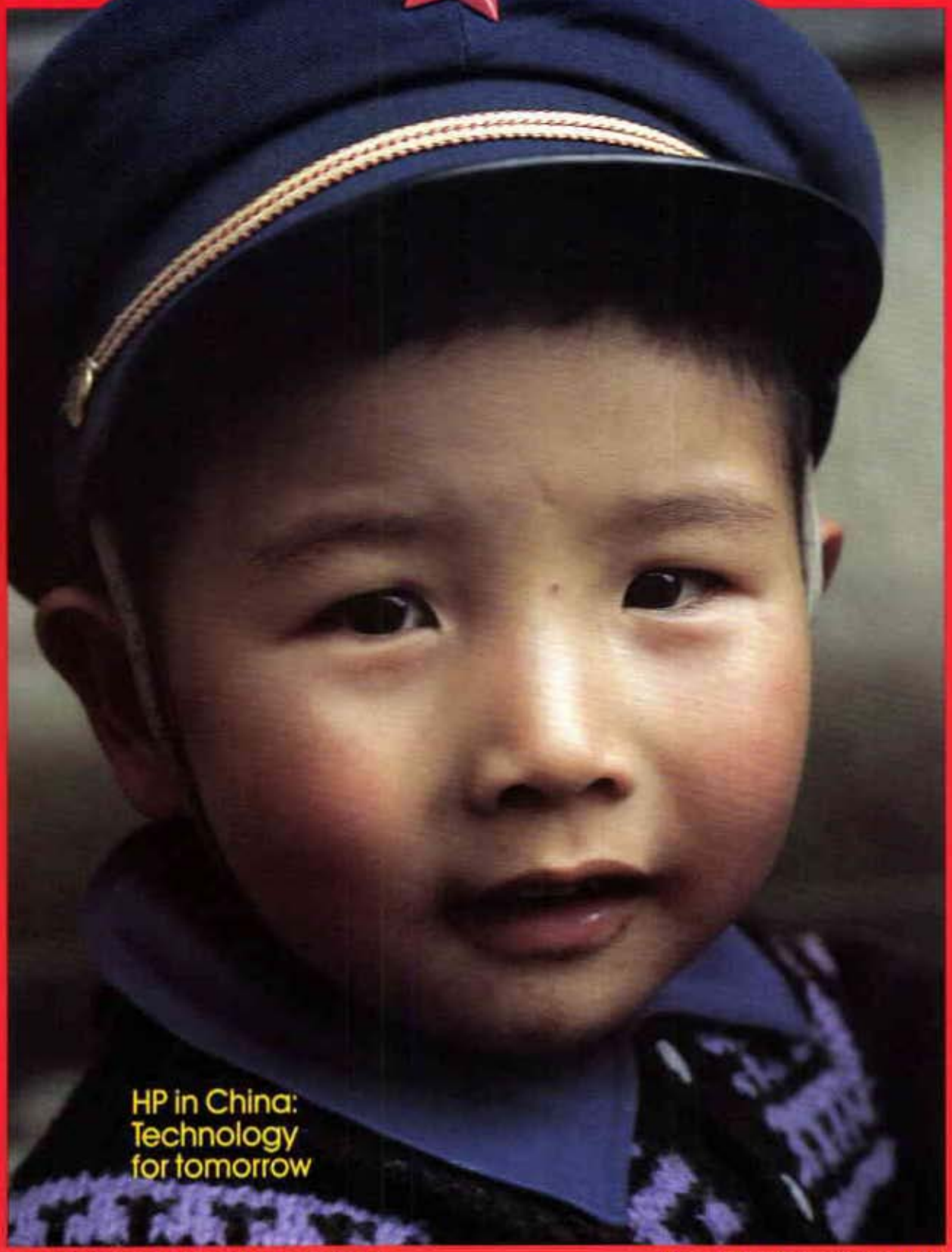
# MEASURE

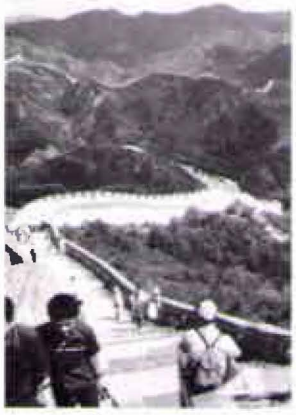


HP in China:
Technology
for tomorrow

*For the people of Hewlett-Packard*

*November-December 1986*

# THE INSIDE STORIES



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# 中国 CHINA

## *"A good beginning is half the success."*

**Shouqin Ren, deputy general manager and vice president of China Hewlett-Packard, thinks this Chinese proverb tells the story of HP in the People's Republic of China.**

In Beijing in the People's Republic of China, you can almost feel the growth and stretching as the city lurches toward modernization.

At every turn incongruous scenes demand double takes. A well-dressed businessman toting a briefcase and exuding a sense of purpose hops off a sardine-packed bus and rushes past an old man squatting on a street corner selling bicycle spokes. A bicyclist hauls a brand new refrigerator on a cart behind him. During the evening, young people gather in coffee shops or a disco. Where not too long ago you would have found only political slogan banners, there are now colorful billboards competing for attention, advertising Japanese watches, Chinese washing machines . . . and American computers.

A fragile form of capitalism is budding in a socialist system, and it's one of the most interesting phenomena in today's world economy.

China Hewlett-Packard is as full of colorful stories as the country itself. Its story mirrors what is happening in the PRC, the great strides the country has taken in the past seven years.

The two CHP offices currently in Beijing will be consolidated next spring in a new eight-story building. The current headquarters is on the fourth floor (no elevator) of the Beijing Second Watch Factory in the Haidian District. The manufacturing operation is on the fourth floor (no elevator) of the Beijing Radio Equipment Company in the Xuanwu District.

A branch sales office opened in Shanghai this year and two sales outposts are scheduled to open next year, one in Liaoning and one in Sichuan.

Dave Packard knew from his first visit to China in 1977 that he wanted HP to participate in the PRC's move toward modernization, and to help raise the standard of living. The country began to open its doors to the outside world around the time former President Richard Nixon re-established full diplomatic relations with the PRC in 1979. In the 10 years since Mao Tse-tung's death, Deng Xiaoping, the paramount leader, has been driving the PRC toward economic improvements and modernizations intended to make the country a world economic power by 2000. The "Four Modernizations" program launched in 1978 continues to focus on agriculture, industry, national defense and technology.

Since the pioneering negotiations and renegotiations that established HP in the PRC, the relationship has been based on trust. The formula has been simple: Hewlett-Packard wants to participate in the potentially huge market the PRC represents and the Chinese government wants a transfer of technology in return. Those objectives have steered the growth of CHP.

The China Hewlett-Packard Representative Office, which first sold and distributed HP products, opened on November 9, 1981, and was 100 percent owned by the government. In

# CHINA

John So and Zhou Xiaoyu, standing, watch Xiaoran Liu localizing the Asian Vectra.

today's 50-50 joint-venture operation, set up on June 20, 1985. HP's partners are the China Electronic Import and Export Corporation operated by the country's Ministry of Electronics Industry and the Beijing Computer Industry Corporation. The joint-venture contract will last 10 years, at which time all partners will review the terms of the agreement.

The joint venture is now a year old and going strong. But the road has not been smooth.

"Things are very different than they were in 1979," says CHP General Manager Chi-ning Liu. "We've got different expectations. We want to establish a long-term partnership and a good, sound structure—a real joined culture. We want to build the CHP culture from scratch. We're the only company that's operating like this in the PRC. We're teaching incentives and performance. What a thing we're trying to do! What a different environment this is— think about what it means to operate HP Desk in a Communist country."

Name any aspect of ordinary business operations and in the PRC, it's a bit more complicated, whether it's something so simple as a phone call or something more complicated such as making a sale.

In the past five years, the HP operation in China has managed annual compounded growth rates in sales that hover between 60 and 70 percent.

Xu Jiahui, local manager for market development, has been with HP five years — a veteran in the grand scheme. He's optimistic about CHP's market opportunities despite the growing competition from other companies. He believes that step by step, people are learning to trust HP and learning that HP is reliable, trustworthy and in China for the long run.

While instruments continue to be CHP's strongest market, he hopes to develop equally strong markets in the coming years for office automation equipment and computer-aided engi-

The richness and diversity of business in Beijing includes both modern joint-venture companies and deals made over bicycle carts.

neering and computer-aided manufacturing systems.

Current manufacturing activities include kit assemblies of HP 3000 computers and the HP 8350 microwave sweeper, as well as localization programs for personal computers.

It will be more challenging this coming year to keep business growing at strong rates.

Business all over China has slowed down during the past year, especially for joint-venture operations. In 1982, the country decentralized buying authority to local levels of the government—to ministries and one level below—for purchases under $5 million. Lots of imports rolled into the country at that time—cars, video equipment, appliances, computers. The local ministries seriously overspent and the trade deficit ballooned. The imbalance eventually caused the treasury to clamp down on imports and capital spending. Everyone was affected—universities, factories, institutes, businesses. CHP's growth has slowed to between 40 and 50 percent. The PRC's gross national product growth in 1986 will end up at about 10 percent.

Compounding the problem are U.S. regulations. While changes are starting, almost 80 percent of the products sold in the PRC still need an Individual Validity License (IVL) and not all products are eligible for export to the PRC. HP's Washington, D.C., office is applying for bulk licenses to ease that paperwork a bit. Any sale that involves foreign currency must go through a Foreign Trade Organization (FTO).

Colin Chin, marketing, sales and support manager, says the buying cycle can sometimes take up to two years. "Chinese buyers want the top of the line. But by the time the licenses are in hand and foreign currency paperwork is done, the product might be obsolete. It's a real problem. Everything is centrally controlled and can change frequently. We must work very closely with many different government agencies.

"Sometimes things suddenly change after you've done all the really hard work of making a sale. The Chinese are much more cost-conscious than they were back in the beginning. The image we project here is we are all engineers first, but we also know business. You have to win the respect of the people first. You don't even talk about sales in the beginning, just technology. You've got to get their trust."

Consider selling in a country that stretches 9,562,904 square kilometers (3,692,244 square miles), with climates that encompass the subarctic as well as tropical. While the potential is enormous, the hazards of transportation in China are trying. Jack Chiu, district sales manager, says CHP's 20 field engineers travel at least once a month to introduce products to customers outside of Beijing.

Within the country, travelers can only get one-way airline tickets. When they arrive at their place of business, it's always a question as to when they'll be able to get a flight home. It's also sometimes difficult to call the home office as the phone system doesn't yet extend into some of the more remote areas. If it does, it's not always reliable. Even in the Beijing office, as many as seven people often have to share one phone.

In addition, the government requires an annual overseas training plan if the company wants to send local people out of the country on business trips.

The northern sales region includes 11 provinces and covers 3,000 kilometers. Jack Chiu and his counterpart Zhongkai Liu divide the northern district into two districts, while Vincent Lee covers HP 3000 computer business in the northern area. The Shanghai branch covers the territory south of Chang Jiang (Yangtze River).

Sng Kim Hock, application engineering manager at CHP, says his crew of 26 employees faces similar problems because of the breadth of the country. To offer sales and customer support, the group is split into three areas: HP 3000s, technical computers and instruments.

Between the Beijing office and the branch office in Shanghai, the group covers all of China except Tibet, Xinjiang, Qinghai and part of Inner Mongolia, as these areas are so hard to get to. And it's written into all ongoing support contracts that CHP will respond only on the first available flight. Response centers are not possible in China because the phone system is not yet sophisticated enough.

Personnel issues define some of the differences at CHP, too.

Roland Goh, personnel manager at CHP for the past eight months, says determining a salary system that didn't offend the Chinese wage structure was a challenge. In a country where there are rigid national guidelines concerning pay so that salaries are equitable whether you operate an elevator, a restaurant or an audio oscillator, there is no such thing yet as sales people working on commission. While CHP employ-

JEAN BURKE

**John So's secretary Jiao Ying is mastering software for HP personal computers.**

JEAN BURKE

**Shouqin Ren is a big believer in HP management style, especially MBWA.**

# CHINA

ees may earn a little more than their counterparts at Chinese-owned companies, it's very little.

Roland says CHP has worked out a pay scale that falls within national guidelines, but also allows some room for performance incentives.

In the PRC, a welfare state, CHP has also altered the total compensation package from how it operates in other countries. In China, Roland says, CHP is considered a "work unit," a subsystem of Chinese society, giving the company responsibility for its employees' housing, medical care and education. A shuttle bus is also available to carry workers to and from work.

For young Chinese, says Shouqin Ren, deputy general manager, CHP provides a good working environment and compensation program. Chinese government regulations for joint ventures, he says, have resulted in a four-part salary structure: basic salary is paid on performance; vocational salary is paid for different duties and will be put into basic salary when local conditions allow it; seniority salary is given one time when an employee joins CHP; and a living subsidy—a fixed benefit package—goes to each employee on an equal basis. In addition, there is a quarterly bonus package and a special bonus during the spring festival celebrating the Chinese New Year. Each employee receives a package containing "something special such as chicken, fish or shrimp," as well as other foods.

Recruiting is another area that creates headaches for CHP, even though it was the first joint venture allowed to recruit in colleges and advertise in Chinese newspapers. CHP advertises for employees once a month and all applicants are given an English test before being interviewed. John So, manufacturing manager, says that in one 15-month period, he interviewed 35 engineering applicants out of more than 100 who took the English test. CHP made offers to six of them, but got no one because the applicants' work units would not release them. The Chinese are typically employed by the same work unit for their whole lives.

Manager of administration Max Yang has been involved with HP operations in China since January 1982 when he worked in what was then called Intercontinental China Operation, which supported the representative office in Beijing. "It's exciting and alarming," he says about business in the PRC now. "Any time a company grows this fast, it's scary. In the long run, HP wants to be in China a long time, and to localize the company. Twenty years from now, we see CHP being where Yokogawa-Hewlett-Packard (in Japan) is today."

Max says he and the other 45 foreign service employees (FSEs), the largest number at any HP operation in the world, hope to bring a Western-world management style to CHP, while respecting the culture and attitudes of the local employees. Each FSE functional manager has a Chinese deputy manager, who is being groomed for the manager's job.

**Jackson Fong is teaching HP accounting procedures to Yan Su Ying and 12 other local employees on his CHP staff.**

"We teach HP philosophies, such as Management by Wandering Around which is well-accepted here, and Management by Objective, which is a little tougher to grasp. MBO is difficult to practice here because of a different mentality and different expectations," says Max. "The Chinese are not used to making decisions. They're used to having them made for them. In a way, the Chinese people overall are reluctant to work hard—the concept is referred to as the 'iron rice bowl.' Workers here have traditionally been rewarded regardless of the quality of their work. Many of our employees know people who work much easier jobs than our employees do—and without pressure. They wonder, 'Why do I have to work so hard?' The fear of being fired from a job is practically nonexistent in the PRC.

"So we're working on basics here. *Lao* Ren ("lao" is a term of respect used to address an older person) helps because he's very interested in HP management and bringing that style of management to CHP. He reads and studies management theories and talks to the employees every day at lunch time—wandering around. Role models like that will help. But deputy managers still look to him to make decisions. CHP managers need to learn to make their own decisions."

General Manager Chi-ning Liu says the PRC is de-emphasizing communism and emphasizing the growth of a socialist democracy that gives more freedom to citizens and to businesses. "To modernize the country, it's well understood that China must work in a global environment.

"So here is HP in the PRC. The CHP way—like the HP way—is an opportunity, not a given. The HP way is a natural here, though. People want to do a better job, want to do something big, something great. We want to provide the environment to let that happen. The compensation and performance incentives teach self-respect and the ability to make decisions. The HP way assumes an individual wants to do a good job. That's happening here. The Open Door policy is a perfect fit in a classless society. And the society is changing to meet the needs of foreign investors.

"The country is moving in the right direction. So much has happened in such a short time. That's scary because you can lose your sense of direction. But politically, the country is very stable. There's no violence."

The biggest frustration, Chi-ning says, is the constantly changing government—regulations that change midstream with the change of an official. "We are constantly reminded that this is not a free-enterprise system. Their decisions do affect us, sometimes at the last minute."

CHP now has 257 employees, including the FSEs from the U.S., Singapore, Hong Kong and Canada, and expects to

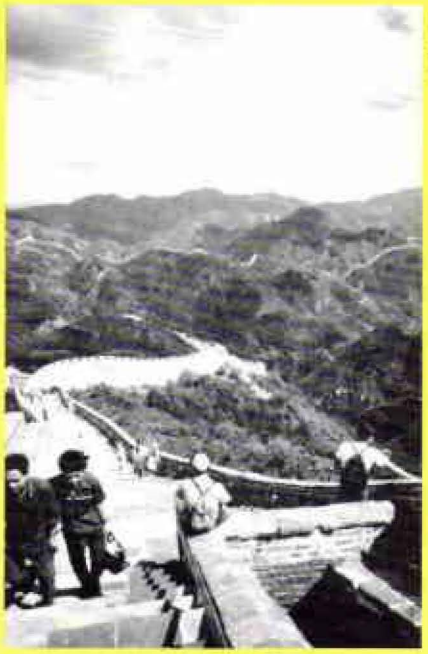
grow to more than 300 during FY87. The task at hand is getting CHP established and training local people as managers.

People development is paramount at CHP in preparation for the eventual departure of the FSEs. Employees attend daily hour-long English classes at the office. AEO manager Sng Kim Hock spends time with his local employees working on vocational skills, such as supporting customers effectively and expected CHP business conduct; specialization in the form of training; and "soft science" skills, such as customer relations, answering the phone and people skills.

"Many HP practices need to be explained in a local context," says Kim Hock. "They don't immediately understand concepts like 'profit.' They might ask, 'Is that something I can buy?' In a Western context, profit isn't bad, but in the Chinese system, it's close to forbidden. We have to similarly explain why the customer is Number One. Our employees do not come from a service-oriented background. In this society, everyone is equal, but in today's business environment, we cannot slow down on service."

There are interesting times ahead for China Hewlett-Packard. Despite the world of difference between the cultures of China and HP, there's a feeling of optimism about working out the future. Says John So, manufacturing manager: "The conditions here are improving. The rate isn't always what we'd like it to be, but you have to give the Chinese credit for trying. After all, 15 months represents a very short span in Chinese history. Being here is very rewarding, personally, knowing that our pioneering effort has made a contribution to CHP, HP and one-quarter of the human race."

*—Jean Burke*



## You can feel the change

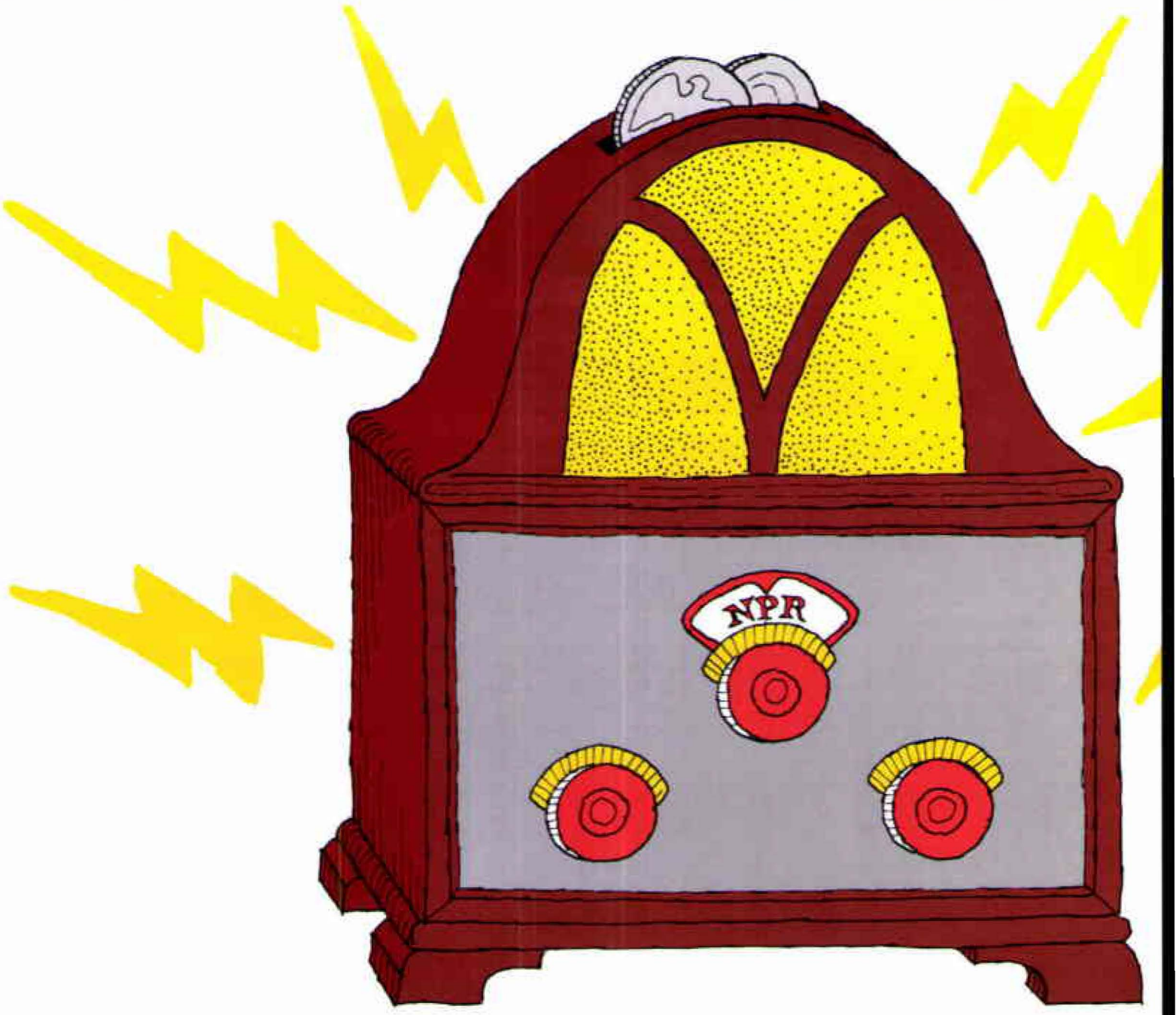
Dave Packard first visited the People's Republic of China in March of 1977, during the last days of the Cultural Revolution, when the country was still closed to most of the outside world. China then was vastly different than it is today. Mao Tse-tung intended to overcome the stagnancy of the Chinese educational and economic systems and to promote an egalitarian spirit in a move that lasted a decade, from 1966 to 1976. But violence, unrest and chaos marked the movement.

It was a period during which intellectuals were in great danger, and were transported to the country to farm, do manual labor or just languish. Farmers and peasants were brought into universities to teach. The curriculum consisted of learning the teachings of Mao and the basics of a communist society. Cultural relics and monuments were destroyed or neglected. Temples were turned into factories; parts of the Great Wall were used to build roads or housing. Flowers were considered bourgeois and were destroyed. An entire generation and parts of two others were lost in that era as far as education and intellectual growth were concerned. It left the country seriously behind the rest of the world in terms of technological and economic progress.

They're making up for lost time. In Beijing, the wide streets swarm with more than five million bicycles, still the preferred mode of transportation for the city's 11 million inhabitants. It is estimated that, in the whole country, fewer than 1,000 households could afford to own automobiles, and there are fewer than one million in all of China. Modern high-rise dwellings with individual bathrooms, running water and kitchens are built next to *pingfang* ("flat houses"), the typical one-level rows of brick housing that sometimes hold several generations or families under one roof in one or two rooms.

The solemn grey and blue workers uniforms of the people, so prominent up until the last year or two, have practically disappeared since an official decree in 1982 allowed more stylish fashions. Western-style clothing in bright yellows, reds and patterns is the norm. Beauty salons attract customers by lining their windows with hair-fashion photos from France, the U.S. and Hong Kong. Free markets, long outlawed under the old system, now line many streets, with vendors selling fresh fruits and vegetables, clothing and prepared food. Construction is booming, with new hotels, office buildings and housing units going up everywhere. Beijing boasts a Kentucky Fried Chicken outlet, as well as a Maxim's Fast Food store.

At tourist attractions, such as the Great Wall and the Ming Tombs, hawkers swarm to sell tourists Mao caps with the red star symbol of the Communist Party, garb now abandoned by the majority of city-dwellers. Tourists anxious to explore the only place in the world that boasts 5,000 years of civilization are being offered exotic new adventures: backpacking through the Woolong nature reserve where the pandas live, horseback riding in Inner Mongolia or living as the people do in the peasant towns of Shandong or Jiangsu provinces, complete with laboring in rice paddies. By the end of the year, less adventurous visitors will be able to explore the Great Wall by cable car instead of on foot—helicopter excursions are already offered.




# Sound investment

## A Hewlett-Packard grant brings science news out of the lab and onto the radio.

Anne Gudenkauf perches on the edge of a swivel chair while she rifles through a stack of news releases, wire copy and science articles on her desk. This morning her four-person science reporting team will decide during its hour-long conference call what stories millions of listeners will hear on upcoming editions of *All Things Considered*, *Morning Edition* and *Weekend Edition* —the award-winning news programs from non-commercial National Public Radio (NPR).

Today Anne and Rich Harris in NPR's Washington, D.C., newsroom; Renee Montaigne and Patty Neighmond in the New York bureau; and Laurie Garrett in NPR's Los Angeles office discuss a smorgasbord of possibilities. Among the ideas: how cells become cancerous, the use of sewage sludge and lime to neutralize acids in a lake, the risks of picking up infections in teaching hospitals and the way blind readers use both hands simultaneously to read a line of Braille characters.

The science, engineering and medical stories you hear on *All Things Considered (ATC)* and *Morning Edition* are, in part, made possible by a $200,000 cash grant from Hewlett-Packard. At NPR, the science unit is considered an equal of the national, international and Washington desks. Science reporting is central to NPR's news operation—it's definitely front-page material.

"Look at the number of times that science has been in the headlines during the past year—Bhopal, the shuttle explosion, Chernobyl, Cameroon, the Mexican earthquake," says Anne, head

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|---|---|---|
| Alpena | WCML | 91.7 |
| Ann Arbor | WUOM | 91.7 |
| Benton Springs | WMUK | 90.7 |
| Detroit | WDET | 101.9 |
| East Lansing | WKAR | 90.5 |
| East Lansing | WKAR | 870 |
| Flint | WFBE | 95.5 |
| Flint | WFUM | 91.1 |
| Grand Rapids | WGVU | 104.1 |
| Houghton | WGGB | 91.1 |
| Interlochen | WIAA | 88.3 |
| Kalamazoo | WMUK | 102.1 |
| Marquette | WNMU | 90.1 |
| Mt. Pleasant | WCMU | 89.5 |
| Twin Lakes | WBCV | 90.3 |
| Ypsilanti | WEMU | 89.1 |

**MINNESOTA**

| | | |
|---|---|---|
| Bemidji | KCRB | 89.5 |
| Burl | WIRN | 90.1 |
| Duluth | WSCD | 909 |
| Duluth | KUMD | 103.3 |
| Grand Rapids | KAXE | 91.7 |
| Mankato | KMSU | 89.7 |
| Minneapolis | KSJN | 1330 |
| St. Paul | KSJN | 91.1 |
| St. Paul | KUOM | 770 |
| Moorhead | KCCM | 91.1 |
| Northfield | WCAL | 89.3 |
| Northfield | WCAL | 770 |
| Rochester | KSIE | 91.7 |
| St. Cloud/Collegeville | KSJR | 90.9 |

St. Peter KGAC 90.5
Worthington KWSK 91.7

**MISSISSIPPI**
Biloxi WMAH 90.3
Booneville WMAE 89.5
Burdine WMAU 88.9
Greenwood WMAO 90.9
Jackson WJSU 88.5
Jackson WMAA 91.3
Meridian WMAW 88.1
Mississippi State WMAB 89.9
Oxford WMAV 90.3
Senatobia WNLC 88.9
Tougaloo WMPR 90.1

**MISSOURI**
Columbia KBIA 91.3
Kansas City KCUR 89.3
Maryville KXCV 90.5
Point Lookout KSGE 91.7
Rolla KUMR 88.5
Springfield KSMU 91.1
St. Louis KWMU 90.7
Warrensburg KCMW 90.9

**MONTANA**
Billings KEMC 91.7
Missoula KUFM 89.1

**NEBRASKA**
Lincoln KUCV 90.9
Omaha KIOS 91.5
KVNO 90.7

**NEVADA**
Las Vegas KNPR 89.5
Reno KUNR 88.7

**NEW HAMPSHIRE**
Concord WEVO 89.1

**NEW JERSEY**
Newark WBGO 88.3

**NEW MEXICO**
Albuquerque KUNM 90.1
Las Cruces KRWG 90.7
Mosquero KMTH 98.7
Portales KENW 89.5

**NEW YORK**
Albany WAMC 90.3
Binghamton WSKG 89.3
Buffalo WBFO 88.7
Canton WSLU 88.5
New York WNYC 93.9
New York WNYC 93.9
Oswego WRVO 89.9
Rochester WXXI 1370
Syracuse WCNY 91.3
Syracuse WAER 88.3
Utica WUTI 89.5
Watertown WNPW 90.9

**NORTH CAROLINA**
Asheville WCQS 88.1
Chapel Hill WUNC 91.5
Charlotte WFAE 90.7
Fayetteville WFSS 88.1
New Bern WTEB 89.5
Wilmington WVSP 90.9
Wilmington WHQR 91.3
Winston-Salem WFDD 88.5

**NORTH DAKOTA**
Belcourt KEHA 88.5
Bismarck KCND 90.5
Fargo KDSU 91.9
Grand Forks KFJM 1370
Grand Forks KFJM 89.3
Minot KMPR 88.9

**OHIO**
Athens WOUB 91.3
Athens WOUB 1340
Cincinnati WGUC 90.9
Cincinnati WVXU 91.7
Cleveland WCPN 90.3
Columbus WOSU 89.7
Columbus WOSU 820
Kent WKSU 89.7
Lima WGLE 90.7
Oxford WMUB 88.5
Toledo WGTE 91.3
Wilberforce WCSU 88.9
Yellow Springs WYSO 91.3
Youngstown WYSU 88.5

**OKLAHOMA**
Edmond KCSC 90.1
Norman KGOU 106.3
Stillwater KOSU 91.7
Tulsa KWGS 89.5

**OREGON**
Ashland KSOR 90.1
Bend KDAB 91.3
Corvallis KOAC 550
Eugene KLCC 89.7
Pendleton KRBM 90.9
Portland KBPS 1450
Portland KMHD 91.5
Portland KOAP 91.5
Portland KBPS 89.9

**PENNSYLVANIA**
Erie WQLN 91.3
Harrisburg WITF 89.5
Philadelphia WHYY 90.9
Pittsburgh WDUQ 90.5
Scranton WVIA 89.3
State College WPSU 89.9
91.1

**PUERTO RICO**
Aguadilla WIPR 91.3
Aguadilla WIPR 940
San Juan WIPR 89.7

**SOUTH CAROLINA**
Beaufort WJWJ 89.9
Charleston WSCI 89.3
Columbia WLTR 91.3
Conway WHMC 90.1
Greenville-Clemson WEPR 90.1
Rock Hill WNSC 88.9
Sumter WRJA 88.1

**SOUTH DAKOTA**
Brookings KSDD 88.3
Pierpont KDSD 90.9
Rapid City KBHE 89.3
Reliance KTSD 91.1
Sioux Falls KRSD 88.1
Sioux Falls KCSD 90.9
Vermillion KUSD 89.7
Vermillion KUSD 690

**TENNESSEE**
Chattanooga WSMC 90.5
Chattanooga WUTC 88.1
Johnson City WETS 89.5
Knoxville WUOT 91.9
Memphis WKNO 91.1
Murfreesboro WMOT 89.5
Nashville WPLN 90.3

**TEXAS**
Abilene KACU 89.7
Austin KUT 90.5
Beaumont KVLU 91.3
College Station KAMU 90.9
Commerce KETR 88.9
Corpus Christi KEDT 90.3
Dallas KERA 90.1
El Paso KTEP 88.5
Houston KUHF 88.7
Killeen KNCT 91.3
Lubbock KTXT 91.7
Midland KMID 91.5
San Angelo KSTA 91.5
San Antonio KSTX 89.1
Texarkana KTXK 914
Tyler KLTS 91.7
Waco KWBU 103.3

**UTAH**
Logan KUSU 91.5
Salt Lake City KUER 90.1

**VERMONT**
Burlington WVPS 107.9
Windsor WVPR 89.5

**VIRGINIA**
Harrisonburg WMRA 90.7
Norfolk WHRO 89.5
Richmond WCVE 106.5
Roanoke WVTF 89.1

**WASHINGTON**
Pullman KWSU 1250
Richland KFAE 89.1
Seattle KUOW 94.9
Spokane KPBX 91.1
Tacoma KTPS 94.7
Tacoma KPLU 88.5

**WEST VIRGINIA**
Beckley WVPB 91.7
Buckhannon WVPW 88.9
Charleston WVPN 88.5
Huntington WVWV 89.9
Morgantown WVPM 90.9
Parkersburg WVPG 90.3
Wheeling WVNP 89.9

**WISCONSIN**
Auburndale WUBL 930
Brule WPSA 89.9
Deerfield WHRD 90.7
Green Bay WPNE 89.3
Highland WHHI 91.3
Kenosha-Racine WGTD 91.1
LaCrosse WLSU 88.9
LaCrosse WHLA 90.3
Madison WERN 88.7
Madison WHA 970
Menomonee WHWC 88.3
Milwaukee WUWM 89.7
Rhinelander WXPR 91.7
Wausau WHRM 90.9

**WYOMING**
Laramie KUWR 91.9

National Public Radio news programs are also heard on Armed Forces Radio outside the United States. Check your local station listing for broadcast times in your area.

of the science unit.

It was NPR's team that first aired the news that engineers from the shuttle booster's manufacturer recommended scrubbing the Challenger launch. The story was a journalistic coup, since NPR was up against massive shuttle reporting task forces at the bigger, commercial news organizations.

To be sure, NPR's science team tackles those fast-breaking, headline-grabbing stories. But the real charm of NPR's news programs is the unusual blend of science, news, analysis, features and even satire. Ted Clark, the executive producer of *ATC*, says the show competes, but not with other news shows. "We try to provide the depth of coverage of such publications as *The Wall Street Journal* or the *New York Times*."

*ATC* is the mainstay of National Public Radio. The 90-minute daily news magazine serves up newscasts on the half-hour; business and economic reports; profiles and interviews with news makers; science and health reports; human interest and arts features; and book, music, film and theater reviews. The show celebrated its 15th season this year.

*Morning Edition* shares reporters, editors and studios, and is NPR's second success story. The two-hour program is highly structured— divided into 16 segments that are aired in the same order at precisely the same time each day. But it's a flexible format that allows local stations to cut away for local news and weather and rejoin the network. *Morning Edition* now has more listeners than the *New York Times* has daily readers.

For two news programs that have bagged nearly every broadcast journalism award—from Peabodys to Armstrongs to duPonts—NPR people seem to get their kicks from quietly doing the job their own way.

"NPR is still small enough to be a family. It's very collegial," says Anne. "We like to set our own agenda."

And they're quick to admit that they couldn't do their jobs without the underwriting support of companies like HP. "None of us would want to sink to the level of rip-and-read newscasts," says Jane Couch, NPR's vice president of development. "Underwriting makes a difference in the color and texture of our programs. It allows us to travel and interview on site, and to give our daily news programs an interesting and artful form."

The Hewlett-Packard connection to NPR goes back to 1980 when the company first gave public radio a $20,000 "pilot" grant earmarked for science and technology reporting. Emery Rogers, who retired last month as executive director of the Hewlett-Packard Company Foundation and head of HP's philanthropic endeavors, was the driving force behind the initial HP grant and saw to it that the allocation has increased by a factor of 10 over the past six years.

"Hewlett-Packard believes there's a strong need to increase literacy in science, engineering and medicine in this country," says Emery. "NPR's science reports have proven to be very effective in accomplishing this goal and they give daily audible evidence that HP also cares deeply about this cause."

"Without private sector funds, we'd be in terrible shape," says Jane. In 1983 NPR ran into a budget crisis. Auditors found a $7 million deficit caused by serious overspending. Staff was cut from 450 to its current level of 300. "If HP funds hadn't been here, the science unit might have been knocked out completely," says Jane.

Now back on a budgetary even keel, NPR still relies heavily on private sector funds. It takes about $25 million a year to keep NPR running, and 60 percent of that money goes to the news department.

More than $3 million comes into NPR from underwriters like HP—the rest comes from local stations who belong to NPR and from satellite fees.

The satellite center of NPR can be seen through the street-level windows of its Washington, D.C., headquarters. It's known as the MOTC: Main Origination Technical Center. In the racks of equipment that keep the system humming, an HP spectrum analyzer helps monitor the signal quality of the 12-channel system. More than 21,000 hours of public radio programming move via satellite to more than 270 downlinks, including some programming for other organizations. NPR sells some of its satellite distribution time to help recover some costs. This year, for the first time, the MOTC operation turned a profit for NPR.

At precisely five o'clock each weekday evening, computers in the MOTC automatically switch the network to NPR's Studio Five. *All Things Considered* director Jude Franco sets the show in motion with a peppy "Hit it" to her two technicians followed by a quiet aside of "This is as calm as it gets."

For the next 90 minutes people scurry into the control room with feature stories recorded on 10-inch reels of tape, short news segments on tape cartridges and triplicate copies of scripts and revisions to scripts.

Through the turmoil, hosts Noah Adams and Nina Totenberg sit on the quiet side of the soundproof glass and try to keep their heads as they watch those in the control room lose theirs.

Jude grabs the control-room telephone for a quick conference with producer Ted Clark out in the newsroom. One ear listens to what Ted's saying, but her other ear is reviewing musical "buttons" to choose the one which will be played at the end of the next story. In the background she's aware that Nina

## Would you like National Public Radio?

According to surveys of people who listen to NPR, the average listener is educated, successful, active, young and well-informed. More specifically, NPR listeners are:

**Well-educated.** An NPR listener is twice as likely to have graduated from college than is the average American.

**Active in public affairs.** Listeners are more likely than others to vote, to write letters to the editor or to an elected official, or to work for a political candidate.

**Politically diverse.** Thirty percent classify themselves as "somewhat conservative," 29 percent as "middle of the road" and 32 percent as "somewhat liberal."

**In management positions.** 65 percent of NPR listeners who work are professionals or managers. NPR's working women listeners are twice as likely to be professionals or managers as are other working women.

**Heavy readers.** The NPR listener is four times more likely to read *Scientific American* and three times more likely to read *The Wall Street Journal* than is the average adult.

is introducing a segment on rock climbing in Yosemite National Park and that one of the technicians has just timed the story after that at four minutes and 32 seconds. Jude's job makes an air traffic controller's look tranquil.

At the end of the show comes the credit line, "and for the reporting of science, Hewlett-Packard, worldwide manufacturer of computers and instrumentation for industry and science." That tag is heard up to 20 times a week on *ATC* and *Morning Edition*. An alternate tag line mentions HP's involvement in medicine.

To make it all happen at NPR, there are 300 employees, most housed on the first four floors of an eight-story office building in downtown Washington, D.C. (The building also houses offices of the Federal Communications Commission, the body that regulates the airwaves in the U.S.) There are also four NPR reporters in New York, three in Chicago, three in Los Angeles and six in other major U.S. cities.

NPR is a non-profit, private corporation that provides programming for a growing association of public radio stations throughout the United States (see list on card). NPR was incorporated in 1970 with 90 member stations; today that number has grown to more than 330.

Public radio is now accessible to more than 80 percent of the U.S. population. Even Barrow, Alaska—population 2,207, the northernmost point in the U.S. and home of the Navy's Arctic research lab—has its own public radio station, KBRW.

More than 10 million Americans listen to NPR programming every week—and more than half of them rely on *Morning Edition* and *All Things Considered* for news and information.

The kinds of people who listen to public radio—and hear the on-air acknowledgements of HP—are a special breed. For example, one of every five listeners is published. (See box on page 9 for a more complete profile of an NPR listener.) It's not surprising that NPR listeners are well-educated since many member stations are linked closely to universities and colleges.

A Louis Harris poll of top corporate executives found that 57 percent listen to NPR news programs "very often" or "somewhat often," results the pollster called "highly significant." These are the same people who decide to buy Hewlett-Packard equipment.

Emery Rogers has a letter in his files from a Massachusetts listener to HP President John Young. The letter thanks John and the company for supporting NPR's science reporting. And a postscript tells John that the listener was the one who decided to buy HP medical systems for his hospital.

But it's not always easy for NPR's development staff to attract underwriters like Hewlett-Packard. "We suffer from the 'weird-bird syndrome' when it comes to asking for underwriting funds," says Jane Couch. "We're not a university, nor are we an advertising buy in the classic sense. We have to be considered a very good public relations vehicle. The underwriting done by companies like Hewlett-Packard really can enhance a company's image."

HP divisions have noticed the same thing. For instance, Greeley Division uses some of its local philanthropic monies to help fund the local broadcasts of *ATC* on KUNC in the northern Colorado town. The Spokane Division is an underwriter on KPBX in eastern Washington.

What does HP receive in return for its investment in National Public Radio? In addition to the important role of expanding science literacy in the country, there's also a great deal of pride that HP employees can feel in being associated with another organization that has a high regard for excellence. A panel of broadcast journalism judges has said *All Things Considered* proves that "National Public Radio does a better job of putting the day's events into perspective than any other broadcasters, past or present."

But Charles Kuralt, known for his outstanding work for CBS News, put it more succinctly. He told *Time* magazine that *All Things Considered* "beats anything else on radio, television, short wave, CB or ship-to-shore."

—*Brad Whitworth*

**NPR Technician Rik Kaplan at the controls of the Main Origination Technical Center (MOTC), the nerve center of the public radio satellite interconnection system in Washington, D.C.**

# YOUR TURN

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

## Radical change: Or is it?

I was impressed with your cover story on "Radical Change" in the July-August issue. HP competes in very dynamic and highly competitive markets. As Jean Burke points out in the article, our company's success in the '80s and '90s will largely depend on how flexible and responsive HP's 84,000 people are to the fast-paced changes in our marketplaces.

Becoming more market-driven, rebalancing our work force, creating HP Precision Architecture, occasionally realigning the company's sectors and groups—these are examples of HP changing to position itself for survival and growth.

Should we do it? Can we do it? You bet. There are no pleasant alternatives.

MICHAEL ECKHARDT
Palo Alto

The greatness of Hewlett-Packard has been that the company has been an extension of the greatness of its founders through a group of people trying their best to emulate Mr. Hewlett and Mr. Packard. I have no doubt that HP will continue to prosper. The challenge facing all of us is to prosper and still remain HP—not another DEC.

CHARLES A. BITTMANN
Retired
Los Altos Hills

Bill and Dave pioneered and put into practice the idea of the extended family in the work place. In those early years, members of the HP "family" were recognized for their contributions to the corporate effort in many personal and thoughtful ways—long before the term "HP way" was popularized in books and articles devoted to the characterizations of highly successful companies.

Now HP is faced with the challenge of redefining (recapturing?) the HP way in that same sense and spirit. Times have changed as you point out in the July-August *Measure*, but the commitment to human values, I'm sure, will always be the hallmark of the HP way.

WILL MORTON
Retired
Palo Alto

## A reference to HP equipment

In response to the letter from Larry Rosenblum printed in the September-October 1986 *Measure*, the Mountain View Public Library does use the HP HP 2624B computer for reference purposes with very simple, easy-to-follow directions.

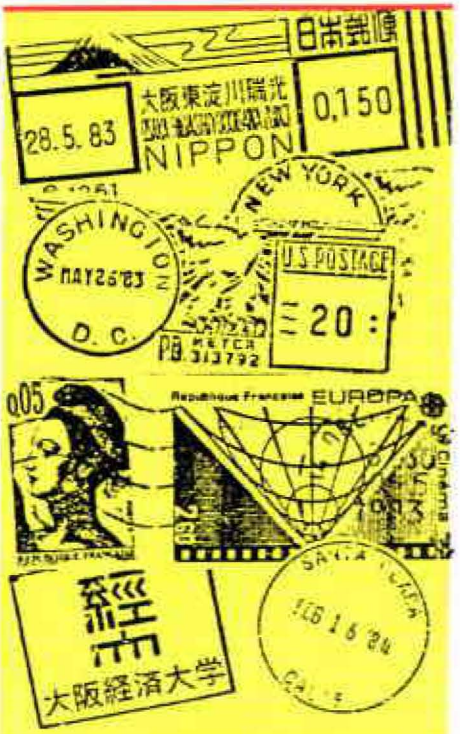
NORA BLALOCK
San Jose

## Choosy mothers are offended

Your labeling of Philip Engelhardt as "extraordinary" in your July-August issue was "extra repulsive." What could be special about a person who insults others? As a mother who has never let my children be smeared with peanut butter, nor left them in any store while I did my shopping, I am insulted by Engelhardt's smear of mothers and children. My co-workers and friends, along with my family, would not risk entering the Aviax showroom as exclusive as it may be. But, it is not as great a risk as that of the risk Engelhardt's wife took in having children. May they smear peanut butter on their father and his computers and live.

Remember, mothers and children have spending money for peanut butter and computers. Maybe not HP computers.

ALICIA POPE
Manager, RA,Inc.
Santa Rosa




## Please send mail

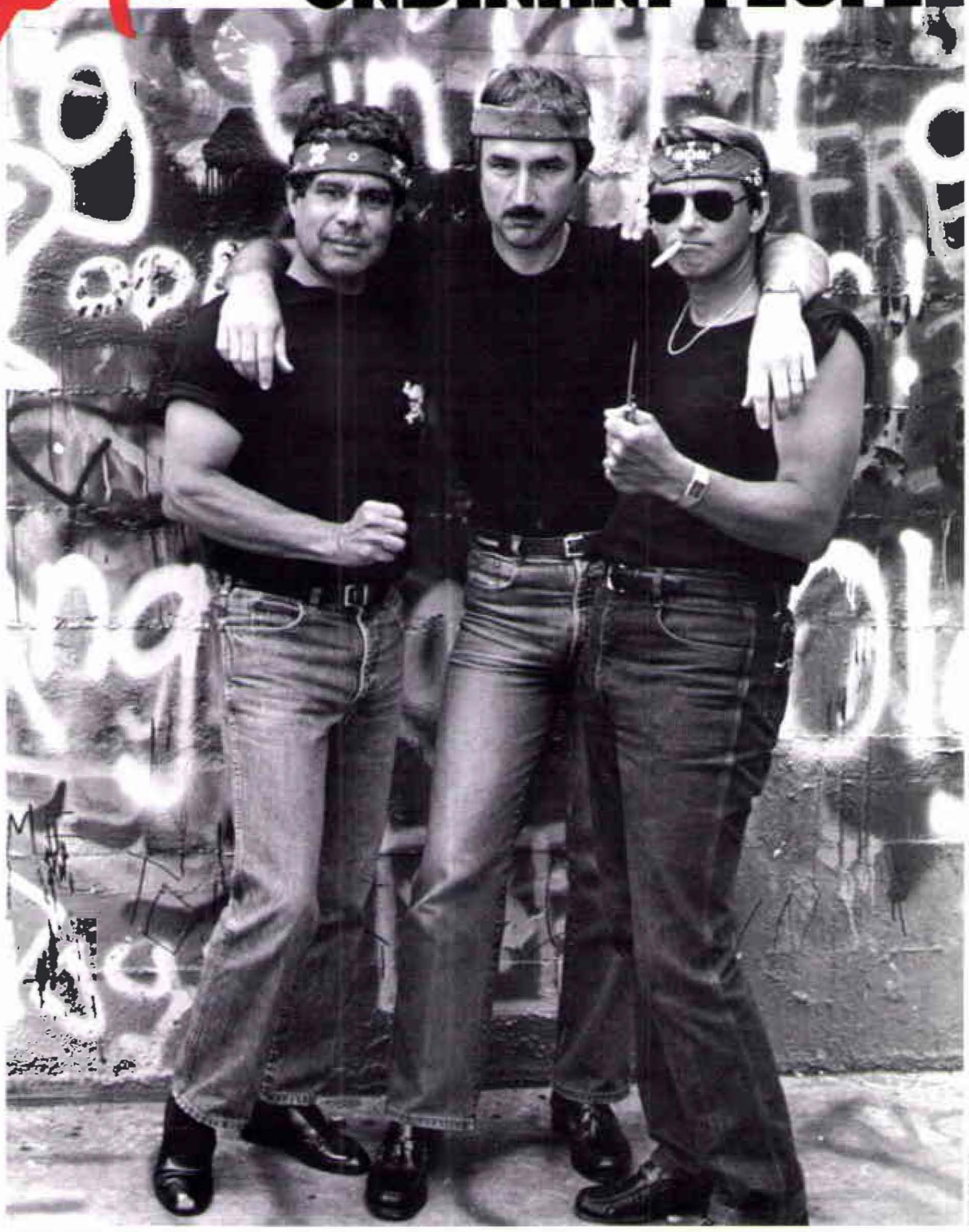
What public issues affect HP people and their jobs? Do you disagree with something you've read in *Measure*?

Send us your thoughts. We want to share your opinions and comments with more than 84,000 other employees.

If your letter is selected for publication, you'll receive a *Measure* T-shirt. (Be sure to send us a return mailing address and indicate your T-shirt size—unisex small, medium, large or extra-large.)

Address letters via company mail to Editor, *Measure*, Public Relations Department, Building 20BR, Palo Alto. Via regular postal service, the address is *Measure*, Hewlett-Packard Company 20BR, PO Box 10301, Palo Alto, CA 94303-0890. Try to limit your letter to 200 words. Please sign your letter and give your location. Names will be withheld on request.

# Extra ORDINARY PEOPLE



Wimps need not apply for jobs from Mike Cuevas, Marc Saunders or Bill Moore at the Stanford Park Division.

"I want to talk about getting the competitive edge," thundered Bill Moore, Stanford Park Division sales manager, at a forum on SPD vs. the competition. Dressed as a street fighter—complete with a pack of cigarettes rolled in the sleeve of his black T-shirt—he was baiting the crowd of SPD employees and loving every minute of it.

"How many people out there like to lose?" he jeered. "Huh? Anybody like to lose?"

"NO!" roared the audience.

"To be competitive, you have to be a winner," Bill shouted, talking faster and faster, as the crowd interjected their "yeahs" and "uh-huhs."

"To be a winner, you've got to believe you're a winner. If you don't believe you're a winner, then I've got a slide for you."

He slapped his next slide on the overhead projector: a wimp with a slash through it.

"Get outta Dodge. No wimps. We've got no room for wimps. I hate to lose."

No wimps indeed. With humor and enthusiasm, SPD marketing managers delivered a serious message in a series of presentations to division employees: The competition is getting as tough as a street fight.

SPD's competition has increased dramatically over the last four years. In 1982, HP had two competitors in the synthesizer market. Today, there are eight. In 1982, there were three competitors in the power meter market. Today, there are five.

Mike Cuevas, SPD product marketing manager, had begun the presentation dramatizing the division's new get-tough stance. To the cheers of the crowd, he stripped off his coat, tie and shirt to reveal the street fighter's attire. (Did it make him nervous? "Extremely nervous. I was afraid it might be like telling a joke in an elevator when nobody laughs.")

"We can't afford to be fat cats," Mike said. "We have to recognize there are other companies in the market who are eager to serve our customers."

"Our list of competitors reads like a 'Who's Who' of microwave test equipment manufacturers in the world today," says Marc Saunders, marketing manager. "These are quality companies."

With the increased number of companies, prices are being driven down.

"In many cases," says Marc, "their products are not quite as good as ours, but their prices are substantially lower.

"But HP developed the markets for synthesizers and power meters, and we're not giving an inch without a fight. To beat the new competition, we'll have to change our products, our prices and our operating policies."

Mike Cuevas told SPD employees that as a division, their efforts must be better than the sum total of any of HP's competitors. "For any job — field engineer, technician, assembly, section manager, administrative support or you name it—our people have to do that job better than the corresponding person at a company that competes with HP."

He gave examples of steps each area would take to improve SPD's competitive situation. Accounting, for example, will provide a cost model for new products that accurately forecasts the factory cost and flags changes immediately. R&D engineers will develop a personal sense of urgency from the beginning of a project and will use patents to protect our technological leadership.

"Tom Peters, co-author of *In Search of Excellence*, said that when he compared successful companies to other companies, the difference wasn't a lot of home runs, but a lot of singles," said Marc Saunders.

"I'm excited about the things we can accomplish if we put our minds to being more competitive. We have the best technology in the world and we have the best people in the world.

"And while we're having a lot of fun with the street-fighting theme," said Marc, "I want you to know we're going to win the fight fairly. We'll continue to have the highest standards of business conduct, the way HP has always done business."

As part of the campaign, SPD employees all dressed for work one day as street fighters, complete with headbands and chains. During the day, the division's new fight song, "Beat 'em," played intermittently over the public announcement system. A rock video starring the SPD street fighters and featuring the fight song was also produced as part of the campaign.

A couple of verses give the flavor of what going on over there at SPD:

*Boonton and Marconi don't you come round here*
*Don't want to see your box, you better disappear*
*There's dollars in our eyes and our words are really clear*
*We'll beat 'em, we'll beat 'em.*

*We'll beat 'em, beat 'em*
*We'll do what we can do to defeat 'em*
*They'll think they beat us and think we're too nice*
*They'll reach for the order, but we'll cut the price.*

*We'll beat 'em, we'll beat 'em.*

—*Virginia Toney*

*(Virginia Toney, communications representative at Stanford Park Division, is no wimp, but avoids street fights at all costs.)*

# Corporate objectives turn 30

***In January 1987, Hewlett-Packard's corporate objectives will celebrate their 30th birthday. There won't be a party, cake or candles to mark the occasion. But in January the latest version of the objectives, newly revised to reflect invariable changes in the nature of HP's business and the environment in which we operate, will begin to be distributed throughout the company.***

Revisions are nothing new to the company's objectives—updates have been needed from time to time to add emphasis to certain topics and expand definitions of others. It's only natural that a year of many changes for the company would result in a revision of the objectives. There have been revisions before—in 1981, 1974 and 1969.

If, in reading the latest version, you expect to find brand-new objectives or sections missing from previous objectives, you'll be disappointed. The alterations are much more subtle—much like a tailor letting out the seams in a coat to allow the owner to grow.

The major reason for this year's update was a need to reflect the company's work-force balancing efforts and to clarify the concept of "employment security" described in the fifth objective, called *Our People*.

"HP selects and manages its businesses with a goal of providing long-term employment for its people and opportunities for personal growth and development," says the new language of the objective. "In return, HP people are expected to meet certain standards of performance on the job, to adjust to changes in work assignments and schedules when necessary, and to be willing to learn new skills and to apply them where most critically needed."

Gone is the term "job security." In its place is the phrase "employment security." This change captures the notion that people shouldn't expect to be hired to do just one job during their HP career. The price for stable employment at HP is the willingness to tackle new assignments and to learn new skills.

Minor changes also were made in the objectives relating to profit, customers and fields of interest.

You'll notice a greater emphasis on the need for HP to be consistently profitable in the face of changing business conditions under the first objective.

In the second objective about customers, there's more attention paid to building long-term relationships with customers and reinforcing the idea that the central purpose of our business—the reason HP exists—is to satisfy real customer needs.

The *Fields of Interest* objective received the most extensive revision in words, though the underlying concepts have changed little. There's more emphasis on HP's basic business purpose and the linkages that exist in the company's technologies and customers.

It's been five years since the text of the company's guiding principles have needed an expanded definition or a shift in emphasis. The last revision put more emphasis on quality and underscored the importance of effective interaction among HP operating units.

The corporate objectives made their first appearance at a 1957 management meeting. At the time, there were just six objectives—later the objective about management was added. Then, as now, the first objective was profit. In explaining the lead-off spot, Dave Packard told managers, "I do so with the specific emphasis that I consider it to be the most important objective to guide your day-to-day thinking. . . . It is (profit) which has enabled us to do all of the other things which make for a good company . . . but it alone is not a sufficient objective."

The full text of the new objectives is reprinted on the following three pages.

# Hewlett-Packard Corporate Objectives

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

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

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

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

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

Profit is not something that can be put off until tomorrow; it must be achieved today. It means that myriad jobs be done correctly and efficiently. The day-to-day performance of each individual adds to—or subtracts from—our profit. Profit is the responsibility of all.

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

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

The essence of customer satisfaction is a commitment to *quality*, a commitment that begins in the laboratory and extends into every phase of our operations. Products must be designed to provide superior performance and long, trouble-free service. Once in production, these products must be manufactured at a competitive cost and with superior workmanship.

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

Providing innovative, reliable products is a key element in satisfying customer needs, but there are other important elements as well. HP offers many different products to many different customers, and it is imperative that the products recommended to a specific customer are those that will best fulfill the customer's overall, long-term needs. This requires that our field sales people, operating individually or in well-coordinated teams, work closely with customers to determine the most appropriate, effective solutions to their problems. It requires, as well, that once a product is delivered, it be supported with prompt, efficient services that will optimize its usefulness.

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

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

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

Our first products were electronic measuring instruments used primarily

# Corporate Objectives

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

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

The basic purpose of our business is to provide products and services that help our customers develop and use better information to improve their personal and business effectiveness. We recognize that some customer information needs may require an industry-specific application where HP has little expertise. For that reason, our design goal is to provide highly functional, interactive hardware and software that can be easily assembled by HP, customers or other organizations to solve specific needs.

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

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

How large should a company become? Some people feel that when it has reached a certain size there is no point in letting it grow further. Others feel that bigness is an objective in itself. We do not believe that large size is important for its own sake; however, for at least two basic reasons, continuous growth in sales *and* profits is essential for us to achieve our other objectives.

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

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

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

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

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

On occasion, situations will arise where people have personal problems which temporarily affect their performance or attitude, and it is important that people in such circumstances be treated with sympathy and understanding while the problems are being resolved.

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

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

There is also a strong commitment at HP to the concept of equal opportunity and affirmative action, not only in hiring but also in providing opportunities for advancement. Advancement is based solely upon individual initiative, ability and demonstrated accomplishment. Since we promote from within whenever possible, managers at all

# How does MEASURE measure up?

From time to time we ask our readers to tell us how we're doing. Are we keeping you informed of major company news and activities? Are you reading stories that are both enlightening and entertaining?

Please take the time now to complete this questionnaire to let us know how we're doing. Return it via company mail to: Editor, *Measure*, Public Relations Department, Building 20BR, Palo Alto. Thanks for your help.

Jean Burke
Editor, *Measure*

Which statement best describes how much of *Measure* you read?

- ☐ I read all the articles in each issue.
- ☐ I read most of the articles in each issue.
- ☐ I read some of the articles in each issue.
- ☐ I read a few articles occasionally.
- ☐ I never read *Measure*.

Please check how interested you were in each of the following stories in the current issue by checking the appropriate box.

| | Great Interest | Above average interest | Moderate interest | Little interest | No interest |
|---|---|---|---|---|---|
| HP in China: Business in PRC | ☐ | ☐ | ☐ | ☐ | ☐ |
| Sound investment: HP and National Public Radio | ☐ | ☐ | ☐ | ☐ | ☐ |
| Extraordinary people: SPD street fighters | ☐ | ☐ | ☐ | ☐ | ☐ |
| Revised Corporate Objectives | ☐ | ☐ | ☐ | ☐ | ☐ |
| Letter from John Young | ☐ | ☐ | ☐ | ☐ | ☐ |
| Your Turn: Letters to the editor | ☐ | ☐ | ☐ | ☐ | ☐ |

Additional comments: _____

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RETURN VIA HEWLETT-PACKARD COMPANY MAIL TO:

Jean Burke
Editor, *Measure*
Corporate Public Relations
Building 20-BR
Palo Alto

levels must concern themselves with the proper development of their people, and should give them ample opportunity—through continuing programs of training and education—to broaden their capabilities and prepare themselves for more responsible jobs.

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

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

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

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

The successful practice of "management by objective" is a two-way street. Management must be sure that each individual understands the immediate objectives, as well as corporate goals and policies. Thus a primary HP management responsibility is communication and mutual understanding. Conversely, employees must take sufficient interest in their work to want to plan it, to propose new solutions to old problems, to stick their necks out when they have something to contribute. "Management by objective," as opposed to management by directive, offers opportunity for individual freedom and contribution; it also imposes an obligation for everyone to exercise initiative and enthusiasm.

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

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

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

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

Each community has its particular set of social problems. Our company must help to solve these problems. As a major step in this direction, we must strive to provide worthwhile employment opportunities for people of widely different backgrounds. Among other things, this requires positive action to seek out and employ members of disadvantaged groups, and to encourage and guide their progress toward full participation at all position levels.

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

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

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

# LETTER FROM JOHN YOUNG

## HP's president reflects on the importance of the company's growing international presence.

CAROLYN CADDES

**This photo of John at home is in Carolyn Caddes' new book, "Portraits of Success, Impressions of Silicon Valley Pioneers."**

This issue's story on activities in the People's Republic of China is a vivid reminder of how truly global HP's operations have become. So it seems like a good time to reflect on our growing international presence.

Let me start by restating how important it is that HP be able to sell its products to a global marketplace. International sales allow us to reap the greatest possible return on the large R&D investment we make. They also help us balance business cycles, because slow sales growth in one part of the world can be offset by stronger results in other regions. Finally, HP's customers have operations around the world and we need to be close enough to understand their needs and deliver the support they require.

The reasons I've just cited are quite timeless and guided our thinking when we set up international operations more than a quarter of a century ago. But there are some recent trends that make it even more important for HP to increase its international presence. First, new markets have developed rapidly around the world, presenting enormous opportunities for vendors who have the foresight to establish themselves early on.

A second trend is the increasingly erratic behavior of international exchange rates. Their dramatic fluctuations have made HP products priced in dollars very vulnerable to rapid price increases. By increasing the local currency content of our products—that is, by buying more parts and increasing manufacturing within the markets we serve—we decrease our vulnerability to such sudden shifts in the world monetary situation.

A third factor is the changing expectations of the nations in which we wish to sell HP products. They want us to do more than sell within their borders. When selling is our only activity, we can be viewed as a source of their economic problems—rising imports. But when we do R&D, manufacturing and procurement within their borders, we're seen as a company that's contributing to their economic development. In many nations, this "value-added" presence isn't just desirable—it's a government requirement.

Fourth and finally, HP's stepped-up international activities are a response to the growing competition we face. Cost is an increasingly important factor in our customers' buying decisions. Since we're in business to satisfy customer needs, that means procuring parts for, manufacturing and distributing HP's products in the most cost-effective way.

As Dick Alberding points out, we don't have a stock formula for increasing our local "value-added" that we apply uniformly around the world. Instead, we tailor our approach to suit the needs and opportunities of each nation where we do business. Our activities may include:

- new or expanded manufacturing operations such as those recently announced in Spain and France;
- broadened international R&D activities, such as a branch of HP Labs in Bristol, participation in Europe's RACE collaborative research program and new R&D charters for a number of international entities;
- the creation of new field marketing centers in Europe and Hong Kong;
- new international procurement operations in Europe, Israel and the Far East;
- joint ventures and strategic relationships, like Microcomputadoras Hewlett-Packard in Mexico and our evolving partnership with Canon in Japan;
- and the establishment of our Asian Personal Computer Operation in Taiwan.

This lengthy but very incomplete list of our international initiatives makes a point: HP people think, speak and sell in many languages, in many cultures, in many places. What does this growing internationalization mean to HP employees? It means our employment outside the U.S. will continue to grow to meet these added developments. But it doesn't mean that U.S. employment will be declining as a result. On the contrary, these extra efforts increase the overall demand for our products, no matter where they're manufactured. HP is currently the 12th largest exporter in the U.S. — with net exports of well over $1 billion annually. So it's clear that our efforts at extending our international presence also contribute to growth and employment in the U.S.

The international economy in which HP operates is highly complex and very interdependent. Never has it been more important that HP people think globally—in their business planning, in their product design, in their marketing and sales strategies. We need to be sensitive to the needs and preferences of specific regions. But at the same time, we need to remember that this is one company, united by a common business purpose. Our ability to balance those perspectives is key to our success in the years ahead.

# Extra

Professor Sir Francis Graham-Smith was keynoter at the symposium.

## A meeting of minds

The September opening of the second Bristol research facility brought together many of the great technological minds of Europe to consider "The Future of Information Technologies."

This will be the new lab's direction as the first HP facility to focus almost entirely on software research.

Addressing the distinguished group, Bristol Research Center director John Taylor discussed artificial intelligence, the development of more efficient networks, distributed office systems and advanced software engineering.

"The approach is to look five to 10 years ahead in an effort to foresee the types of systems people would ideally like to build in a number of application areas and to consider how new technology will change those systems," John said.

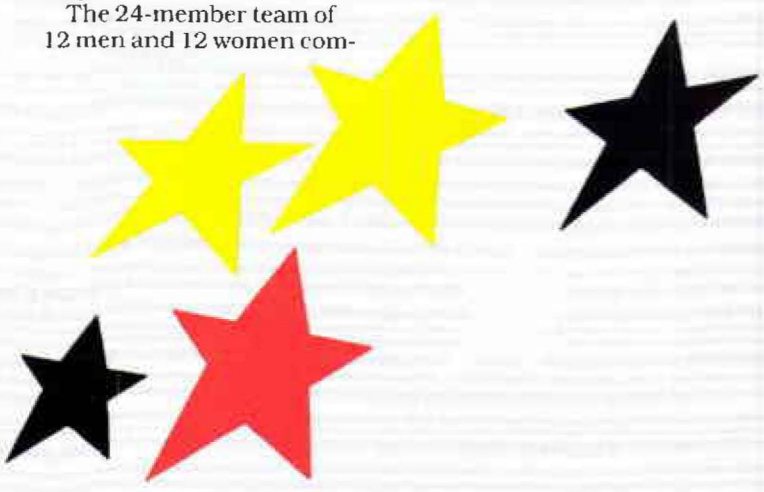
To do that, John added, Bristol will be a European center of excellence able to attract and keep the highest-caliber researchers working on multi-disciplinary projects.

ITG engineer Francine Nunley participated in the battle of the stars.

## Corporate stars battle it out

HP's first-ever "Battle of the Corporate Stars" team won first place in the Bay Area local competition in September, which sent them to Orlando, Florida, in October to represent San Francisco in the national finals where they came in first.

The 24-member team of 12 men and 12 women competed against about 20 other regions throughout the country. ESPN taped the competition, and will broadcast the event Christmas Day and New Year's Day. (Check local listings for times.) Events include track, volleyball, Frisbee-throwing, tug-of-war, swimming and surfing.



# Extra MEASURE

David Hackelman, at right, explains the HP Portable to campers.

## This camp keeps the intellectual fires burning

Two HP engineers went to summer camp in the forested mountains of West Virginia's Pocahontas County this past summer. David Hackelman, in ink and media R&D at Corvallis' InkJet Components Operation, and Raymond Dandeneau in Avondale's Analytical Instrument Operation R&D, were guest lecturers at the 23rd National Youth Science Camp. David is a 1969 graduate of the summer camp.

The camp was founded in 1963 to honor the nation's most outstanding high school science students. Two from each state are chosen annually to participate.

The three-week session, David says, allows the teenagers to see there are other people that are as excited about science as they are. "The wide scope of the program lets them know their studies are worthwhile, that there are reasons to work hard."

David, who has been involved with the camp for several years, says the instructors are constantly amazed at the in-depth questions asked by the campers. "During my lecture, they were very curious about what HP products would be coming out soon. They asked about RISC technology, exactly how ThinkJet printers work, and what it's like to work in corporate R&D. They also wanted to know how we dress for work."

## BOTTOM LINE

Hewlett-Packard Company reported an 11 percent increase in net revenue and a 6 percent increase in net earnings for the third quarter (ended July 31) of the 1986 fiscal year.

Net revenue totaled $1.794 billion, up from $1.612 billion for the same quarter in FY85. Net earnings were $123 million, or 48 cents per share on approximately 257 million shares of common stock outstanding (compared with net earnings of $117 million or 45 cents per share for the year-ago quarter).

Incoming orders for the quarter were $1.853 billion, up 25 percent from $1.478 billion in orders the third quarter of FY85. International orders gained 51 percent, to $863 million.

HP announced September 25 that shipment of the first business system using the new HP Precision Architecture would be delayed until the middle of 1987. The delay is expected to have little effect on the company's overall revenue expectations for 1987, however.

## SECTOR LEVEL

The new shortened names for the company's product-oriented sectors: Business Systems (**Doug Chance**), Measurement Systems (**Bill Terry**), Systems Technology (**John Doyle**), Technical Systems (**Lew Platt**).

An exchange of groups between two sectors has moved the Design Systems Group into the Technical Systems sector and the Analytical and Medical groups into the Measurement Systems sector.

## CHART CHANGES

Manufacturing activities have been pulled out of the Computer Systems Division and Data Systems Division and consolidated into a newly formed Cupertino Manufacturing Operation. Operations manager is **Pierre Patkay**.

The Printed Circuit Division has transferred to the Circuit Technology Group. . . In the Far East, an operation name change: Computational Products Singapore.

## NEW HATS

**Rod Carlson** has been named director of Corporate Grants and executive director of the Hewlett-Packard Foundation. Succeeding him as general manager of the Stanford Park Division is **Alan Seely**.

**John Golding** to general sales manager for the UK Sales Region. . . **Rick Justice** to director of marketing, sales and support for Intercontinental Operations. . . **Paul Chan** to Malaysia sales GM.

**Luiz Barata** has been named GM of HP do Brazil S/A, a new joint venture.

## He's sorry, he's sorry already

When Don Jensen wrote a column for the Detroit Free Press about major San Francisco area companies laying off employees, he included HP in the list. The retired Ford Motor Company executive wrote: "Manufacturing changes led Hewlett-Packard to hand pink slips to 1,500."

Corporate press relations spokesman Gene Endicott wrote to Don to point out the inaccuracy in this statement and explain HP's early retirement and voluntary severance offer. Within 10 days, Gene received a reply, stating in part:

*"You were too late. In fact, I should give you a number and have you wait in line.*

*"My family started on me first. My grandson, Mike Parker, is a summer employee at HP in Rohnert Park. My stepson, Chris Wilcox, is a freelance copy writer for HP in Palo Alto. They told me I was all wrong.*

*"Then the employees (past and present) of HP worked me over. All I did was quote a story in the S.F. Chronicle. Then the loyalty of the HP group came to the fore.*

*"You never have to worry about 'Corporate Press Relations.' Every employee is doing your job for you."*

**Forrest Whitt's Beagle Pup cruises over rolling California countryside.**

## Rare bird

When people think of a beagle pup flying through the skies, the image that pops into most heads is that of WWI flying ace Snoopy atop his doghouse.

But Forrest Whitt's mind is filled with Immelmann turns, loops and aileron rolls in a Beagle Pup, a plane which he restored. The district applications engineering manager in Neely's Santa Clara, California, office is the proud owner of one of only two such planes in North America.

Forrest and his aerobatic Pup go to airshows and often come home with trophies, "although sometimes they can't find a category for me to compete in," says Forrest.

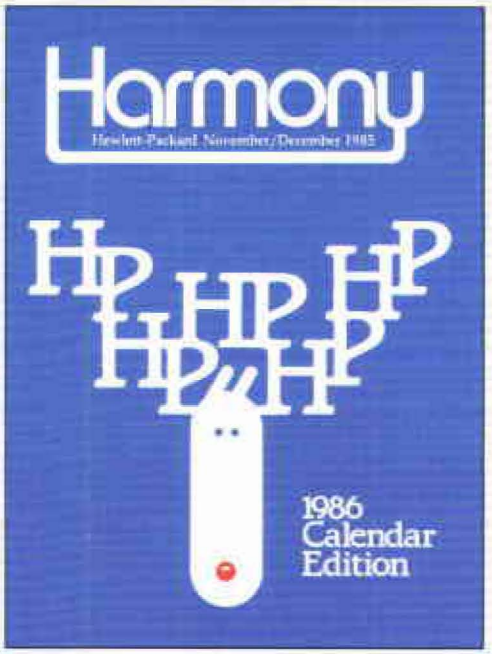
Beagle Aircraft, Ltd. in England built just 170 Pups, primarily as military/civilian trainers. So often Forrest finds himself classified as a "warbird" in "static display" competitions. In a show this summer, the Pup came in second to the SR-71 Blackbird U.S. spy plane.

Forrest also took part in the EXPO 86 airshow in Abbotsford, Canada, where 150 planes flew in formation over the world's fair site at low altitude. "What a spectacular event," says Forrest, "with everything from biplanes to jets." Snoopy stayed at home.

## A reindeer with HP on its mind

This HP-laden reindeer, which originally appeared on the cover of the November-December 1985 edition of Fort Collins' *Harmony* magazine, was picked for the annual edition of *Print* magazine.

*Print* is a prestigious graphic arts publication. The design was created for *Harmony* editor John Monahan by John Gravdahl of John Gravdahl Graphic Design in Fort Collins.



# Extra MEASURE

## Calling baby-to-be: Everything OK?

For the mother-to-be whose pregnancy develops problems, the old term "confinement" can suddenly gain real meaning. Linked to a fetal monitor, she must stay within a few feet of the gear which is monitoring the activity in her uterus.

Now, the Böblingen Medical Division has come to the rescue with HP 80240A fetal ultrasound telemetry that frees the patient to sit in a chair or move around a distance of 300 feet within line of sight of the receiver. The patient keeps a small telemetry transmitter in her pocket or wears it over a belt.

HP 80240A

It relays (to an HP 8041A fetal monitor) data from a "toco" transducer worn next to the body to measure the force of contractions. Or she may use a hand-held device to signal fetal movement or contractions.

Just call it. . .delivery!

Barry E. Jones

## HP and academia: Meet Prof. Jones

When Professor Barry E. Jones was named Hewlett-Packard Professor of Manufacturing Metrology at Brunel University in West London, he became the first-ever professor in that field in the U.K.—and the holder of HP's first endowed chair anywhere in the world.

To get to know HP better, he was invited to visit seven divisions in Silicon Valley and Roseville, California. There was lots of talk about metrology—which is using measurements within manufacturing, something that goes back to the very roots of HP.

The Brunel Centre for Manufacturing Metrology, which Prof. Jones heads, will not only teach student engineers but work closely with industry on continuing education and R&D projects. As further help in building the new program, HP Ltd. has donated an HP 1000 system with software for quality and process monitoring and control.

## BRAZILIAN CHANGE

HP has made marked changes in its business in Brazil, which has a law limiting manufacturing and sales of computers by non-Brazilian firms. A new subsidiary company named Tesis Informatica S/A has been formed by the Brazilian firm of Cia Iochpe de Participacoes. Tesis has taken ownership of HP's computer and calculator operations in Brazil. Some 200 HP employees in Brazil have joined Tesis.

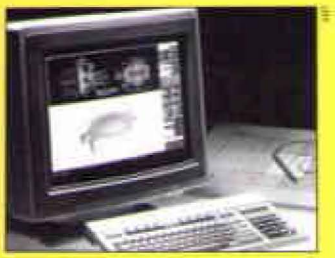
The remaining 70 HP people have become part of a new joint venture—Hewlett-Packard do Brazil S/A, equally owned by HP and Iochpe—which will market and sell HP instruments and components in Brazil.

## NEW PRODUCTS

Five state-of-the-art parts were developed to produce the Colorado Springs Division's new general-purpose HP 54111D digitizing oscilloscope with a super-fast 1 gigasample/second digitizing rate, high bandwidth and deep memory. . . .Products with portability: the Signal Analysis Division's HP 8590A, HP's first portable, low-priced RF spectrum analyzer; the Colorado Telecom Division's HP 4951C, the first in a new family of disc-based, highly portable analyzers.

Newly introduced fiber-optic transmitters and receivers from the Optical Communication Division feature an optical port that mates with ST® style connectors.

Technology from the Böblingen Engineering Operation is used in HP's first proprietary solid-modeling design and drafting system, the HP ME Series 30 which operates on the HP 9000 Series 300. . . .The Greeley Division has introduced the HP 97504B disc-drive controller that is HP's first SCSI product. (SCSI stands for small computer-system interface, an industry standard). . .Creating excitement at the INTEREX HP users' conference were the Disc Memory Division's HP 7936 and HP 7937—compact, high-capacity disc drives for HP 3000, HP 1000 and HP 9000 systems.



HP ME Series 30

*(ST is a registered trademark of AT&T.)*

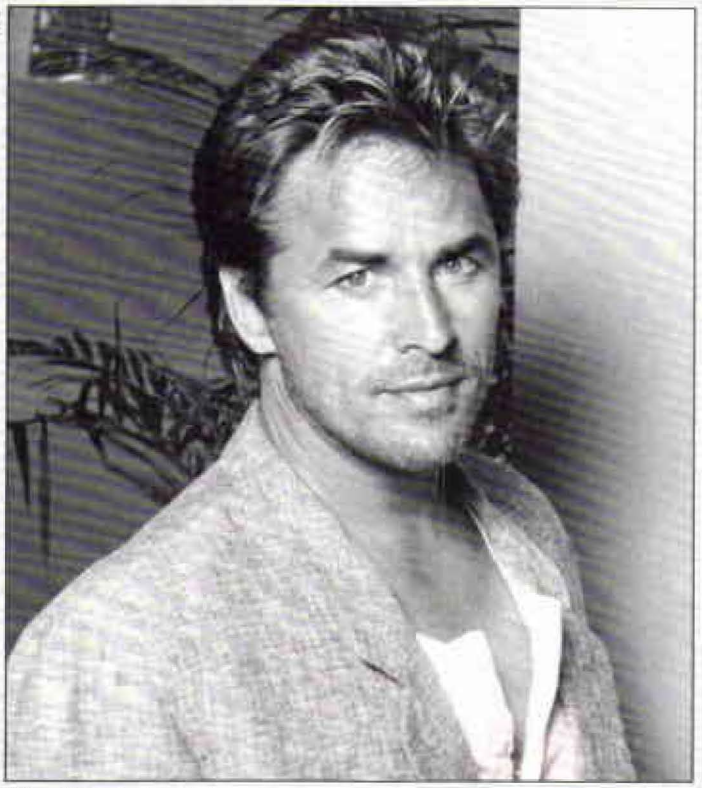
## HP equipment helps Don crack the case

HP instruments shared the screen with *Miami Vice's* Don Johnson in November.

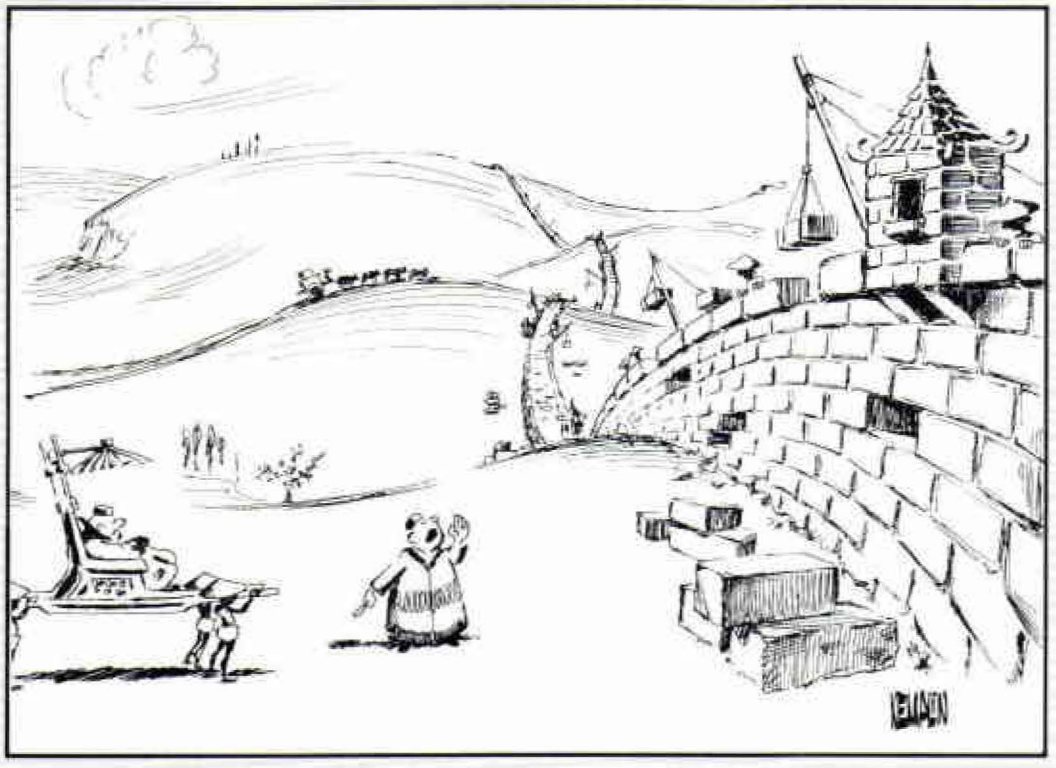
Jim Hagan, Miami analytical field engineer, and Gayle Papadopoulos, Miami customer engineer, supplied and set up the analytical demo equipment used in this season's seventh episode, entitled "Better Living Through Chemistry."

Jim and Gayle also served as technical advisers during the filming. The instrumentation, an HP gas chromatograph/mass spectrometer system with a color workstation, is used to analyze a drug synthesized by a diabolical chemist trying to outsmart the law. The HP system determines the drug is cocaine.

Don Johnson as Crockett and Philip Michael Thomas as Tubbs take it from there.



***Miami Vice's* Don Johnson**



BAD NEWS, BOYS... THE EMPEROR WANTED IT OVER HERE...

## Growing old at HP

Three 25-year anniversaries are being celebrated this year with special events, parties and much hoopla.

HP Canada, Ltd., the United Kingdom's Hewlett-Packard, Ltd. and the Medical Products Group in Waltham have all been looking back this year at the many changes and events that have taken place over the past quarter of a century.

Employees of more than five years in HP Canada were given gold anniversary pins with a special anniversary logo, and the top 25 suppliers and top 25 customers were awarded plaques.

Along with the usual celebrations and events, the UK's Hewlett-Packard Ltd. offered to match funds raised for charities by employees during the anniversary year.

And in Waltham, employees with 25 years at HP provided accounts of what it was like back when HP Medical cleared out a pig farm off Route 128, called America's Technology Highway today, and made it their home. What was then a two-lane road is now eight lanes that practically circle Boston and the area is one of the busiest and most densely populated in New England because hundreds of high-tech companies have settled there.

# PARTING SHOT

## Making fires less alarming

The HP-71B handheld computer is helping stamp out forest fires.

The U.S. Forest Service is using the HP equipment to help firefighters make informed decisions in the midst of a blaze. Gary Tallis, Corvallis market development engineer, says the HP-71B and custom ROMs can predict fire danger ratings, heat intensity, how high flames will jump and how fast a fire will spread.

The computer makes the decisions based on the amount of moisture in the ground, wind speed and the type of terrain where a fire breaks out.

The new computer replaces Texas Instrument gear that had been used by U.S. firefighters. The modified HP-71B will be offered to each national forest district in the country.

DAVID HAZEN

**Donald Bradsby uses the modified HP-71B to compute the speed and intensity of a fire.**

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