Northern exposure
FROM THE EDITOR

Four-year-old Casey and I were coloring the other day when she paid me the ultimate compliment: "That's very good, Dad. Would you like to put your name on it?"

In Casey's pre-school, the kids can color and scribble and doodle. But when they really create something special, they're allowed to put their name on it.

Ever since Casey's comment, I've been thinking a lot about things we put our name on.

Parents, of course, put their name on their children. Oftentimes, their expectations, too. I was good in math, we might say, so my children should be, too. It's unfair, but we do it.

There was a time in the United States when most wives took their husband's name and gave up their own. But that practice has changed for many women. I have my own identity—my own name—the thinking goes; why should I give that up?

Putting your name on your work has been a way to distinguish it—perhaps make it more valuable—for centuries. William Shakespeare's signature—only six are known to exist—is worth more money than some people earn in a lifetime. A Ming vase could bring you a small fortune today. Steven Spielberg's name on a movie virtually guarantees that it will be a financial success.

Bill Hewlett and Dave Packard could have called their young company anything they wanted to when they started it in 1939. But there's nothing like putting your name on your product to remind yourself that the product must be exceptional.

If your product has a strong identity in a particular market, it has good "brand equity." People immediately recognize Coca Cola, for example, when they think of soft drinks.

The same thing is true for a number of Hewlett-Packard products, as you'll see in the story beginning on page 9. In many markets, HP is the standard that other companies want to emulate.

It's ironic, then, that some day HP may put someone else's name on products we produce. It sounds a bit far-fetched, but here are a few ways it could happen:

• Let's say that HP decides to enter a market where low cost is the driving force—and that HP traditionally hasn't been thought of as a low-cost leader. The customer scans the shelf at the appliance store and thinks to herself, "Why should I pay for the high quality of an HP widget when a WidgetPro widget is all I need?" So, HP might start manufacturing the widgets, put a WidgetMaster logo on the product and sell millions.

Better yet, we could get in the widget market faster by acquiring the WidgetPro Company and keeping their name on the widgets on the store shelf.

• If the HP name doesn't have a strong identity in a market, we still could put our name on the product, but in a low-key way. Actually, we're already doing this. Kayak—the interactive TV set-top box—features the Kayak name prominently with the HP logo shown in a secondary position.

Fortunately, recent marketing surveys clearly demonstrate a tremendous "equity and value" in the HP name.

That's a comforting thought. Because—as any 4-year-old can tell you—when it's really good, you should put your name on it.

—Jay Coleman

On the cover: Julie Hugo sleds back to camp with a caribou that village elders will carve for dinner for Julie and other students at a Nunamiat School in Northern Alaska. An HP 9000 business computer links Julie's class with students throughout this remote region (see page 4). Cover photo by Clark Mishler.
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Conquering a new frontier

By Tom Ulrich

HP computer equipment helps link Alaskan school children, including the last nomads in North America.

ANAKTUVUK PASS, Alaska—"As a child, I followed the caribou," says Lela Ahgook, president of the Nunamiut School Advisory Council. She traveled by dog sled in winter, on foot in summer. "It was a hard life," she says. "When there were no animals, we did not eat."

Lela, a Nunamiut or inland Iñupiaq, speaks for the last group of nomads to roam North America. Her grandchildren, students at the public school here, speak for the first inhabitants of the new frontier.

"In the past decade," says Steve Yates, principal of Nunamiut School, "we've gone from the Bronze Age to life beyond the year 2000."

Evidence of the electronic age abounds at this elementary, middle and high school. Satellite dishes flank the maintenance building. Students pass notes electronically to Iñupiat children across the aisle or across the Arctic.

An HP NetServer LM directs the flow of e-mail over the tundra. It delivers the application programs that students and teachers share with colleagues at nine other village schools located along Alaska's North Slope.

Each classroom is equipped with several personal computers, all of them connected through the HP NetServer LM and an Alascom satellite to an HP 9000 160 located at North Slope Borough School District offices in Barrow—about 250 miles away.

"The computer gives these children a sense of control that they didn't have before," Jim Werden, fourth-grade teacher, says. "The power of the district network allows them to search for information that they would otherwise glean from an encyclopedia or never experience at all."

Rising above the hemisphere like the North Star, the Aurora II satellite relays information to district school children at the speed of light. It scales the 88,000-square-mile borough so that the district's most distant people are only a split second apart.

Down the hall from Jim Werden's fourth-grade class, two large-screen monitors beam a vision of 21st-century education to Algebra I students. One screen, like a dulled mirror, reflects Sally Walker and her three students. The other screen shows Larry Moye, recipient of a presidential citation for excellence in math education and a district algebra teacher. A special-purpose computer that attaches to both monitors receives and transmits signals simultaneously.

Larry teaches mathematics from a television studio in Barrow. Students in Anaktuvuk Pass ask questions, figure out a compound interest problem and then share their answers with classmates in villages across the North Slope.

"Distance learning lends itself to this generation of students," Larry says. "It is a medium they understand."

When Frances in Anaktuvuk Pass asks Larry a question, her voice trips a computer at the central office to switch video transmission from the television studio in Barrow to her classroom in the Brooks Mountain right.

Steve Yates, Nunamiut School principal, helps Stacey Wells and Willie Hugo, Jr. with a computer program that teaches basic mathematics.
As Larry answers it, the transmission returns to him.

Like the most traditional classroom, students in other villages look back and forth between Frances, who asks the question, and Larry, who answers it. And, like a teacher addressing students in a large lecture hall, Larry surveys his audience once class begins. A monitor at the television studio beams students—watching, listening, frowning, smiling—as video transmission moves from one village to another sequentially.

"Last year, my algebra class performed better than any I've had on the North Slope," Larry says. Boroughwide scores on national achievement tests have improved steadily since the district added distance learning to the curriculum in 1990.

"The North Slope Borough School District has created one of the most innovative distributed educational systems in the world," says Suzanne Neil, a director of the Research Program on Communications Policy at the Massachusetts Institute of Technology (MIT).

"The North Slope Borough School District uses dispersed technology in intelligent and creative ways to transmit cultural values," says Suzanne Neil from MIT. "Children can now grow up in villages instead of being yanked off to boarding school."

"My grandmother used Eskimo tools to make mukluks for her family," says Valerie Ahgook, sixth-grader at Nunamiut school. "I use the computer to share ideas with friends all over Alaska." M

(Tom Ulrich writes for HP's Integrated Systems Division in Sunnyvale, California.—Editor)
A $3.7 million general bond issue paid for the district's distance learning project, including a satellite dish that carries audio and video transmissions.

Twilight in the Arctic. A young hunter and his guide search the horizon for grizzly bear from the surface of a frozen lake 10 miles west of Anaktuvuk Pass.

Roger Kunayak shapes Inupiaq numerals for a multimedia presentation to elementary students from the editing room at Barrow High School.
Students and a teacher’s aide in Anaktuvuk Pass share the airwaves with Alaskan studies teacher and Inupiaq Eskimo Martha Stackhouse.

All personal computers at the remote school are connected to an HP NetServer LM, which enables students throughout the 88,000-square-mile district to search for and receive information easily.

Twins Helen and Kara Kasak bundle up on a crisp April day. All but one of the students attending the school in Anaktuvuk Pass are Nunamiut Eskimo.

A school bus leaves the Nunamiut school for the next run through the village. Each trip covers 1 1/2 miles of graveled streets.
As every winner knows, it's great to be No. 1—whether that ranking is for a sports team, the best in a piano competition or the top box-office draw at movie theaters.

Hewlett-Packard offers an impressive array of different products: more than 23,000, when you add in all the options and accessories. To remain in HP's current offering, each must make a genuine contribution or it is soon replaced by another enhanced or even break-through product. In the face of all this excellence, a few products do stand out as clearly No. 1, as seen through the eyes of HP's customers, competitors and the trade press.

On the following pages are HP's listings of current products and services that are No. 1 in their particular field, with photos of some representative top products. Leadership rankings are based on data from third parties or, by HP's Corporate Communications department.

**Computer Systems**

There's nothing timid about the aim of the Computer Systems Organization (CSO)—its mission is to be the leading supplier of innovative information-technology (IT) solutions to the top 1,000 global companies and to its own channel partners. CSO's product areas cover a broad range from workstations to multi-user systems and servers—all based on PA-RISC chips. Included in its portfolio are networking and application platforms, application software for mechanical design, and telecommunications solutions. CSO is organized into Computer Systems, Systems Technology and Solutions Integration groups, a Software Business Unit, and sales, marketing and manufacturing.

- #1 worldwide in revenues for UNIX system-based computers
- #1 worldwide in X terminal revenues
- #1 worldwide commercial RISC/UNIX system-based computer market
- #1 worldwide in RISC-system revenues
- #1 in overall customer satisfaction (for the HP 3000) among mid-range systems
- #1 in overall customer satisfaction for HP-UX (among all UNIX system-based operating systems)
- #1 in network and systems management
Computer Products-Hardcopy
The Computer Products Organization (CPO) divides its business into "hardcopy" and "personal computing." The LaserJet Solutions Group and the Inkjet Products Group make up the "hardcopy" side of CPO. HP created the market for desktop printers and maintains worldwide leadership in other product lines.

- #1 worldwide in laser printers
- #1 worldwide in inkjet printers
- #1 worldwide in color printers
- #1 worldwide in desktop scanners
- #1 worldwide in inkjet plotters
- #1 in the United States in multifunction devices

Computer Products-Personal computing
The Personal Information Products Group (PPG) within CPO focuses on the explosive market of personal computing. HP has set new standards in such key markets as mobile computing and high-speed networking. New desktop PCs for the home user and products for the emerging interactive-television and communications markets also are exciting.

- #1 DOS-based handheld PCs
- #1 highest overall customer satisfaction for desktop PCs (J.D. Powers survey)
- #1 worldwide in manageable stackable hubs

Information Storage
A key requirement for the Information Storage Group (ISG) in serving the computer and IT marketplaces is reliability—assuring that vital information is saved and readily retrievable. ISG is one of the industry's major suppliers of storage, data-management and backup products and its products are extremely reliable.

- #1 worldwide in 5.25-inch optical disk-drive jukeboxes
- #1 worldwide in digital audio-tape drives and tape backup products

Test and Measurement
As the world's leading supplier of customized and standard test systems and equipment, instruments, components and accessories, the Test and Measurement Organization (TMO) also provides consulting services. With a history that dates back to the origins of HP, TMO maintains a well-established worldwide lead in many product categories.

We're #1
while moving energetically into such new business areas as telecommunications, data communications and multimedia networks. It is organized into Communications Test Solutions, Microwave and Communications, and Electronic Instruments groups.

- #1 worldwide in overall test and measurement products
- Leading supplier to the telecommunications industry
- #1 worldwide in modulation domain and time interval analyzers
- #1 worldwide in communications test equipment
- #1 worldwide in network analyzers
- #1 worldwide in spectrum analyzers
- #1 worldwide in high-frequency computer-aided engineering software
- #1 worldwide in laser-based positioning systems
- #1 worldwide in radio-frequency and microwave-signal generators and sweepers, synthesized and unsynthesized
- #1 worldwide in VXI instrumentation
- #1 worldwide in logic analyzers
- #1 worldwide in ASIC (application-specific IC) verification and characterization equipment
- #1 worldwide in microprocessor development systems
- #1 worldwide in semiconductor process-control test equipment
- #1 worldwide in DC electronic loads
- #1 worldwide in electronic counters
- #1 worldwide in system DC power supplies
- #1 worldwide in electronic counters
- #1 worldwide in system DC power supplies
- #1 worldwide in cesium (atomic) clocks

Medical
One of the world's largest developers of electromedical equipment, the Medical Products Group (MPG) markets more than 400 medical products, services and supplies, including ECG management systems, ultrasound imaging technologies, patient-monitoring systems and clinical-information systems.

- #1 worldwide in patient-monitoring systems
- #1 worldwide in cardiac ultrasound imaging
- #1 worldwide in clinical information systems for critical-care
We're #1

• #1 in UNIX system-based platforms
• #1 in customer satisfaction
• #1 in United States in cardiac ultrasound imaging service

Analytical
The Analytical Products Group (APG) has spawned many advances in analytical chemistry, such as the electronic-recording integrator, the microprocessor-controlled analytical instrument, the digital benchtop gas chromatograph/mass spectrometer and the fused-silica capillary column. Drawing from new technologies developed at HP Laboratories, it has developed advanced technologies for mass spectrometry and spectroscopy. It also is in the fields of liquid chromatography and elemental analysis.

• #1 worldwide vendor of gas chromatography systems

Electronic components
The Components Group is the largest independent supplier of communication components in the world. The group’s charter is to develop semiconductor component solutions that will advance such strategic technologies as the “information superhighway,” the extended desktop and mobile information appliances.

• #1 worldwide in LED lamps and displays
• #1 worldwide in fiber-optic communications transceiver modules
• #1 worldwide in optical encoders
• #1 worldwide in photo IC optocouplers

Customer support
With the rapidly growing need to link and support “open systems,” Worldwide Customer Support Operations (WCSO) offers a variety of services to support these typically multivendor systems. Many organizations are outsourcing some or all of their computer maintenance and management, while support services for older software and hardware are still much in demand.

• #1 in overall support satisfaction for UNIX system-based operating systems
• #1 in technical support
• #1 in technical support for desktop computers, network servers and desktop printers

For a copy of the full 36-page “HP Fact Sheet,” send an e-mail message to Randy Lane. The SUBJECT is HPFactSheet. On UNIX: Randy Lane@HP-PaloAlto.com hp.com

Three million HP light-emitting diodes (LEDs) glow brightly in the world’s largest electronic sign in Tianjin, China.
Employees in Kobe, Japan, show incredible strength in the aftermath of January’s devastating 7.2 earthquake.

Where her family house once stood, Akemi Takahashi inspects the sand, rice, salt and laurel branch—part of the Shinto ceremony to christen the ground for construction.

A time for recovery

By Jean Burke Hoppe

KOBE, Japan—"It’s difficult to express," says Akemi Takahashi, with a nervous laugh. "I think about many things I never thought about before. I think now about death—my death, the death of my family. I wonder if the fear will ever go away. I know my family was very lucky. Still, I think about these things."

That is how a natural disaster like Kobe’s January 7.2-magnitude earthquake alters reality. To Akemi, software engineer with HP’s Asia Pacific Products Operation (APPQ), nothing—neither buildings nor freeways nor bridges—ever will look quite the same, quite so benign. Denial will be harder to sustain now that she knows the forces of nature can rip loose and, in 20 seconds, kill more than 5,000 people, injure nearly 27,000 and leave 300,000 homeless.

Akemi’s family literally was torn apart by the powerful quake. Akemi, her parents and a college-age brother were fast asleep when the temblor struck with a thunderous crack. It was so strong that she could not get up out of her bed even though the wall of her second-floor bedroom was giving way toward her and the ceiling was ripping apart.

When the shaking stopped, her entire family—even the dog—got out safely. But their home in Nishinomiya, between Kobe and Osaka, was one
Recovery

of the few in the neighborhood beyond repair.

They re-entered the wreckage of their home briefly, despite unnerving aftershocks, to get a few possessions—some clothes, books, kitchenware and money, plus important papers, photographs, letters—"the things money cannot buy." They were lucky. "So many of our neighbors lost everything. Many of our neighbors died."

Akemi’s family spent a miserable two weeks operating out of a lecture hall in the primary school across the street from their home. She stayed

"It was very terrible. There was no food, no water for bathing the first day."

there only three days with her mother before HP Japan housed Akemi in the dormitory at the Kobe site—which HP Japan also offered to employees from other companies—and eventually in an apartment close to work. Her brother, father and the family dog slept in their car.

"It was very terrible. There was no food, no water for bathing the first day. It was crowded and you had no privacy. You couldn’t change clothes. The buses weren’t running. Some people staying there had lost their family so it was very sad. We could not get information. You can’t believe this is happening to you. No one believed it could be happening here."

Her parents now rent a house in Osaka. Her brother has moved to an apartment near the university he attends. They are living apart for the first time and it’s hard for Akemi. "I like my little apartment and I am grateful to HP Japan for all the help they gave me after the earthquake. But I have never lived alone and sometimes feel lonely. This is a very different neighborhood. Sometimes I’ll wake up at night scared, my heart beating very fast. I think about it happening again."

She returned to work January 24 and had trouble concentrating at first. "I’m better now. Talking with my friends helps a lot. We still talk about it at the office. Everyone was deeply affected by it."

Yoh Narimatsu, Kobe Instrument Division (KID) general manager and Kobe site manager, says one need only look around the Kobe area to know how lucky HP Japan was to sustain such minor damage from the quake. While recovery is complete or well under way for many companies damaged in the quake, he says, he knows of a big steel company whose headquarters was completely destroyed.

"Our people did more than a great job in February and cleared the backlog by the end of the month."

"They’re thinking about giving up the site, raising money by selling the land," Yoh says. "Other companies also have changed their priorities on spending money. Recovery and rebuilding expenses are a higher priority than investment for R&D and/or expansion."

HP Japan repaired its damage quickly. The quake hit early Tuesday and KID manufacturing was back in business by Friday. The KID manufacturing line is on the first two floors of the main Kobe building, Yoh says, and the quake did less damage there than on the upper floors, which house R&D, marketing and administration.

"On the higher floors," he says, "computer terminals fell to the floor (amazingly, they didn’t break), and parts of the ceilings and walls fell to the floor. In the production area, document binders, tools, PC monitors and printed circuit boards fell to the floor, and racked systems rolled around, but fortunately none of the small electronic parts were scattered. The disk containing the production-related data didn’t crash."

Yoh says shipments were held for a few days and parts supplies were unstable for a few days. "The maximum delay was about a week, not very serious. Most of our customers were generous and understanding about the delay and we experienced no loss of business. Due to limited production capacity, the January shipment level was 70 percent of what it should have been and that increased our backlog for February."

"Our people did more than a great job in February and cleared the backlog by the end of the month. That’s even more amazing when you consider how many of our people had difficulty getting to work or were busy caring for their families and neighbors."

While HP Japan is not specifically providing ongoing external support following the quake, the service department of a small company which lost its offices in downtown Kobe is operating from HP Japan’s Kobe facility. Similar requests are coming in, says Yoh, while they—and the rest of Kobe—rebuild. M

(Jean Burke Hoppe, a Lincoln, Nebraska-based free-lance writer, is a former MEASURE editor.—Editor)
HP's impressive booth in the exhibition hall featured products from the Queensferry (Scotland) Microwave Division, Workstation Systems Division, Lake Stevens (Washington) Instrument Division, Microwave Instruments Division and IDACOM Telecommunications Operation, as well as VID.

USA Animation, a Burbank, California, company, showed attendees how it uses HP workstations to create cartoons such as Ren & Stimpy (pictured here), The Simpsons and Beavis and Butthead.

VID's Christine Martino, who managed HP's Hot Company/Cool Video booth, maintained a frantic pace during the four-day exhibition.

Junko Yoshida from EE Times interviews Andrew Gee of the Video Communications Division about some of HP's new digital video solutions.
LAS VEGAS, Nevada—The doors open at this annual orgy of technology in April 1995 and some 80,000 people swarm onto the floor of the Las Vegas Convention Center exhibition hall like ants attacking a pot of spilled honey.

The event is NAB '95—the National Association of Broadcasters' annual conference and exposition, held in the mecca of extravagance, neon lights and high stakes.

To win in this town you need an air of confidence, a good knowledge of the game and a winning hand. On all counts, HP has a sure thing.

HP's presence here is amazing. Four years ago, the then-Stanford Park Division began its caterpillar-to-butterfly metamorphosis. It shed its entire product line—primarily defense-related test-and-measurement equipment—and turned itself into a whole new creature. It became the Video Communications Division (VID) and targeted the digital video market as its new focus.

VID's venture to NAB '91 was essentially a scouting trip. It zeroed in on the kinds of products video executives need and how HP can meet those needs. A year later, HP returned to NAB with 14 new products.

By NAB '95, HP had it all: confidence, knowledge and a winning hand. Like its flashy purple, aqua and blue booth, HP's theme said it all—Hewlett-Packard: Hot Company, Cool Video.

How important is NAB '95 to the Video Communications Division? HP estimates that the potential worldwide market for disk-based video storage—one of its marquee products—will be more than $1 billion during the next five years. And the average executive attending NAB '95 will spend as much as $1 million for video equipment and systems in the next year.

As one HP official explains, "This is where the elephants dance and the ants get crushed."

Caterpillar...butterfly...elephant. It could only happen in Las Vegas. —Jay Coleman

above
John Casey from HP's Video Communications Division (VID) demonstrates the HP VidJet Pro video print manager's grab-and-print capability at NAB '95 in Las Vegas.
An 8-minute multimedia presentation about HP's broadcast video server—and comfortable chairs—drew scores of NAB attendees to the HP booth where David Siever narrated the show.

Trying to see the latest in broadcast technology from 1,000 exhibiting companies is an amazing feat (and takes amazing feet) for the 80,000 attendees.

Tatt-Si Tan of HP Singapore talks with customers from Hong Kong in the HP booth.

Panasonic's Frank Murrinoh liked the HP booth so much he videotaped it.

John Cecil from the Microwave Instruments Division explains some broadcast and cable TV testing equipment to a special booth visitor, HP CEO Lew Platt.
HP adopts cc:Mail for OpenMail—the next-generation e-mail system—with an aggressive rollout plan.

It's time for a

Quick Change

By Jay Coleman

Ronald Reagan was president of the United States, Ghandi was voted the best motion picture of the year and Italy beat West Germany for the World Cup soccer championship.

The year was 1982, and HP revolutionized the way employees communicated when it launched HP Desk—its electronic-mail system.

Thirteen years later, a new revolution is taking place in HP as the company moves to the next generation of e-mail systems—Lotus' cc:Mail communicating with an HP OpenMail server.

And the pace of change, like most things these days, is fast. The company plans to convert its 80,000 HP Desk users to cc:Mail for OpenMail in a little more than one year. The rapid transition project is called "Quick Change."
The Quick Change rollout schedule began in July 1994. It's truly worldwide, with users already on-line in Asia Pacific, Europe and the United States. Among the first adopters were users of PC COE—HP's common operating environment—because software updates can be delivered on the local-area network.

Approximately 29,000 HP employees were using cc:Mail by June 1995—a fast rollout when you consider that similar conversions have taken years. When HP introduced HP Desk, for example, only 150 employees received the new system each month.

The Quick Change concept is to stop using HP Desk and begin using cc:Mail immediately. The "cold-turkey" change means that HP won't have to run two e-mail systems at the same time, which would cost the company millions of dollars.

Why change to cc:Mail at all?

"More and more applications are moving from running on a host computer to a client/server architecture," explains Matt O'Connor, a member of the client engineering team for Corporate Network Services. "It was obvious that HP employees need an electronic messaging system that can handle their increased business requirements and integrate with their PCs and workstations."

What does cc:Mail for HP OpenMail offer? First, it allows users to attach different types of files such as spreadsheets, graphics and Ami Pro documents easily and quickly. It uses SmartIcons similar to those used in Microsoft Windows, which most employees use daily. Because it has these features, it's easier to learn than HP Desk.

Advanced functions include text searching, rules and the ability of users to see exactly what was sent to them, such as maps, charts, graphs and text.

Gordon Staley, a process control manager for HP's Inkjet Supplies Business Unit in Corvallis, Oregon, was one of the first HP employees to use cc:Mail in the evaluation phase. He adapted to it quickly, he says, and enjoys it thoroughly.

"The Windows interface makes it a much stronger, more powerful tool," Gordon says. "Being able to attach PC files such as Freelance, Excel and Ami Pro is a big advantage. And the online spell-checker is quite handy."

Using cc:Mail Mobile, Richard Kirby, another early cc:Mail user from HP's Mobile Computing Division in Corvallis, can download e-mail messages on an HP OmniBook 600 laptop computer. He reads the messages and types responses while on an airplane, for example, then sends the replies the next time he has a phone and modem.

"It's convenient and really increased my productivity," Richard says.

HP OpenMail, a product of HP's Enterprise Messaging Operation (EMO), fulfills the same role that HP Desk did earlier, providing a reliable, enterprise-wide, secure mail system with the added advantages of multimedia and mobile communications capability.

HP employees are using cc:Mail for OpenMail to eliminate paperwork transactions such as disbursement vouchers and travel expense reports.

The Financial Services Center is using this technology to speed its processes and improve customer satisfaction, Matt says.

Like most new applications, the early version of cc:Mail for OpenMail had its limitations. It didn't allow users to see Ami Pro tables, for example. However, version 2.2, released in June, addresses some of the former limitations, and future versions will handle others.

"We're listening to what our customers want and so is Lotus," Matt says. "Converting to cc:Mail is a change, and change makes some people uncomfortable. However, cc:Mail is a powerful tool. As employees use it more, they will unlock more and more of its potential." M

(Ready to convert to cc:Mail? Contact your site's information-technology organization.—Editor)
Renaissance player

By Jennifer Kate Ward

16th-century history buff Grant Smith is jousting to place Hewlett-Packard at the forefront of the Information Renaissance.

Grant Smith has a unique foothold in both the past and the future.

By day, as a program manager in HP's Electronic Sales Promotion (ESP) department in charge of Access HP—HP's home page on the World Wide Web—Grant fundamentally is changing the way Hewlett-Packard does business around the world.

By night and on weekends, this Information Superhighway drag racer fashions historically accurate armor for "Nathan Bear," the fictitious House of Bear protectore he has played for the last 15 years at Northern California's annual Renaissance Pleasure Faire.

"To understand Grant," says his longtime friend and former Intel co-worker Dennis Gobetz, "you almost have to see him at the Faire, in the middle of a dusty road in leather and steel, sword hanging off one side and a two-foot hollow bull's horn filled with dark brown stout jammed into his belt on the other."

Celebrating its 30th anniversary this August, the Renaissance Pleasure Faire in Novato, California, attracts scores of visitors (more than 217,000 attended last year), and more than 4,000 players and participants who transform themselves into nobility, peasantry, members of various guilds and myriad other Elizabethan characters for eight consecutive weekends. Using authentic dialects, lords mix with washerwomen, while rogues in tattered cotton trip over Shakespear-ean sonnets in their attempts to seduce velvet-clad ladies.

All new participants must take at least 20 hours of apprentice instruction offered by the Faire's own College of Performing Arts. "Elizabethan English as a Second Language," country dancing and history of the period are among the 40 colorful subjects taught. After 10 years of study, Grant has graduated from the apprentice and intermediate journeyman ranks to the master level of scholarship.

His expertise is legend, particularly among those who enjoy his energized tours of the 22-acre fairground. Grant is a member of the Guild Master's Fund, a division of Novato's Living History Center that provides docent services to the disabled and disadvantaged.

"One of the most fascinating tours I gave," he remembers, "was to three blind women. They chose to take a tour with me because I'm loud. When I walk around, the armor clacks a lot, so they could 'see' me as they walked along. I showed them the cinnamon buns, the perfume booth, the fur shop, the madrigal singers, the chain-mail seller and the bell booth. They rang all the different bells and chose one for their seeing-eye dog."

There was genius in the armor costume that Grant crafted by hand. First, he bought sheet metal from a
local metal shop and cut it to size by hand. Then came the step of annealing the metal, making it soft and pliable with the application of intense heat. Next, the metal was cold-forged on an improvised tree-stump 40-pound steel block anvil with three types of hammers yielding various shapes. Finally, Grant blued the metal, re-heating it and dousing it in water to oxidize the various pieces that were joined by leather straps.

Barbara Smith, his wife of 12 years and a sales representative for Sun Microsystems, recalls the armormaking episode with great amusement: "I just remember him with his big gloves and tongs, running through his mother's living room, from fireplace to hot tub to dunk this stuff, the steam coming up, and I thought, 'I'm living with a lunatic!' But that was one of the things that makes life with Grant interesting. Never a dull moment."

His HP job is equally demanding. For nearly two years, Corporate Marketing Services has focused on new and emerging electronic marketing technologies that will enable customers to do business with HP more easily and effectively. Grant's task is to bring on-line marketing information for the company's product groups worldwide.

For Grant, who has been involved in HP marketing communications since 1988, this assignment represents his most gratifying and expansive professional challenge. "I love the openness and exploration. It was clear when I saw Access HP go live on the Internet—when we had our marketing presence open—that it was a complete fundamental shift in how the world will do business. I was staggered. I just sat down, lifted my jaw off the ground and said, 'Time to get to work.'"

Most internal business divisions are already on-line with Access HP; all of them will be within the year. Currently offering immediately updatable information on more than 2,000 navigable pages that are globally accessible 24 hours a day, this emerging interactive marketing tool reflects the company's leading technological edge.

Customer response has already exceeded expectations. On average, Access HP serves more than 100,000 pages during a normal business day via the Internet. By the end of next year, the number of display pages is expected to grow by a factor of five, while the increase in Internet users and potential customers already is surpassing all projections. An on-line magazine and other communication services also will be adopted.

And what does the future hold for a man who typically has 500 e-mail messages waiting for him? "I'd like to learn to sell better, and through that help others. It's great to watch people get a new idea, to see the light bulbs go on and to be able to share in that moment of 'Aha!' with them." Grant also is eager to learn how to sculpt marble.

"But for now," he muses, sitting back in his chair, "I'd like to take a nap."

(Jennifer Kate Ward is a Palo Alto, California-based free-lance writer. — Editor)
A whole new world
Thanks for the article on the recent split of HP stock. It helped to put the world of "high finance" in layman's terms so that even business neophytes like myself could understand.

The article was at the exact level of detail to explain the pros and cons of a stock-split decision and what such a decision means to HP as a company and to HP shareholders.

TONY SMALDONE
Wayne, Pennsylvania

Now I know
I didn't know what MEASURE was at first and just thought it was a magazine to advertise Hewlett-Packard. Now I realize that it's our story and messenger, and I really enjoy reading it.

One thing I would like to suggest is a feature story introducing each HP entity. It would be a great help with understanding our HP friends around the world.

Keep going on; we're proud of you.
HYUN OKC YU
Seoul, Korea

A musical correction
I enjoyed the "What's your global I.Q. ?" quiz in the March-April issue, but I did notice a mistake.

Question 29 stated that "The Japanese play their national anthem at the start of baseball games, sumo wrestling matches and other athletic events." Actually, the national anthem, *Kim*i ga yo, is played only rarely before baseball games, and then usually only for some tournament games. It also is played after the end of the 15th and final day of a Grand Sumo tournament, but not on other days or before matches.

DAVID LUKE
Boise, Idaho

The right move
After reading Lew Platt's letter in the March-April MEASURE, I felt even more reassured that I have made the right decision and right move in my career at HP. However, unlike Lew, I have worked for 12 of my 15 years at HP within one organization.

While I moved upward and laterally, and even a step down to broaden my knowledge, I never felt I had taken control of my own career until my most recent move to Corporate Internal Audit. And, like Lew, some people just didn't understand why I took this position; they thought I had been demoted.

With support from (top) managers, I knew I was plotting the right course. I now have the opportunity to improve certain technical skills while expanding my base knowledge of HP business units.

I'm grateful to work for such a flexible company and management that encourages personal and career growth. Lew's right—change is motivating!

CHERYL JOHANNES
Palo Alto, California

How we're doing
About three times a year, MEASURE encloses a reader-response card and asks you to rate the articles in that issue and submit future story ideas. Although the results aren't scientifically or statistically valid, they give us some idea of the quality of the stories. It's a way for you to let us know how we're doing.

Response cards still are coming in, but here's a quick look at the first 200 or so that came back:

Eighty-three percent of you say that you read most or all of MEASURE. The most popular article in the May-June 1995 edition was the Letter from Lew Platt. Other favorite stories were "Doing the right thing" about an inkjet paper-feeding problem; "Just the right time" (HP stock split); "Through the eyes of the customer" (the Commercial Systems Division); and "Your Turn"—the section you're reading now.

Comments from readers include: "MEASURE definitely is improving. It's nice to see you can point out mistakes HP has made and not be considered treasonable!" "Overall, while interesting, MEASURE isn't very valuable to my work or private life."

And, "This was my last MEASURE because I've joined another company. Thank you for eight years of good reading."

Thanks to everyone who returned the survey card.

Jay Coleman
MEASURE editor
Shirley Hufstedler, HP's first woman member of the board of directors, reflects on her colorful career.

Life is a banquet

(Founder's note: Shirley Hufstedler has had a fascinating career. She served as an appellate judge from 1966 to 1979, was appointed Secretary of Education by U.S. President Jimmy Carter in 1979 and has been on HP's board of directors since 1982. Shirley currently is a partner with a law firm in Los Angeles.

Lisa Asato, Corporate Offices site communicator, recently interviewed Shirley during a town meeting with employees. Following are excerpts from her remarks on aspects of her career and personal philosophy.)

Q: What was it like to work in Jimmy Carter's cabinet?
A: Like every cabinet post, it was an appalling amount of work. There was even more work because I had to organize the department, which meant I had to carry the whole load until I had all the people in place. I was testifying on the Hill, interviewing people, taking the full budget before the Office of Management and Budget. And it just happened that the most politically and emotionally volatile issues at the time were in the Department of Education, from buss-
You've been a member of the HP board of directors since 1982. Tell us about some of the difficult issues that have come before the board.

There haven't been terribly difficult issues because HP is extremely well run. There have been issues that were of great importance, such as when the inside managers and outside directors had to decide to change the company from primarily an instrument company into a computer company. Another was the question of whether the company should invest in the RISC (reduced instruction-set computing) architecture. This company wouldn't be where it is today without those kinds of decisions being made when they were.

I know that serving on HP's board of directors involves a lot of time and energy. Why do you do it?

Because it's fascinating. I have learned a lot and, of course, I always have the most wonderful time when we have previews of new products coming out of the HP divisions. I remember the first time I saw the ThinkJet printer. It was just a baby new product. Well, of course the print quality wasn't absolutely gorgeous, but it was going to be a winner because it was inexpensive and very reliable. It had the charm of razor blades. People would always have to come back for more!

What advice would you give to working women with regard to advancing their careers?

If you're going to be a working woman and have a family, you're going to have to face the fact that you're just going to work terribly hard. No matter how thin you try to spread yourself, you feel guilty all the time because everybody needs more from you than you can give.

Bear in mind that life spans do not end at 40 anymore. Some men and women can afford to take time out and do something that is important with respect to their family or children or some other thing. You can't end up on the escalator at the very same place you would have been if you hadn't stepped off, but that doesn't mean that you can never go back again. You can.

Can you tell us what your current projects are? What are your passions right now?

I'm still very much involved in issues respecting education all over the United States, with world environment issues and international affairs.

I am deeply interested what's happening in the convergence of technologies. And yet, it worries me because we already have a chasm between the haves and the have-nots, and the advent of technology can deepen it unless we give the opportunity to those less fortunate to use all this wonderful technology so that they don't fall behind.

I grow orchids, and I walk up and down mountains around the world. I have friends all over the world and I teach in countries all over the world.

You see, the world is full of the richest opportunities for learning, for helping, for doing something that really warms the heart, fills the spirit, keeps the brain alive. All I can say is, heavens, life is a banquet. Too bad so many people are starving to death. Here at HP you have all these opportunities. It depends on what you want to do with them, and it's hard to make the choices because when you do some of them, you have to give up others, at least for a time.

There's something I learned that sometimes helps people. I decided many years ago that every day of my life, I would find something beautiful to look at. It can be a spider web in the morning with the dew on it and the sun beaming through. It can be one flower. If you look, you'll find something. And then when things aren't so good, you can string all those beautiful things in your head and fill your spirit.
HP’s chairman, president and CEO discusses “one of the most fun and interesting” facets of his job—monthly visits to HP Labs.

What do the following technologies have in common: inkjet, liquid chromatography, cardiac ultrasound, cesium frequency standard, fiber optics and RISC (reduced instruction-set)?

If you said that they all came from developments that took place in Hewlett-Packard Laboratories, you’re exactly right.

HP Labs has performed a vital service for HP since Bill Hewlett and Dave Packard established the advanced R&D arm of the company in 1966—27 years after HP began.

Every month, I spend a half-day or so visiting HP Labs. It’s one of the most fun and interesting things I get to do in this job. My visits to Labs give me a preview of the work being done there that will help ensure that our divisions will be competitive in the future.

You probably already know some things about HP Labs. Let me tell you a little more and give you an inside look at some of those exciting projects that may well be the futuristic technologies of the late 1990s and beyond.

As I mentioned, Labs began in 1966 in Palo Alto, California. In 1984, it established the first applied research lab outside the United States, in Bristol, England. The last of the three branches was set up in Tokyo in 1990.

HP Labs has about 1,200 employees and nearly 1,000 of them are scientists.
and technicians. More than half of the professional staff have Ph.D.s and more than three-fourths have master's degrees.

One of HP's true visionaries, Joel Birnbaum is both an HP senior vice president and director of Labs. Joel is the person who first envisioned MC²—the blending of HP's measurement, computation and communication technologies into real products that answer many customers' needs today. In the last four years, Labs has devoted one-third of its resources to new-business activities aimed precisely at MC² products.

In fact, HP spends about 10 percent of the company's total research-and-development funds at HP Labs. Most of the projects are too risky to be undertaken at the divisions. As Joel says, they have the luxury of time because they're often not schedule-driven.

Here are some of the technological developments that are under way or already are paying dividends for HP:

• optical and communications devices for the Components Group;
• mass spectrometry techniques;
• measurement appliances, including the family of handheld Test and Measurement Organization products;
• the physician's workstation for the Medical Products Group;
• new recording technology for our disk-drive businesses;
• initiatives to take HP into the world of bioscience instrumentation;
• and man/machine interfaces to help the computer organization deal with ease-of-use issues.

I'm amazed when I walk around Labs, talk to the people and see the breadth of important, diverse and innovative contributions that HP Labs has developed just in the last few years. Of course, not all research culminates in marketable products. Indeed, I want the people at HP Labs to stretch enough that some programs ultimately will fail. But Labs has the happy dilemma of being able to choose the best developments from a long list of great ideas.

The job doesn't end merely with the development of great ideas. The people at Labs work hard to get division support for the technologies they're pursuing. Actually, HP Labs doesn't always get the credit it deserves once its ideas result in products released by our divisions. Many of the scientists and technicians there are among HP's unsung heroes.

Perhaps the most interesting initiative taking place in HP Labs is its goal of becoming recognized as the world's best industrial research laboratory, or WBIRL. I believe that HP Labs already can claim that distinction, but it's gratifying to know that Joel and all the people in Labs never are satisfied or complacent.

I always come away from my visits to HP Labs energized and reassured about HP's future. Labs has the happy dilemma of being able to choose the best developments from a long list of great ideas.

The people at Labs work hard to get division support for the technologies they're pursuing. Actually, HP Labs doesn't always get the credit it deserves once its ideas result in products released by our divisions. Many of the scientists and technicians there are among HP's unsung heroes.

Perhaps the most interesting initiative taking place in HP Labs is its goal of becoming recognized as the world's best industrial research laboratory, or WBIRL. I believe that HP Labs already can claim that distinction, but it's gratifying to know that Joel and all
Cathy Williams inspects various "travel mates" with second-grade students at St. Ignatius Elementary School in West Lawn, Pennsylvania, during "Coming Home Day.

She was lost but now she's found

Cathy Williams, former general manager of HP's Analytical Products Group (APG) in Canada and the newly named APG Americas Major Accounts program manager, travels often in her work, and to exotic locations, such as Antarctica, for fun. It was no surprise that her sister-in-law, second-grade teacher Kate Williams in West Lawn, Pennsylvania, turned to Cathy for help with a social studies project she was conducting to teach her students about world geography.

Last fall, Kate had each of her students make a doll—or "travel mate"—to send off traveling for the school year. Each doll embarked with a note asking for postcards and information about each destination. By Christmas time, one student, Christina Cantwell, was the only child who hadn't received any postcards. She just didn't know anyone who traveled anywhere. Enter Cathy Williams.

She took on Christina's plight with enthusiasm and humor. Christina's travel mate, String, "a Styrofoam ball covered in yellow string to resemble something like an octopus," would cover the globe—all seven continents—in the next four months, far outpacing her classmates. (There was tough competition, though. One doll, Shaq, had an audience with the Pope. Also, some of the travel mates, including Bingo the Flamingo, traveled in style in homemade bags; String traveled in a zip-lock bag.)

Cathy took String along on a vacation to South America and Antarctica. One of her friends carried String to Australia and Asia. A co-worker took the doll to Europe and an HP Geneva sales manager got String to Africa on a trip to Morocco.

The bad news: String got lost in the mail between Geneva and Canada following her African journey and didn't make it back in time for "Coming Home Day” at St. Ignatius Loyola Elementary School May 18. That meant that the book, attached to her with a string and holding all the priceless details and photos of her journey, also was missing.

The good news: String resurfaced in Geneva two weeks after Coming Home Day and made it safely back to Cathy in Canada.

Cathy was there as the guest of honor for Coming Home Day, telling Christina and the rest of the class about String's travels and answering questions. They asked everything from "How tall are you?" (Cathy's 6-feet tall and her height was quite the topic of lunchroom conversation, she was told) to "How old are you?!" to "Did you see any cheetahs?" to "Were the bugs big?"

Cathy tried to ease the pain of String's late arrival by donating two HP Vectra PCs and two HP DeskJet printers to the class when she visited in May—with no String attached.

—Jean Burke Hoppe
A day for future engineers

ROCKVILLE, Maryland—How do you get kids interested in engineering? HP employees in the Rockville, Maryland, sales office hosted 40 minority students from local schools in May at an HP Day.

The kids heard a motivational speaker, talks on goal-setting and the "economics of life," and saw demonstrations of HP equipment from the Computer Products and Computer Systems organizations.

Lending a hand

OKLAHOMA CITY, Oklahoma—Within days of the bombing of an Oklahoma City federal building, federal agents investigating the tragedy had some of the latest technology at their fingertips, thanks to fast action by HP.

HP's U.S. Marketing Center for calculators and palmtops in Corvallis, Oregon, instructed HP's North American Distribution Organization to ship 100 HP 200LX palmtop computers with special software to the site.

The Federal Bureau of Investigation (FBI), which already was field-testing the computers, immediately began using the units, along with agents from the U.S. Customs Bureau and the Secret Service.

HP palmtops can receive clear images of photos and drawings via wireless transmissions. The FBI chose the palmtops because of the sharpness of their displays.

Dave's book report

STANFORD, California—An overflow crowd of more than 400 people got a rare chance to meet Bill Hewlett and Dave Packard in May when the HP co-founders made a personal appearance at the Stanford University Book Store.

The appearance was part of the launch of Dave's first book, The HP Way: How Bill Hewlett and I Built Our Company.

All HP employees and retirees should have received a free copy of the book by now. Anyone who didn't—or who received a damaged or torn book—can get a replacement. Employees in the United States, Canada or Latin America should send the damaged book via interoffice mail to Corporate Communications, mailstop 20BR, Palo Alto. All other employees with damaged books can contact their personnel department.

HP co-founder Dave Packard chats with Stanford University freshman Ern Loh during Dave's appearance at the university's bookstore.
Sharing the best

SEOUL, Korea—More than 150 HP senior managers, quality managers and quality teams participated in the 1995 Asia Pacific Quality Convention here in May.

Instead of the traditional competition, the teams shared their best practices during the two-day event.

Topics included improving shipment quality, reducing inventory, increasing maintenance service and lowering defects on booking.

Fit for a queen

HP manufacturing divisions in the United Kingdom were recognized on April 21—Queen Elizabeth’s official birthday—with a Queen’s Award for Export achievement in 1995.

The award—the third that HP has received—recognizes companies for their contributions to the U.K.’s strengthening economy. Seven HP operations in the U.K. contributed to the substantial three-year export growth required for the award. Overall, U.K. exports have more than doubled from 1992 to 1994.

Noteworthy

As if the list of HP’s No. 1 achievements isn’t long enough already (see story on pages 9-12), Wall Street analysts in June named Hewlett-Packard No. 1 in a survey of the value of a corporation’s image. CDB Research & Consulting Inc. of New York—in conjunction with Financial World magazine—conducted the survey of 1,189 analysts. HP received the highest rating out of 389 major U.S. corporations on non-financial criteria, including brand equity, ability to increase revenue and employee relations.

EXTRA MEASURE

NEW DIRECTOR, OFFICERS

David M. Lawrence, M.D., was elected to the board of directors May 19. He is chairman of the board and CEO of Kaiser Foundation Health Plan, Inc. and Kaiser Foundation Hospitals.

Promoted to senior VP: Pete Peterson, VP-personnel, and Jack Brigham, general counsel and VP-administration.

Named vice presidents: Bernard Guidon, G.M., Computer Systems Group; Antonio Perez, G.M., Inkjet Products Group; Alex Sozonoff, G.M., Computer Products Sales and Distribution; and Carolyn Ticknor, G.M., LaserJet Solutions Group.

TMO CHANGES

Within the Electronic Instruments Group, a new Electronic Measurement Division has been formed under G.M. Mike Gasparian. It absorbs the former Personal Measurements Operation, along with handheld multimeters, PL18 oscilloscopes and general-purpose source activities.

The new name for VXI Systems Division is the Measurement Systems Division.

BOTTOM LINE

Hewlett-Packard reported a 19 percent increase in net revenue, 27 percent growth in orders and 41 percent increase in net earnings for the second quarter of the 1995 fiscal year, ended April 30.

Net revenue for the second quarter was $7.4 billion, compared with $6.3 billion in the year-ago period.

Orders for the quarter totaled $8.1 billion, compared with $6.4 billion in the second quarter of 1994.

Net earnings for the quarter were $577 million, or $1.10 per share, on approximately 526 million shares of weighted-average common stock and common-stock equivalents outstanding. This compares with earnings of 78 cents per share in the same quarter a year ago. (The average number of shares and equivalents used in computing net earnings per share has been restated to reflect the effect of the March 1995 two-for-one stock split.)

Operating expenses for the second quarter were 25.6 percent of revenue, compared with 27.6 percent in the year-ago quarter.
A field trip to The Children's Museum in Boston livened up spring break for children of HP parents from the Medical Products Group.

Care camp
ANDOVER, Massachusetts — How do you give your children a great learning experience while solving child-care needs during a spring school vacation?

HP parents from the Medical Products Group (MPG) devised the perfect solution in April when 48 students and several parents took part in the first-of-its-kind school Vacation Back-up Care Camp.

Children in grades 1 through 7 commuted with their parents, ate breakfast and then boarded buses to The Tsongas Industrial History Center in Lowell, or to Boston to The Children's Museum and The Computer Museum for a day of fun and learning.

HP employees, with their managers' approval, took a paid day off from work to serve as chaperones. Parents paid $120 per child for the four-day program, which MPG subsidized.

Comments from the grade-school students included "I couldn't wait to get up in the morning" and "I was sorry to see the weekend."

CSO CHANGES
Within the Computer Systems Organization (CSO), a new Computer Systems Group has been formed under Bernard Guidon as G.M.

It pulls together entities from CSO's former Workstation Systems, Systems and Servers, and Systems Component groups.

At the same time, Masao Terazawa has been named to the newly created position of Asia Pacific G.M. for CSO business and sales.

Shigechika Takeuchi becomes CSO G.M. for Japan.

CPO CHANGES
The former LaserJet Printer Group has been reorganized and renamed the LaserJet Solutions Group. Several new divisions have replaced the former Boise Printer Division and Network Printer Division.


Included in the latter are Greeley Hardcopy Division, Bergamo Hardcopy Operation, Guadalajara Printer Operation and a new Integrated Network Solutions Operation.

The Inkjet Products Group has formed a new Home Imaging Division under Vyomesh Joshi as G.M. It includes the former San Diego Imaging Operation and several independent teams.

NEW HATS
Bernard Meric to G.M., Barcelona (Spain) Division...Raymund Del Val to G.M. of HP Philippines and CSO manager for the country.

Hans Stork to director of HP Labs' Ultra Large Scale Integration (ULSI) Research Lab.

Correction of an item in the May-June 1995 issue of MEASURE: Rick Kniss succeeded V.P. Dieter Hoehn as G.M. of the Analytical Products Group May 1. Hoehn will retire from HP in 1996.
Old men river

VANCOUVER, Washington—"I walked with my camera gear over the bank toward the beach on the Columbia River, intending to prepare for a leisurely evening of taking sunset pictures," says Warren Chism, product engineer for the Inkjet Supplies Business Unit at HP's Corvallis, Oregon, site.

"What I saw was a scene coming up that had to be captured. Two old codgers fishing from a gravel bar—their bicycles beside them—a sailboat coming down the river and seagulls everywhere.

"I ran down to the beach, set up my tripod and was ready just as the sailboat went by. Unfortunately," Warren says, "I scared all but one seagull away in my haste."