency situation, you could be the difference between life and death.

The American Heart Association has developed the cardiac “chain of survival,” a series of four critical steps to saving the life of a sudden cardiac arrest victim. Would you know what to do? Learn these steps and you might one day save a life:

- Step 1: Call for emergency assistance immediately. In most U.S. communities, **call 911**; call x2222 within most HP locations in the United States.
- Step 2: **Perform cardiopulmonary resuscitation (CPR)** immediately. CPR delivers oxygen to the body and helps prevent permanent brain damage and death.
- Step 3: **Defibrillate.**
- Step 4: **Medical professionals perform advanced cardiac life support.**



More than a year after his sudden cardiac arrest, Bob's full of vitality as he enjoys time with his family, Kyle, 2, Ryan, 6, (hidden behind Kyle), Kimberly, 8, and his wife, Sue.

to the second victim, he was not in a shockable rhythm as determined by the ForeRunner. He also survived.

“Safeguarding lives is a top priority at Michelin,” says Dr. David Brill, corporate medical director of Michelin North America. “The goal is to provide good medical care to help stabilize a

ASK

Dr. Cyberspace



THOMAS J. BROWN

HP's Executive Committee is concerned about expenses, and who can blame it? IT costs alone have increased 20 percent a year for the last five years. By the end of the 1998 fiscal year, it's estimated that HP will spend \$2.1 billion on IT. What's going on? Read on to find out, and see how you can help nip this growth in its ballooning behind.

If you ask me, there's one word to describe HP's IT situation: Ubiquity. U-what?

Ubiquity. You know: omnipresence, pervasiveness, existing everywhere, widespread, etcetera. The stuff my friend Joel Birnbaum, HP Labs director and V.P. of Research and Development, talks about.

"There will come a time when information technology will be truly pervasive," Joel says. "By pervasive, I mean more noticeable by its absence than its presence."

The good doctor believes that that time has come for HP. But it doesn't come cheap.

Think about it. You have e-mail and voice mail; a WAN and a LAN; UNIX and NT; mobile phones and telephones; PCs and portables; Internet and intranet. Information technology is at your fingertips. You probably don't even think twice about it, or how many times the cash register *ca CHINGS* to provide you with these IT services.

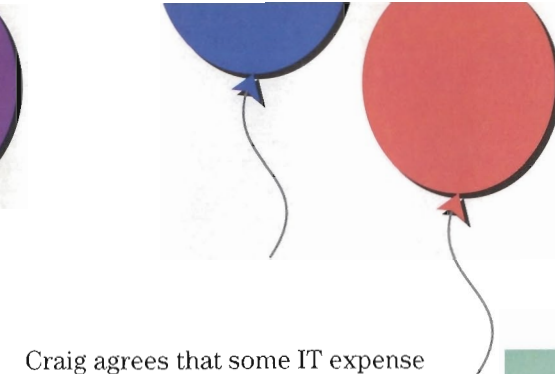
"HP has a rich IT environment that is offered to all employees," says Craig Vent, HP's Corporate Information Systems controller. "You can go to other companies that wouldn't offer you nearly as much. A few companies would offer you more. But HP is definitely toward a richer end. We have a lot of tools at HP and that all adds up."

Granted, many of these tools increase employee productivity, improve business processes and may actually reduce expenses. In fact,

The billion-dollar price tag

What makes up the \$2.1 billion in IT expenses? Craig Vent provides these approximate percentages:

- Business applications and systems: 35 percent
- Voice and telecommunications: 25 percent
- Data communications and e-mail: 25 percent
- PCs and desktop peripherals: 15 percent



Craig agrees that some IT expense growth isn't unreasonable when you consider business efficiency.

"I would characterize much of HP's growth as an investment in productivity," Craig says. "Think about the way you do your job. You don't use carbon-paper forms anymore. Carbon forms had a lot of hands that touched them as they went through life. Now you pretty much enter data once in a computer and it lives there."

So what is a company to do in these serious cost-conscious times? Take away the mobile phones and HP OmniBooks, or purchase more? Neither, Craig says.

"The cause for concern is waste and redundancy," he says. "We need to wage a war on waste."

For example, HP management continues to look at whether certain IT programs offer a high return on investment and will cut back on the ones that don't.

The good doctor believes employees can contribute in their own way to help decrease the rate of growth.

"Employees can make a difference by the way they consume services," Craig says. "Being careful of the personal use of the environment would help."

The prescription is that it will take a collective effort between HP management and employees to wage this war on waste and to reduce IT expenses.

But it won't be easy for anyone, especially with the take-for-granted attitude that has evolved alongside the ubiquity. **M**

You can help control IT costs

As great-granddad Cyberspace used to say, "A penny saved is a penny earned." Imagine if every HP employee saved 500 pennies or U.S. \$5 in IT expenses. It would reduce total costs by at least a half-million dollars.

Here are seven tips collected from my pals in E:BIS, the group that provides IT products and services to internal customers and other IT friends:

E-mail

- Check your e-mail storage. Some employees have up to 1.7 gigabytes of storage at a cost of \$1,500 per month. Most U.S. employees can check their e-mail costs at <http://boi173.boi.hp.com/mailtrix/agglst.cgi>.

- Clean up e-mail. Move data stored on expensive e-mail servers to any one of the following: network servers, personal PC disks or to the trash folder.

- The smaller the message, the lower the cost. Publish any document larger than 3 megabytes to a Web site. The volume of information you send via e-mail determines the cost of the transmission.

Telephone and voice mail

- Send a voice-mail message instead of voice-to-voice, when appropriate. You can save as much as 70 percent since voice-mail traffic occurs over the HP network instead of the standard telephone system.

- Decide when to use voice mail vs. e-mail. Use voice mail when the message is less than two minutes; e-mail when it's a detailed message for a large audience or exceeds two minutes.

- Reserve the use of wireless phones for urgent voice mail only. Those mobile phone minutes add up rather quickly.

Web

- Minimize non-business Web use, which is skyrocketing. The amount of information transferred over the Internet determines the cost of your Internet use.

For more IT cost-saving tips, visit HP.Now at <http://hpnow.corp.hp.com/news/features/expenses/tech.htm>.

Score one for HP

A "flawless" record at World Cup 98 proved to the world that when it comes to performance, HP is a winner.



Inside HP's World Cup 98 box, actor Sean Connery (center) and race-car driver Jackie Stewart (bottom left) cheer madly for their Scottish team. Also present in the box were Ian Smith (top right), managing director of British Telecom's Consumer Division, his wife, Jennifer, and Serge Sozonoff, son of HP's Alex Sozonoff.

Faced with a 7 a.m. flight on July 13, the day after the World Cup 98 finals, HP's Nick Earle settled down in his Paris hotel for a good night's sleep. It never came.

"The noise level in the streets was so loud, I didn't sleep for one minute," says Nick, an HP vice president and group marketing manager for the Enterprise Systems Group. When the host French team upset perennial champion Brazil, 3-0, it ignited a celebration in France that probably still continues today.

"You have to get outside the United States to understand how popular football (soccer) is," British-born Nick says. "A country can get behind an individual athlete in the Olympics, but World Cup pits country against country. Other than war, it's the closest thing to total national involvement."

With the world's attention focused on World Cup 98—the most-watched event in history—HP, the official information-technology (IT) hardware and maintenance supplier, ran the risk of being globally embarrassed. It happened to IBM during the 1994 Olympics in Atlanta, Georgia. Instead, HP's record was perfect.

"Everything from HP performed flawlessly," says Philippe Verveer, chief information officer for the French Organizing Committee. "We depended on HP and its partners (EDS, Sybase and France Telecom) to come through for our mission-critical applications for this World Cup, and they delivered."

Alex Sozonoff, HP vice president and general manager of Computer Marketing and Operations, led HP's World Cup effort. He says that HP has



left an excellent legacy for future sports endeavors.

"Three years of emotion, intensity and hard work peaked at the right time, and we peaked with it," Alex adds.

When Alex says "we," he's referring to the massive effort of linking people and some 75 different types of products from nearly every HP product group, division, sales force and geography. It was as complex as any event in HP history.

The World Cup 98 Web site—<http://www.France98.com>—which was powered by HP Domain servers, chalked up some amazing statistics. It attracted 13 million Internet surfers from 170 countries, registering 74 million hits in a single day and 1.25 billion hits during the 33 days of matches.

World Cup 98 also was a golden opportunity to prove to the world that

World Cup 98 also was a golden opportunity to prove to the world that HP could handle the most mission-critical electronic-business solution with class and style.

Sunday 12 July
St. Denis Stadium, Paris

フランス



HP could handle the most mission-critical electronic-business solution with class and style. HP hosted 3,600 customers during the 33-day competition, showcasing HP technology in a must-win environment.

"I don't have a scientific formula for measuring our return on investment," Alex says, "but if we could win business from 10 percent of our customer-visitors, that would go a long way toward paying for our investment in the World Cup."

Not to mention the goodwill of treating customers to a once-in-a-lifetime event.

"Tickets were selling for 20 to 30 times their face value on the black market," Nick adds. "For many of our customers, it wasn't just an opportunity to see World Cup football, it was the only opportunity."

Although HP had only a small budget for advertising and promotion, about 40 countries throughout Asia saw the HP logo onscreen six times during televised games, notes Katey Kennedy, World Cup 98 marketing manager.

A neophyte in sports marketing, HP learned that it can be a strategic weapon for communicating marketing messages to a variety of audiences, Alex says.

Billboards created by HP DesignJet printers displayed a final World Cup moment in six cities, including Tokyo.

HP's World Cup 98 scorecard

How impressive was HP's performance during World Cup 98? For statistics freaks, here's a brief summary—by the numbers:

- Number of spectator lives saved by HP patient monitors or defibrillators: 1
- Number of different types of HP products represented: 75
- Number of HP Domain servers used: 132
- Seconds of downtime for HP servers during World Cup 98: 0
- Number of HP employees on core World Cup 98 team: 200
- Number of randomly selected soccer players chosen for urine tests, using HP gas chromatography and mass spectrometer systems: 250
- Number of HP printers networked for World Cup 98: 600
- Number of HP-networked PCs used: 2,000
- Number of customers HP hosted: 3,600
- Number of media representatives: 12,000
- Number of HP-created accreditation badges: 80,000
- Number of worldwide Internet users who accessed the HP-powered France98.com Web site: 13 million
- Number of hits on Web site on June 30: 74 million (single-day record for sporting-event Web site)
- Number of hits on official Web site during 33 days of World Cup 98 matches: 1.25 billion
- Estimated cumulative TV audience: 40 billion people

"We made an impressive investment on the technical and product side," he adds. "In the future, we need an equally impressive investment in PR and advertising to leverage our accomplishments."

"World Cup 98 is a great success story for HP, and we should continue to tell the world about it." **M**

Get 'em while they're hot

Sports fans snatched up more than 155,000 pieces of World Cup 98-themed merchandise worldwide, including 10,000 pieces by HP employees, 23,000 for business use in the Americas and 122,000 for business use in Europe and Asia. The best-selling items have been lapel pins, mouse pads and ceramic mugs.

If you want to stock up before supplies are gone—and save 20 percent or more—check the HP Company Store Web site at <http://www.hpstore.com> or contact the fulfillment house for your region:

Europe/Asia

Product Plus International
phone 44 171 393 0033
fax orders 44 171 627 5464
For additional information, call James Lewis 44 171 396-6869

Americas

Ha-Lo Marketing & Promotions
phone (800) 858-3042 (within U.S.)
(847) 647-4902 (outside U.S.)
fax orders (847) 647-4804
For additional information, call Ilene Marshall (415) 981-4256

Expense reductions aren't just a short-term fix, they're a long-term solution, says HP's chairman, president and CEO.

HP's current financial situation may seem confusing to some people, but really it's no different from how each of you manages your personal finances.

When your expenses grow at a faster rate than your income, you have to find ways to reduce them.

It's OK if your expenses are growing 10 to 15 percent each year if your revenue is growing 25 to 30 percent. That was HP's fortunate experience in the mid-1990s. However, we've entered a period of lower revenue growth without a corresponding decrease in expense growth (see the chart below).

That's a recipe for disaster, and we can't let that happen at HP.

The realities are that we're in some of the most competitive businesses in the world and the competition is intensifying.

For example, earlier this year, Compaq, one of our top competitors, had a huge inventory of PCs, so it slashed prices to reduce its supply.

That forced us to drop our prices, too. In effect, we had to pay for our competitor's mistake.

We're also faced with the constant challenge of competing with companies like Dell, which have lower infrastructure costs than HP.

These competitive pressures are found in all of our businesses—not just printers and PCs. As an HP employee, you can't say, "That's somebody else's problem."

You can attribute some of our recent slower growth to the continuing economic crisis in Asia. Our revenue growth rate would be higher if there were greater economic strength in that part of the world. But even if sales in Asia were stronger, the competitive pressures I mentioned earlier still would be with us.

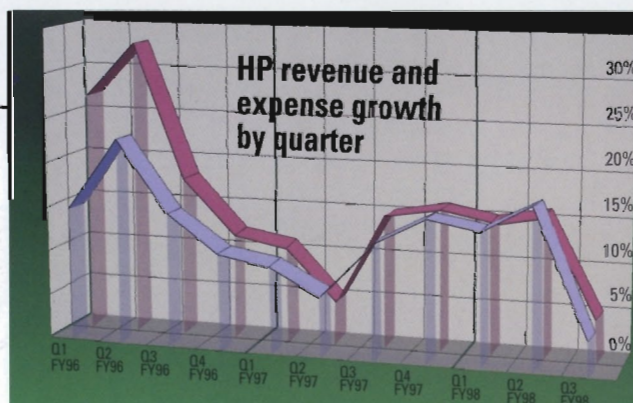
That's why we're taking immediate action to reduce operating expenses—not just for the short-term but also to ensure our long-term profitability. And we're not alone. Virtually every company in our industry is taking some action, including restructuring and downsizing.

What steps are we taking? A few examples include:

- In July, the Executive Committee asked functional managers and above to take a 5 percent pay cut for the fourth quarter of fiscal 1998. This step not only reduces operating expenses, but reinforces the idea that managers are responsible for leading our expense-management efforts.

- At the same time, we announced that all U.S. operations will close for

Quarter	Percent expense growth over prior year	Percent revenue growth over prior year
Q1FY96	15	27
Q2FY96	23	33
Q3FY96	15	18
Q4FY96	11	12
Q1FY97	10	11
Q2FY97	7	5
Q3FY97	13	15
Q4FY97	16	16
Q1FY98	15	15
Q2FY98	18	16
Q3FY98	4	5



Slower revenue growth (reddish ribbon) in the past three years has focused more attention on reducing the growth of HP's operating expenses (bluish ribbon) for the long-term, not just the short-term.



STEVE WELSH

In June, Lew visited with employees after a coffee talk at the HP site in Boise, Idaho. Lew's multipurpose trip to Boise included delivering a President's Quality Award statue to the LaserJet Supplies Operation; touring the World Center for Birds of Prey, an HP equipment grant recipient; receiving a citizenship award from Idaho Governor Phil Batt; firing the starter's pistol for the International Women's Challenge cycling race; and participating in a site diversity awareness event.

the December holidays, and that operations in other parts of the world will take time off during a comparable period. The only exceptions must be driven by customer need and approved by the business's general manager. Again, the savings from these closures will help lower our operating expenses.

- As a company, we're also exploring other more permanent cost-saving actions, including restructuring businesses, limiting hiring and finding ways to reduce ongoing expenses. This, of course, means that we'll be forced to make wise decisions about what we do and what we don't do. An example is travel. There were about 25 percent fewer trips this June than in June of 1997. If we maintain this reduced travel schedule, we can save more than \$200 million a year.

Let me re-emphasize that these cutbacks mentioned in the third point aren't merely ways to improve our

short-term profitability. These are changes in attitude and practices that we must embrace for HP's long-term strength and competitiveness.

Someone asked me recently if these expense reductions aren't too severe. "How do we know," the person said, "when we've cut too much?" I maintain that when our operating-expense ratio is hovering around 24 percent—more than \$11 billion a year—there is room to eliminate expenses that don't generate a good return.

We're not, however, asking employees to forget the long-term or our responsibilities as a company. We're still committed to the important fundamentals such as customer intensity, diversity, training and developing our people, and caring for the environment. But it's imperative that we demonstrate wise spending practices for everything we do.

As far as the stock market is concerned, HP is in a show-me period. Our financial results have been erratic. We've fallen short of Wall Street's—and our own—expectations for the past six quarters. The financial community is looking to us for predictable, high-quality results—for the short- and long-term.

Every employee must make a significant commitment to control expenses. It may not seem important when you save \$10 or \$50 or \$500

until you multiply these savings by our 127,200-person population. Large savings come from an accumulation of small savings.

Each of us has a stake in HP's long-term profitability. It will require some sacrifices along the way, and we'll have to make wise and creative decisions about expenses. Our future depends on it, and I'm confident that HP employees will do their part.

MEASURE readers share their views on matters of importance.

Partners make it possible

Thank you for the excellent article on HP's overarching strategy—The Electronic World. A critical aspect of delivering on our strategy is the power of our partnerships and strategic alliances.

We are perceived in the marketplace as a solutions provider as opposed to an iron mover. This is where our partners come in. The second challenge is communicating our ability to deliver solutions—together with our partners—in the E-World market segments of E-Business, E-Consumer, E-Commerce and the Extended Enterprise Infrastructure.

One tool that we are using is a 10-minute video that acts as a catalyst for dialogue among our customers who are grappling with the changes created by the Internet.

To order a copy of the E-Business video, visit the Media Solutions Web site at <http://mediasolutions.cup.hp.com>.

LISA LION WOLFE
San Diego, California

Please send mail

Do you have comments about something in *MEASURE*? If we publish your letter, you'll receive a Dr. Cyberspace *MEASURE* T-shirt.

Send your comments to Editor Jay Coleman. The addresses and fax number are on page 3. Please limit your letter to 150 words, sign your name and give your location. We reserve the right to edit letters.



A fighting chance

I read with pride the story in the July–August 1998 issue of *MEASURE* celebrating HP's 30 years in the fetal-monitoring business.

I recently received a letter from a surgical intern at Stanford University whose mother went into labor at a hospital in Jamaica—a hospital without the benefit of modern fetal-monitoring equipment. The intern wrote a heart-wrenching story about her baby sister, Imani, who did not survive childbirth because the dilapidated hospital was without the equipment that could have detected the unborn baby's distress, and maybe saved her life.

The letter sparked a team of HP employees into action. The result? HP donated a fetal monitor to the hospital. Unfortunately, the equipment arrived too late to make a difference in little Imani's life, but HP's equipment just may prevent similar tragedies in the future.

Maybe my opinion is biased by the fact that I work in the Medical Products Group, but I believe every Hewlett-Packard employee should be proud to work for a company that makes a real difference in people's lives—those living, and those fighting for a chance at life.

KATHY ROGERS
Andover, Massachusetts

Navigating through the labyrinth

I agree with Lew Platt's letter from the July–August *MEASURE* about improving customer satisfaction. I find the most rewarding aspect of 20 years in sales—14 at HP—is listening to customers and taking action. This is the added value of a salesperson.

Voice mail, e-mail and conference calls are not substitutes. A one-on-one conversation with a customer establishes responsibility and ownership of the customer issues.

But this usually is only the first step. The challenge is navigating through the labyrinth of HP to find a person with the responsibility and authority who will listen to the customer issues and take action.

In addition to listening to customers, we need to listen better to each other. Without completing this step, the value from the customer contact evaporates.

JAMES KUDLESS
Piscataway, New Jersey

Wrong train of thought

In the July–August *MEASURE*, the speed of the ICE train in Germany was listed incorrectly. Eighty miles an hour is not 50 kilometers an hour. It should be the other way around.

By the way, the ICE train runs regularly at speeds up to 250 kilometers an hour (150 miles per hour) between the big cities of Germany.

GUENTER PARET
Böblingen, Germany

Correction

Ray Lane is Oracle's chief operations officer, not chief financial officer as printed in the July–August *MEASURE*. We regret the error.

News from around the HP world

By Muoi Tran and Grace Razo

Opening Down Under

BLACKBURN, Australia—Kangaroos aren't the only ones leaping in Australia. Jon Johnston, HP veteran and founder of Centari Systems, is leaping for joy over the opening of the HP museum in July.

Centari Systems—the largest HP dealer in Australia and winner of the 1997/1998 HP Reseller of the Year award—established the museum with displays of HP computer and peripheral products, ranging from the 1930s to 1990s. There also is a special multi-

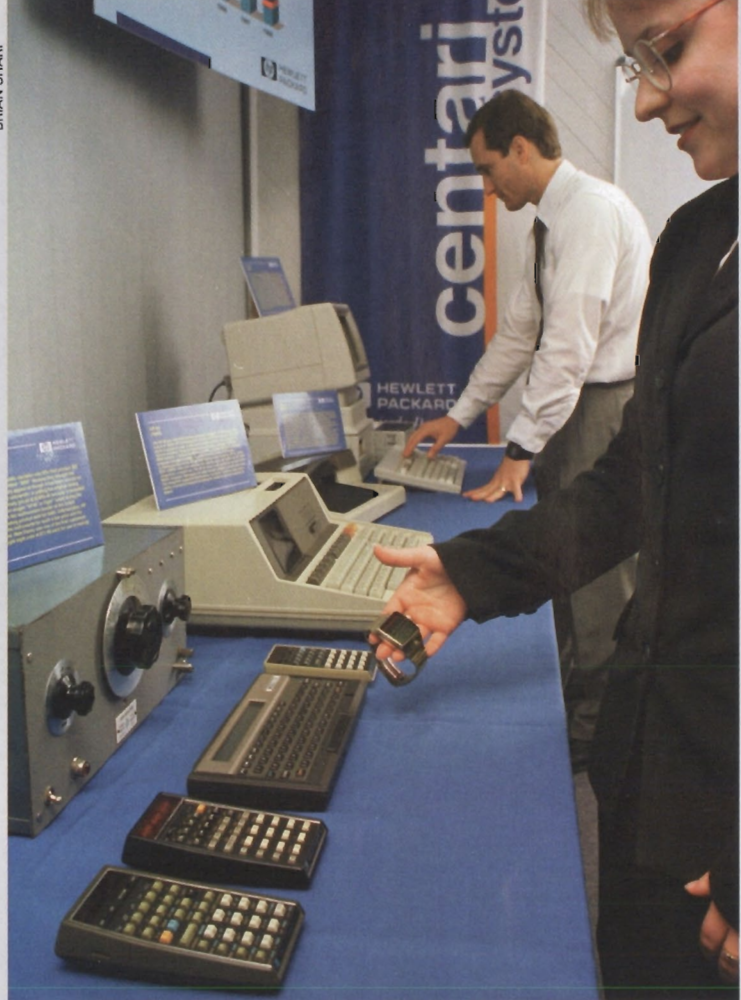
media section featuring HP videos, clips and television commercials.

"All of the products are in working order and most of them will be displayed running," Jon says. "The best displays are of the HP plotters, which are always fun to watch in action."

Because the museum is the only one like it in Australia—and located very close to HP's Australasia headquarters—Jon hopes that HP employees will benefit greatly from the museum.

The HP museum contains HP relics such as a 1939 audio oscillator and a 1977 watch.

BRIAN SHARP



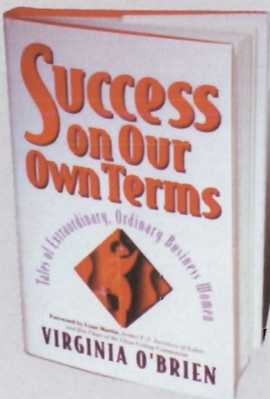
Extraordinary, ordinary women

Medical Products Group's V.P. Cynthia Danaher, Corporate Education's Margo Davis, HP Labs' Darlene Solomon and Worldwide Remarketing Operations' Diana Bell can't leap tall buildings in a single bound, but they are extraordinary.

For achieving remarkable success in their careers—and maintaining balance between the home and office—these four HP women are featured in the book *Success*

on Our Own Terms: Tales of Extraordinary, Ordinary Business Women by Virginia O'Brien, a freelance writer and editor. "The women I interviewed aren't superwomen, but they are extraordinary, ordinary women. They represent the best of all of us," Virginia says.

To read excerpts from the book, visit <http://hpnow.corp.hp.com/>.

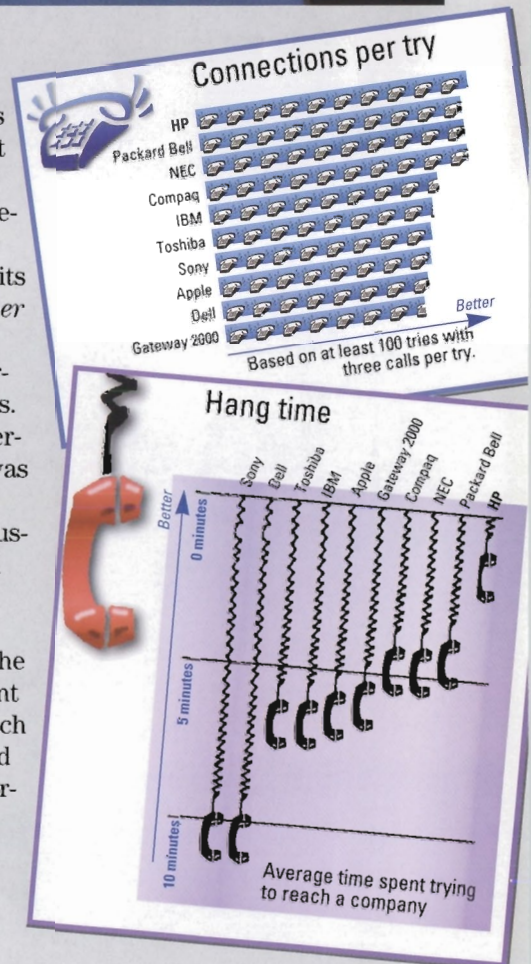


Ringling in No. 1

The results are in: HP has topped the list as the best computer-manufacturing company in providing telephone customer support. In a study conducted for its June 1998 issue, *Consumer Reports* magazine compared 10 major computer-manufacturing companies.

HP was the best in overall performance, which was based on the number of calls needed to reach a customer representative and the amount of time the caller spent on hold.

In the comparison of the average time a caller spent on the phone trying to reach the company, HP also had the best results. HP's average response time was less than half that of the competitors.





SOURCE IMAGES: PATRICIA BARRY LEVY

College interns graduated with pomp and circumstance from Fort Collins' unique HP University program.

Innovation at work

FORT COLLINS, Colorado—"Finding, hiring and integrating qualified talent into our labs is an increasing challenge," says Mark Grigsby, HP recruiting manager in Fort Collins' VLSI Technology Center. "Very few universities adequately prepare students in the design technologies we use to design HP's high-performance CPUs."

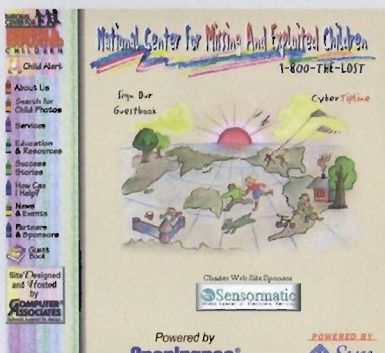
Mark and his recruiting team took matters into their own hands this summer to change the status quo and assist with HP's need to hire qualified VLSI design engineers.

Eighteen students, including six women and 10 from under-represented minority groups, were recruited to

participate in HP University, an innovative SEED program that incorporated formal education, project work and fun.

The education segment was taught by Dr. Thomas Chen, a well-respected VLSI instructor from Colorado State University. While the group bonded during planned weekend activities, their week was intense as they learned VLSI design and the tools used in the VLSI lab.

"HP University enabled us to make job offers to college candidates who are qualified, familiar with HP and with each other," Mark says. "We're looking forward to an even more successful program next year."



Hope for missing children

Unfortunately for many parents, the nightmare of discovering that their child is missing is a reality. In May,

HP brought help and hope to these parents by donating U.S. \$26,000 in computers and printers for the creation of a Missing and Exploited Children Center in Belgium.

The equipment traces missing children around the world by quickly transmitting pictures and information to investigators.

For more information about the Missing and Exploited Children Center in the United States, go to <http://www.missingkids.org>.

THIRD QUARTER RESULTS

HP reported a 1-percent increase in net earnings and 5-percent revenue growth for the fiscal year's third quarter.

Net earnings for the quarter were \$621 million, compared with \$617 million in last year's third quarter. Earnings per share on a diluted basis were 58 cents.

ACTIONS BY THE BOARD

HP's board of directors has elected **Patricia Dunn** as a board member. Dunn is chairman of Barclays Global Investor.

The board also elected **Rick Kniss**, HP V.P. and G.M. of the Chemical Analysis Group, and **Bill Russell**, HP V.P. and G.M. of the Enterprise Systems Group, as corporate V.P.s, making them officers of the company.

DIVIDEND DECLARED

The HP board also declared a dividend of 16 cents per share on HP common stock. The dividend is payable on October 14 to shareholders of record as of September 23, 1998.

BRUSSELS SUPPORT CENTER

HP has opened a round-the-clock support center in Brussels for mission-critical computing environments. Companies across Europe can use the center for comprehensive support.

WATTS TO LEAVE

Dick Watts, HP V.P. and G.M. of the Computer Sales and Distribution Group, has resigned from HP to lead ConvergeNet, a start-up company based in San Jose, California.

ConvergeNet creates products for the high-performance, high-reliability storage marketplace.

MPG HELPS CHILDREN

The Medical Products Group is helping provide state-of-the-art medical care to the children of China by donating \$5.5 million (U.S.) of advanced medical equipment and supplies to the Shanghai Children's Medical Center (SCMC).

SCMC will provide clinical care for children with serious health problems.



As the top fundraisers for a hospital in England, (from left) David Welsh, Liz Fernley, Bill Hill and Steve Hind scaled peaks in Scotland, Wales, Ireland and England—with a smile.

A blistering challenge

After driving 1,900 miles and climbing 14,000 feet, Bill Hill, Steve Hind, Liz Fernley and David Welsh—HP employees from the United Kingdom support organization—bandaged their blisters and celebrated their success.

The HP team was one of 50 teams that participated in the 1998 Four Peaks Challenge in July to raise money to build a new Wooden Spoon Society Cancer Care and Hematology

Unit at Stoke Mandeville Hospital in Buckinghamshire, England.

As part of the Challenge, the HP group scaled consecutively the UK's four highest mountains—Scotland's Ben Nevis, England's Scafell Pike, Wales's Snowdon and Ireland's Carantouhill—in exactly 45 hours and 15 minutes.

Despite the painful blisters, the fearless foursome proudly walked away with the trophy for raising the largest amount of money—a total of £25,000 (U.S. \$40,845).

Behind the scenes

GENEVA, Switzerland—HP equipment was working behind the scenes recently at the 12th World AIDS Conference to fulfill a promise. Bernard Hirschel, the Conference chair, vowed to the attending delegates that they would have easy access to conference information through the use of computers.

HP was the main provider of hardware, supplying monitors, printers and 250 desktop computers for the more than 12,000 people who attended this year's conference.

The delegates had a training session to learn how to use the computers to access information, create personal itineraries and contact others at the conference.

To find out more about the 12th World AIDS Conference, visit <http://www.aids98.ch>.

The Web site for the 13th World AIDS Conference in Durban, South Africa, already is available at <http://www.aids2000.com>.

A PARADE OF HITS

The official World Cup 98 Web site, powered by HP Domain servers, became the most popular sporting-event site in the short history of the World Wide Web.

With nearly 74 million hits on June 30, the site surpassed the one-day record of 58 million hits, held by the site for the 1998 Winter Olympic Games in Nagano, Japan. (See related story on page 24.)

ORGANIZATION TRANSITIONS

The Colorado Memory Systems Division has changed its name to Colorado Personal Storage Solutions Division (CPSS). **Jerry Shea** continues as G.M.

The factory operations for Yokogawa Analytical Systems have been upgraded to division status and named the Tokyo Analytical Division, under **Ryuji Kanno** as G.M.

The San Diego Division and Office Products Division have merged to become the All-in-One Division (AiO). **Ray Brubaker** is AiO G.M.

AN OFFICER OF THE EMPIRE

John Golding, chairman and managing director of HP United Kingdom, has been awarded an OBE (Officer of the Order of the British Empire) by Her Majesty Queen Elizabeth.

HP 42ND IN GLOBAL 1000

Based on its market value as of May 29, 1998, HP is the 42nd largest company in the world at \$64.31 billion (U.S.), according to the most recent Global 1000 ranking from *Business Week*.

I NEW HATS

Marilyn Edling has been named G.M. of the Enterprise Storage Solutions Division.

Greg Hoberg is the new G.M. of the Video Communications Division.

HP Education has become a separate entity within the Professional Services Business Unit. **Lenny Alugas** has been named G.M.

Roberto Medrano, formerly president of Finjan Inc., has joined HP as G.M. of the Internet Security Operation.

Gerry Mooney is G.M. of the newly created New Venture Program.

Thursday 20/09/98 in Durban, see the site

WELCOME

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Welcome to the Aids 2000 site, the official web site of the 12th International AIDS Conference

12th INTERNATIONAL AIDS CONFERENCE

The 12th International AIDS Conference will be held from the 7th to the 14th of July 2000 in Durban, South Africa. This site will contain all the information you will require leading up to the conference. At the moment, most of this site is UNDER CONSTRUCTION. We trust you will understand.

The 12th International AIDS Conference is currently underway in Geneva, Switzerland. Please visit their web site.

Our Co-Organisers

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Crossing over time

PRAGUE, Czech Republic— One October morning, Eric Becker, an HP business process analyst in Santa Clara, California, found himself seemingly transported back in time.

As he stood midway on the Charles Bridge in Prague during a European vacation, Eric felt as if he had been “dropped into the Middle Ages.”

The bridge’s stonework and Gothic statues made it easy for him to imagine what it was like hundreds of years ago. King Charles IV had the bridge built in 1357 after the previous one was destroyed by a flood.

Eric was determined to bring back real evidence of his surreal trip. He waited for the thick fog to clear, climbed the side railing and shot this timeless image.

“I almost took a color picture,” Eric says, “but I knew it wouldn’t have the same effect as black and white.” He used a Canon Sure Shot camera with 125 speed black and white film.

“The picture had to be taken in the early morning,”

Eric adds, “because the bridge is always crowded.”

For more than 400 years, the bridge was the only link between the two halves of Prague.

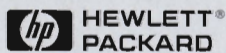
On that October morning, crossing the Charles Bridge meant more than just sightseeing to Eric—he was crossing over time. “Being on the bridge made

me think about all of the medieval kings and queens who had crossed it before me.” **M**



ERIC BECKER

For U.S. address changes, use Change of Address form in Personnel on the Web at <http://persweb.corp.hp.com>.



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