MEASURE

HP in the Pacific Northwest

INSIDE:
Snapshot '81
a progress report
to employees

UP FRONT

Comments on the changing HP scene— and the people behind it.

As a matter of general principle, editors should be **read**, not **read about**—at least in their own publication. An exception is when the editorship changes, as it did for **Measure** with this issue. The new editor is Brad Whitworth who has been one of **Measure's** associate editors for the past two years. His prior background includes a degree in journalism from the University of Missouri, some sports broadcasting, two years as employee communications manager for an insurance company and some key roles—both local and international—in the 9,000-member International Association of Business Communicators.

At HP, Brad has participated in several communication task forces (including Open Line and Flexible Time Off), contributed significantly to the company's 1981 annual report and led the development of a new evaluation service for division publications.

Meanwhile, former editor Gordon Brown has not left the fold. With 142 issues under his belt, he will continue to exercise a quality-assurance role on **Measure** as manager of the internal communications department in Corporate Public Relations. Readers can count on seeing his continuing contributions in upcoming issues.

HP's growing presence in the rugged Pacific Northwest is described in our cover story by staffers Lane Webster and Joanne Engelhardt. The two travelers visited eight HP divisions in six cities in a quick week—a far cry from the grueling travels of Meriwether Lewis and William Clark 178 years ago.

The two-year Lewis and Clark expedition, following the course of the Columbia River, explored much of the region inhabited only by native-American tribes led by chiefs with names like Seattle, Yakima and Spokane.

Where waterfalls and rapids once slowed the explorers' progress, huge dams now span the river, providing nearly one-third of all the hydroelectric power produced in the U.S. The abundant natural resources in the area—energy, timber, fish, fur-bearing wildlife—have attracted many industries to the region in the past two centuries.

One of the most recent to move to the Pacific Northwest is the electronics industry, praised by its many supporters as clean, quiet and financially stable—"the best kind of industry to have, if you have to have one nearby."

But the industry is not without its critics. Many oppose any growth.

Lane and Joanne trace Hewlett-Packard's manufacturing history in this rugged territory. **M**

Turn-of-the-century Boise, Idaho.

IDAHO HISTORICAL SOCIETY

NORTHWEST

CLAIR MUMAU

A slumping economy in the Pacific Northwest, long dominated by lumbering, is gradually recovering with help from Hewlett-Packard and a growing electronics industry.

By the end of World War II, three sawmills near McMinnville, Oregon, had called it quits and closed forever. Savage forest fires had gutted 250,000 acres of the Tillamook Forest over a seven-year period. Most of the timber industry was moving south to harvest lumber from the forested slopes of the lofty Cascade Range. It was no longer practical to haul logs back to McMinnville.

The only other industry in the area, agriculture, could not make up for the jobs lost when the sawmills closed.

"The city fathers thought of this as a place where they wanted to retire," recalls Lee Perry, publications production manager for HP's McMinnville Division. "As a town, we were dying on the vine."

McMinnville's experience was an early warning signal of what would be needed to guarantee the future economic success of the Pacific Northwest: diversified industry.

The Pacific Northwest has always been rich in natural resources.

Dense forests, shrouded by thick mists and showered by rain, have made the region famous. Great snow-capped mountains like Rainier, St. Helens, Adams and Hood crown the land while fresh-water trout skim through the streams, and ducks and geese fly overhead.

The industry that has grown up in the Northwest and dominated its industrial landscape is lumbering. For many years, companies like Boise Cascade and Georgia-Pacific have cut timber in the abundant forests and floated or trucked logs down to sawmills scattered throughout the rugged region.

But the last two years have been rough ones for the wood and wood products industry. In several months of 1980, there were fewer homes built than at any time since World War II, bringing down demand for lumber and forcing sawmills to close, according to the Western Wood Products Association. At the end of 1981, 152 of the 454 mills in the Northwest were closed and 118 more were operating at curtailed

Galen Wiles is just getting his feet wet on electronics advisory committees for two community colleges near HP's new Lake Stevens Instrument Division (LSID) plant. Equipment at the two schools, Everett and Edmonds, is "not all that bad," according to Galen, "but we hope to help them improve class structure and curriculum."

When the new division began looking for technicians last year, supervisors found there were not many local residents with the electronics training needed by HP.

"We interviewed more than 100 applicants from the local area and hired only three," he recalls. "But we hired eight who were graduates of Northern Seattle Community College, which has a good electronics curriculum."

His primary function on the community college committees, he feels, is "to give the colleges some insight into what our industry needs in regard to electronic technicians."

In the meantime, Galen and Jean Vantine have their hands full putting together some HP courses on electronics and nontechnical manufacturing. Galen says most of the new technicians "just need some 'brush-up' instruction," while Jean has been organizing classes in assembly and wiring techniques for people who have never done that kind of work before.

For the long haul, however, Galen knows how important it is to contribute to upgrading the local junior college technician curriculum—"else where will we get the technicians we need to expand?"
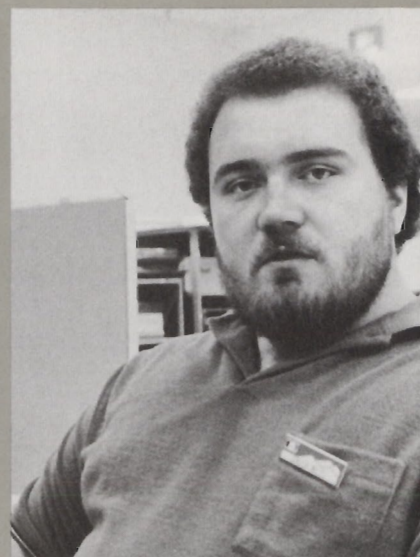
Galen Wiles
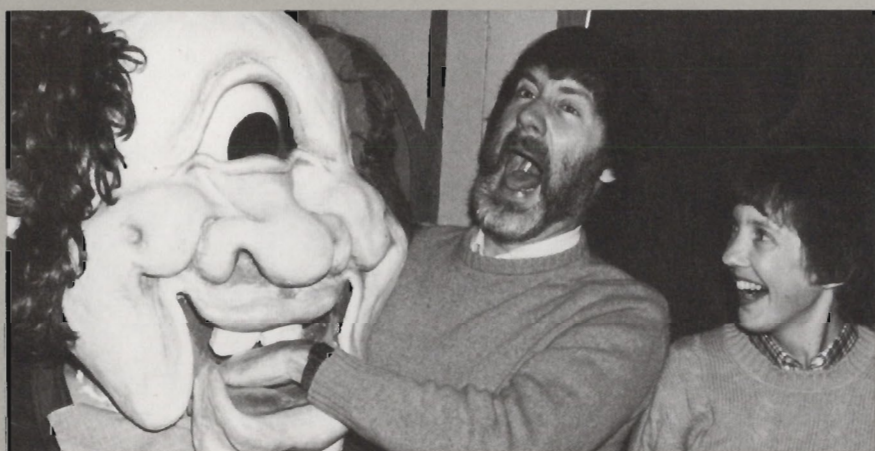
Brontok, John and Marlyn Rhodes

Engineers in the R&D lab of the Vancouver Division have been working on projects which include the development of a character thermal printer, a graphics thermal printer, a next-generation wire-matrix printer and a great big one-eyed ogre named "Brontok."

No relation to Frankenstein, Brontok is a friendly monster who is a product of the "Tears of Joy" Theatre. Based in Vancouver, the non-profit company of players visits more than 400 elementary schools each year, performing masques and puppet shows.

Brontok the ogre along with a cowardly cat who lives in a garbage can are two of the company's top performers. The mechanical engineering that went into them is the work of Vancouver's engineering services manager, John Rhodes, who also sits on the theatre's board of directors.

"It's equivalent to a half-time job," says Rhodes, "There's no money in it—just fun." Currently he is perfecting a motor for the helicopter wings of a giant mosquito puppet.

His wife, Marlyn Rhodes, a program director for the theatre and a part-time HP employee, sees more benefit to artful activities than simple enjoyment. "The arts can be a creative outlet for the employees and it really goes back into their work," she says.

This was the kind of thinking that originally prompted Jim Doub, general manager of the Vancouver Division, to spearhead a drive to find a home for Vancouver's performing arts groups.

An association of artists had set their eyes on a used-brick, four-story building formerly occupied by the Emmanuel Baptist Church. They wanted to turn it into the Columbia Arts Center, but they had no way to pay for it.

Marlyn asked Jim whether he could find people who would finance the project. "This is where Jim was instrumental. Others just did not have the organizational sense," says John Rhodes.

First, Jim pepped up a group called the Columbia Business Community for the Arts. Then he got another idea: persuade the city to buy the church and lease it to the arts center for $1 a year until enough money is raised to buy the building back from the city.

Once the city council agreed, Jim brought in professional fundraisers who have already had successes in securing lump sums from large businesses and foundations.

Meanwhile, Marlyn developed an audience for the arts, beginning with a nucleus of sixty people, nearly all of them members of HP families. "We needed people to get out and try things, and HP people are the logical people to do that. We sold a whole social package to employees to get them to go to things that they might not otherwise go to."

How did the Rhodes discover that art and industry could be a complement to each other? Several years ago, while John was working in Sunnyvale for the Data Terminals Division, Bill Hewlett called around to find someone who could use two spare opera tickets.

"That really made a big impression on me. I had always been interested in the arts, but that was the first time I saw that a company could be interested as well," says Marlyn.

If not the entire company, at least many HP employees at the Vancouver Division are interested. Along with the employees of other local companies, these HP people have made sure that they will not have to leave town to get their fill of entertainment, be it mime, ballet, a musical, a play, or the friendly ogre Brontok swatting away at a giant mosquito.

levels. Nearly 25 percent of the 60,000 sawmill employees were unemployed, and another 25 percent were working short shifts.

The entire Northwest is experiencing the same crisis in the 1980s that McMinnville faced in the 1940s. Weary of the cyclical nature of the lumber industry, communities now recognize their need for a more diversified industrial structure. Their plans include attracting fast-growing electronics companies, which are less affected by high home mortgage rates than the volatile lumber industry.

"HP's ups and downs are primarily ups and downs in growth rate, while the timber industry has ups and downs of an absolute nature," explains Fred Hanson, general manager of the Corvallis Division.

"The timber industry will never regain the prominence it has had in the past," adds John Owen, head of the electrical and computer engineering department at Oregon State University in Corvallis. "Oregon, for one, is not a very rich state. Unless we go high technology, we haven't got anywhere to go."

Other Northwestern states and other traditional industries are in the same bind. "It's not unusual to find unemployment of 10, 12 or even 15 percent in some areas," notes Bill Kay, who left Loveland, Colorado, last year to manage HP's start-up Lake Stevens operation. "In this area, for instance, when Boeing Company (an aircraft manufacturer) has a big layoff, it affects the whole economy of the area."

Currently employing 75,000 people in all its Washington plants, Boeing reduced its workforce by 5,000 in 1981, half through layoffs, the other half by attrition. It expects to dismiss another 2,000 to 3,000 employees in the first half of this year due to the long lead time required for tooling up its plants when new contracts come in.

Not far from Spokane, Washington, the Bunker Hill Mining Company is closing down, and Kaiser Aluminum, the largest employer in that city, has threatened to reduce or eliminate its two operations if they do not become more productive.

In the face of this economic slump, HP is helping revitalize and diversify the Northwest's industrial base. In the last 10 years, the company has put eight divisions in six different communities. These divisions, along with the five HP sales offices in the Northwest, already account for nearly 15 percent (7,100 people) of the company's total U.S. employment.

Other electronic companies also are in the region. John Fluke Manufacturing Co. and Tektronix, Inc. are both native to the Northwest, while others such as Intel and Fairchild have expanded north from California's Silicon Valley.

The McMinnville Division was HP's first manufacturing outpost in the Northwest. It was not started from scratch like the other divisions in the region, but was acquired by HP in 1973 as part of its medical products group. The community, now numbering about 14,500, not only weathered its crisis of the 1940s but has become, in the words of the sign posted at its entrance, "Oregon's Pacesetter in Industrial Development." Its method: small-scale, diversified manufacturing.

Late in 1973, a small group of HP pioneers scouted Corvallis, Spokane and Boise, seeking a site for a new division that would make computer peripheral equipment. "We happened to choose Boise first, but now we have divisions in all those areas," says Ray Smelek, now general manager of the Boise Division.

Semirural land parcels—near but not in major cities—are still common in the Northwest, and these are the places where HP has customarily chosen to expand. Apparently it chooses well. A recent study sponsored by the U.S. Environmental Protection Agency identified the top two "most liveable" metropolitan areas: the Portland/Vancouver and Seattle/Everett communities. Each area now has a new HP division.

"Coming up here allows people to turn back the clock," says Bruce Gant, senior personnel representative in Vancouver. "You can live in a neighborhood that's like the one you grew up in. It's not as transient and mobile as the urban areas. It's more family oriented."

Echoes of the same feeling are heard on other Northwest plains. For people like Disc Memory Division General Manager Doug Spreng, the outdoor life in Idaho could not be more idyllic. "Here I can go water or snow skiing, hunting, fishing, backpacking, play tennis or golf—all within an hour's drive. My problem is not that there's not enough to do. It's trying to figure out which I want to do most."

Rangy Bill Lawrence, Boise Division information systems manager, moved to Boise when he was 10 but later traveled the world during eight years in the Navy. "Quite simply, Boise is the best of the places I found to do what I like to do," says Bill.

While there are a number of transferees from other HP divisions who appreciate the Northwest environment, there are thousands of native Northwesterners who also welcome HP's expansion.

Nothing shows their eagerness better than the mountains of applications received daily at every division. When the Lake Stevens Instrument Division announced in June that it had some 50 jobs avail-

LAKE STEVENS
SPOKANE
WASHINGTON
VANCOUVER
MC MINNVILLE
CORVALLIS
BOISE
OREGON
IDAHO
CALIFORNIA
NEVADA
UTAH
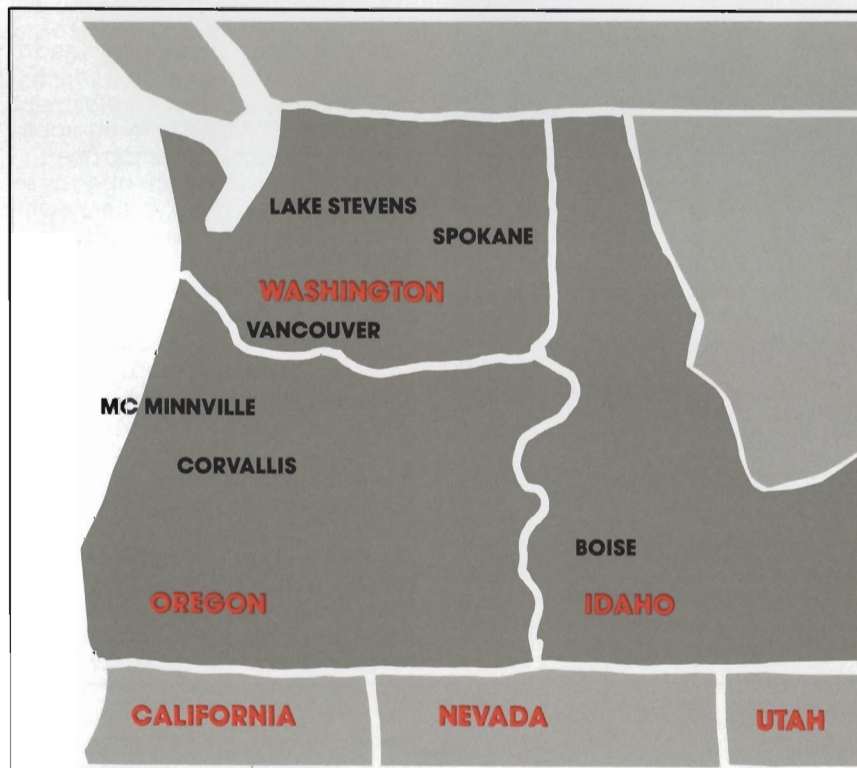
JOANNE ENGELHARDT

A good portion of Spokane Division will move into this new building in early March, but employment is increasing so rapidly that some departments will remain in the division's two temporary buildings for the next few years.

Their love of horses was the deciding factor when Bob and Carol Sommer were offered the chance to move to Spokane Division from the San Francisco Peninsula. "We had horses when we lived in California," explains Bob, "but I had to drive 10 minutes twice a day to feed them." He now steps out his front door and walks 20 feet to his own barn where the horses are pampered. Here, Moonbeam gives Carol a nuzzle with Bob's approval.

JOANNE ENGELHARDT

Clusters of alder trees decorate the 133-acre rural site near Lake Stevens, Washington, purchased by HP for its permanent plant site. The company already has weathered two court challenges on whether the site should be developed for a plant that would hire as many as 1,000 employees by the end of 1984.

able for local people, it was greeted by an onslaught of 5,000 applicants, two thirds of whom were unemployed. Employment supervisor Susan Bowick arranged two-minute initial interviews with all applicants. It took 12 hours a day for three weeks, she recalls, but the vacancies were filled and a pool of applications amassed.

After a similar hiring experience, Spokane Division decided to restrict the hours during which people can apply for employment. Vancouver Division accepts applications only for specific job openings because there are already so many qualified applications on file.

But if the electronics industry is to continue to grow and to employ ever greater numbers in the Northwest, universities must turn out graduates capable of working with sophisticated technology.

In a December speech to the Seattle Rotary Club, HP President John Young, who grew up in Oregon and graduated from Oregon State, pointed to the looming shortage of qualified engineering graduates in the U.S., particularly in the Northwest.

"In Washington," he noted, "neither the University of Washington nor Washington State University has expanded its engineering program to keep pace with the needs of industry. Washington State recently cut its program by 20 percent."

A lack of money for laboratory equipment and a shortage of engineering faculty have put the departments in their present predicament, said Young.

To ensure a steady flow of qualified engineering talent, HP divisions are helping Oregon State University (OSU), the University of Idaho and Washington State University overcome their engineering department limitations by donating HP equipment and by providing HP lecturers.

This year, Megha Shyam, R&D engineer for the Corvallis Division, is teaching a year-long course in integrated circuit design at nearby OSU to acquaint students with the bewildering complexity of VLSI circuitry. In Boise, the nearest electrical engineering department is located five hours away at the University of Idaho in Moscow. Roy Foote, Boise Division project manager, has overcome the distance problem by using a video link from the studio of a Boise television station to teach a course at the university.

Such educational arrangements are usually reciprocal. At most Northwestern divisions, HP engineers can take courses via video from accredited engineering schools. At OSU, 10 HP engineers, some of them working toward doctoral degrees, are attending the VLSI course along with five members of the Oregon State faculty.

The value of these programs shows up in the number of graduates recruited by HP. In 1981, the company hired 91 people who at one time or another graduated from OSU, with 78 of them remaining at the Corvallis divisions.

Says John Owen of OSU: "I thank my lucky stars for the day HP decided to locate in Corvallis."

Not everyone agreed with him when HP first came to town. For all its economic difficulties, the Northwest has a few outspoken groups which oppose industrial development of almost any kind.

To some HP people, this opposition is no surprise: the very areas that have the quality of community life that makes them so attractive to HP are usually inhabited by people who appreciate their surroundings and fear new industry will destroy that environment.

"People here in Oregon want to preserve what they have," says Gerry Inman, U.S. service manager for handheld calculators. "It's the 'close-the-door-and-pull-up-the-ladder' syndrome. They think, 'Now will change.'"

First in Corvallis and more recently in Lake Stevens, lawsuits

regarding the annexation or zoning of HP land have led to public hearings and court action. In January, a superior court upheld the rezoning of HP's wooded acreage on Soper Hill Road in Lake Stevens. Although further litigation is threatened, the group of citizens who brought the lawsuit is small in number, and HP appears to be supported by the great majority of the people, says Bill Kay.

In fact, during its public campaign, HP had the good fortune to be buttressed by a citizens group that organized itself on behalf of HP.

"Naturally we want to be responsive to the concerns of all the residents, and I feel we are," says Bill. "But it is not easy to appease

those who are totally opposed to any growth at all."

No-growth attitudes are subject to deeply personal feelings and are not easily changed. For one thing, cycles of employment and layoffs can make residents less receptive to industry. Six months before HP arrived in Vancouver, 1,000 employees were laid off at a nearby electronics plant.

"There was no obvious reason for the plant to close," recalls Ardis Boland, personnel manager for the Vancouver Division. "Every group I talked to asked, 'How long are you going to be here?'"

This suspicion of industry in some areas means HP must put its ideals into practice daily to earn the community's trust, says Ardis.

But whether it is Boise and Spokane, where HP has been welcomed from the beginning, or Corvallis and Lake Stevens, where the going has been tougher, a community almost always appreciates HP's presence once its people start contributing to its well being.

Maybe the first impact is felt by the retail firms in the area. One merchant in Corvallis has started to notice that every so often Terry Tallis, field support manager for the Corvallis Division, comes in to buy some furniture. The last time he came in, Terry was surprised to be greeted with a knowing smile. "Oh, I see

you're spending your profit-sharing check," the merchant remarked.

In Spokane, printed circuits supervisor Jack Nourse remembers one fellow employee who found that the usual requirements to pay the first and last month's rent and cleaning deposit on an apartment were altered when the landlord learned the potential renter worked for HP.

Upgrading the economic base is by no means the only contribution HP people make to a community. "It never seems to take very long for our people to become active in United Way, Junior Achievement, youth programs, the arts and so many other worthy causes," notes Ray Smelek.

That involvement extends not only to community activities but also to state and regional social issues. Washington's three general managers (Bill Kay, Ned Barnholt and Jim Doub) expect to meet regularly to determine how HP will promote engineering education.

In energy, another area important to HP's growth, Ray Smelek takes the lead in the Northwest. "We have to make the public more aware of the need for sufficient energy in the future to support projected industrial growth, as well as to emphasize the relatively minor energy consumption of a company like HP," he explains.

It seems clear that the company, its employees and the communities in which HP has located have all benefited from HP's expedition into the Pacific Northwest.

During a recent public hearing in Corvallis, one of the two dozen people speaking on behalf of HP was an Oregon state legislator. In the last two years, HP has generated $6 million in taxes in Corvallis alone, he said, adding, "I only wish we had about 15 more HPs...to help stabilize the economy of this state."

One day he may get his wish, or at least part of it. In Seattle, President John Young made a firm commitment to continue the company's "settlement" in the Northwest. "We intend to increase our participation here, providing employment opportunities and in other ways being a good corporate citizen."

Though it always takes time to live out, HP's good citizenship has had lasting effects in the Northwest. Says Corvallis' Fred Hanson: "When I came here about five years ago, there were still some pockets of resentment. Now we seldom find someone who is opposed to HP. It may have been a rough courtship, but it makes for a solid marriage." **M**

CLAIR MUMAU

FROM ALBRECHT DÜRER

SLAYING DRAGONS AND SOLVING PROBLEMS

What's a target?
What's a goal?
What's an objective?

Those are all highly familiar terms around HP. Yet they seem to have a very similar meaning. Almost interchangeable, one might think. What's the difference?

Here's one way to sort them out—and solve problems of misinformation and faulty communication—thanks to Fred Waldron, trainer of HP neophyte sales people. Fred's approach to solving such a problem is to think of it in terms of a medieval castle, complete with surrounding moat, drawbridge, fire-snorting dragons and evil tyrant. In the tower is a royal captive (prince or princess, as you wish) who holds the keys to your kingdom, but can't get out.

To solve your problem, of course, you first have to approach and capture the castle. That's your **objective**.

But before you can enter and subdue the tyrant, you must identify and slay all the dragons. They are the negatives in any problem situation, and must be challenged one by one with the shining lance of the truth. They are your **targets**. Hit 'em hard!

Now you can proceed on your rescue mission and return the prince or princess to your kingdom. That's your **goal**.

Problem solved. Or is it? Let us know if you have any problems with this solution, or a better solution to the problem. **M**

Snap Shot '81

This special eight-page section of Measure is a moment frozen in time. It gives you a chance to look back at Hewlett-Packard's highlights and successes in 1981. Compare last year's results with those of previous years. Examine the structure of the organization as we enter 1982. Hewlett-Packard had net sales of $3.58 billion in its 1981 fiscal year (Nov. 1, 1980 to Oct. 31, 1981). Here's where the sales came from, and where the sales dollar was spent.

HOW WE MADE IT

49 cents

38 cents

5 cents

8 cents

Electronic test and measurement
Electronic data products
Medical electronic equipment
Analytical instrumentation

HOW WE SPENT IT

48 cents

7 cents

10 cents

20 cents

15 cents

Cost of developing new products
Cost of managing and operating business
Cost of manufacturing products
Cost of marketing and selling products
PROFIT from operations

4 cents—Pension and profit-sharing to employees
7 cents—Income taxes to federal, state and foreign governments
1 cent —Dividend to shareholders
8 cents—Reinvested in company to finance growth

JANUARY

Growth of sales activities in the People's Republic of China results in Intercontinental's creating a "country" management entity □ Steve Adam elected Fellow of I.E.E.E. □ ROUTS system is added to COMSYS Central □ San Diego Division introduces large-format HP 7580 plotter with grit-wheel paper transport design.

FEBRUARY

First quarter FY81 sets all-time order record of $931 million □ At annual shareholders' meeting Feb. 24, Francis L. Moseley retires from the board of directors, Harold J. Haynes is elected to board □ HP's 32-bit "Super Chip" with 450,000 transistors creates stir □ HP 4700 "PageWriter" electrocardiograph is introduced.

MARCH

The Computer Groups open road show of "Productivity '81" exhibit/seminars in Los Angeles, with six other cities on the schedule □ Results of Open Line survey of U.S. employees are summarized in Measure □ Instrument Founders Club is announced. □ Quality expert W. Edwards Deming gives seminar for HP managers.

APRIL

The name of Delcon Division changes to Colorado Telecommunications Division as part of a phased move from Mountain View, Calif., to Colorado Springs □ Two HP-41C calculators are used on the flight of space shuttle Columbia □ HP's first teleconference is held April 2 with transmission from Palo Alto to 38 U.S. cities.

MAY

Second quarter FY81 sales up 15 percent, net earnings up 14 percent □ Two-for-one split of HP common stock □ $38 million in cash profit-sharing checks □ Barney Oliver retires as VP-R&D □ HP Labs announces E-beam lithography system □ HP to 120th place on the Fortune 500 ranking □ Personal Computation Group formed.

JUNE

Computer center moves to new Corporate office building in Palo Alto □ Business Computer Group creates Information Networks Division and Applications Systems organization □ HP Labs reorganizes □ Future Lake Stevens Instrument Division begins hiring in Washington □ New: HP 9826A multi-language desktop computer.

JULY

Medical's Dick Alberding and Europe's Franco Mariotti elected VPs, while Marketing's Al Oliverio, International's Bill Doolittle and Treasurer Ed van Bronkhorst move up to senior VPs □ South Queensferry Division changes name to Queensferry Telecommunications Division □ New: Manufacturer's Productivity Network.

AUGUST

HP reports $936 million in sales (up 15 percent) and $81 million in net earnings (up 14 percent) for the third quarter of FY81 □ Telnet, HP's own U.S. long-distance telecommunication system, goes nationwide □ HP 125 and new HP 250 office computers; low-price HP 2623A graphics terminal; 16-bit emulator for HP 64000 System.

SEPTEMBER

First HP ads on U.S. network television air as part of campaign on major sports and news programs during fall □ Technical Computer Group forms new Computer Integrated Circuits Division □ Corvallis Division unveils HP-11C and HP-12C slim-design calculators. □ Five HP "loaned professors" start school year.

OCTOBER

New Electronic Measurements Group is formed within Instrument Groups □ HP acquires distribution software firm (Information Resources Ltd. of Denver, Colo.) as part of Business Computer Group □ HP makes impact with introduction of 27 products for office computer market including HP 3000 Series 64 and 44.

NOVEMBER

Year-end sales total $3.58 billion (up 15 percent), net earnings $312 million (up 16 percent) □ Company forms new Personal Computer Division, Instrument Support Division, Systems Remarketing Operation □ HP New Zealand receives full subsidiary status □ HP China rep office sponsored by PRC government opens in Beijing.

DECEMBER

A new Computer Terminals Group forms within the Computer Groups □ HP Labs' Computer Research Center announces reorganization □ HP distributes more than $45.8 million in cash profit-sharing worldwide □ Hewlett-Packard Interface Loop (HP-IL) introduced to link personal computing products and low-cost test instruments.

H ewlett-Packard continued to build toward the future during FY81 by adding 1,846,000 square feet in HP-owned manufacturing, administration and central research buildings plus another 422,000 square feet of its own sales and service buildings. That brought the total of HP-owned facilities to approximately 13,206,000 square feet out of the 17,815,000 square feet of space owned or leased at year's end.

During FY81 the company optioned or purchased several large sites for future development in Europe and the U.S.: purchase of 50 acres in Bristol, England (with an option for an additional 115 acres) for expansion of the Peripherals Group; the purchase of 206 acres for a second site in Colorado Springs, Colorado; purchase of the remaining acres in a 133-acre site for the permanent facility of the Lake Stevens Instrument Division in western Washington; an option on 320 acres in Longmont, Colorado (which was subsequently purchased in January of this year), and an option on some 140 acres outside Lyon, France. In addition, HP expanded its recreational facilities in Northern Colorado by the purchase of 3,200 acres in Larimer County.

Altogether, HP invested $318 million in new property, plants and equipment during FY81—$21 million more than the year before.

HP-OWNED PROJECTS COMPLETED—FY81

MANUFACTURING	SQ FT	SALES/SERVICE	SQ FT
Boise, Idaho	181,000	Rockville, Maryland	69,000
Loveland, Colo.	301,000	Brisbane, Calif.	32,000
Rockaway, N.J.	163,000	San Diego, Calif.	22,000
Roseville, Calif.	186,000	Atlanta, Georgia	69,000
San Diego, Calif.	141,000	Orlando, Florida	21,000
Santa Rosa, Calif.	192,000	Vienna, Austria	70,000
Boeblingen, Germany	204,000	Zurich, Switzerland	53,000
		Tokyo, Japan	86,000

OTHER FACILITIES

	SQ FT
Corporate, Palo Alto, Calif.	478,000

Hewlett-Packard Corporate Organization January, 1982

BOARD OF DIRECTORS
Dave Packard, C...
Bill Hewlett, Chairma...

CHIEF EXECUTIVE OFFICER
John...

ADMINISTRATION
Bob Boniface, Executive Vice President

OPERATIONS
Paul Ely, Executive Vice President

Bill Te...

CORPORATE STAFF

Corporate Controller
Jerry Carlson
Controller

Corporate Services
Bruce Wholey
Vice President

Government Relations
Jack Beckett
Director

International
Bill Doolittle
Senior Vice President

Patents and Licenses
Jean Chognard
Vice President

Personnel
Bill Craven
Director

Public Relations
Dave Kirby
Director

Secretary
Jack Brigham, Secretary
and General Counsel

Marketing
Al Oliverio
Senior Vice President

Treasurer
Ed van Bronkhorst
Senior Vice President

EUROPE
Franco Mariotti
Vice President

Field Sales Regions
  Germany
  France
  United Kingdom
  South/Eastern Europe
  Northern Europe

Manufacturing
  United Kingdom
  Germany
  France

INTERCONTINENTAL
Alan Bickell
Managing Director

Field Sales Regions
  Japan
  Far East
  Australasia
  South Africa
  Latin America

Manufacturing
  Singapore
  Malaysia
  Puerto Rico
  Brazil
  Japan

U.S./CANADA SALES

Field Sales Regions

  Eastern
  Mid-West
  Southern
  Neely (Western)
  Canada

Corporate
Parts Center

COMPUTERS

TECHNICAL COMPUTER GROUP
Doug Chance
General Manager

□ Data Systems

□ Roseville

□ Desktop Computer
  ○ Engineering Sys.

□ Böblingen Desktop

□ Computer I.C.
  ○ Cupertino I.C.
  ○ Systems Technology

COMPUTER PERIPHERALS GROUP
Dick Hackborn
General Manager

□ Boise

□ Disc Memory

□ Greeley

□ Vancouver

BUSINESS COMPUTER GROUP
Ed McCracken
General Manager

□ Computer Systems

□ Information Networks
  ○ Pinewood

□ Böblingen General Systems

○ Application Systems

COMPUTER TERMINALS GROUP
Cyril Yansouni
General Manager

□ Data Terminals

□ General Systems

□ Grenoble

○ Puerto Rico

Computer Marketing Group
Jim Arthur
General Manager

□ YHP Computer

○ Systems Remarketing

□ Computer Support

Worldwide Sales

○ Computer Supplies

MICROWAVE COMMUNICA... INSTRUMENT... GROUP
Hal Edmonds...
General Mana...

□ Colorado T...

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Young, President

ry, Executive Vice President Dean Morton, Executive Vice President*

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**ELECTRONIC
MEASUREMENTS
GROUP**
Bill Parzybok
General Manager

□ Böblingen Instrument

□ San Diego

□ Colorado Springs
  ○ Logic Systems
  ○ Oscilloscope
  ○ Graphics Displays

□ YHP Instrument

□ Loveland Instrument

□ Lake Stevens
  Instrument

□ New Jersey

□ Santa Clara
  ○ Lasers

**COMPONENTS
GROUP**
John Blokker
General Manager

□ Microwave
  Semiconductor

□ Optoelectronics

○ Malaysia

**Components Sales/
Service**
Worldwide

MEDICAL GROUP
Dick Alberding
Vice President

□ Andover

□ Böblingen Medical

□ McMinnville

□ Waltham

Medical Sales/Service
Worldwide

ANALYTICAL GROUP
Lew Platt
General Manager

□ Avondale

□ Scientific Instruments

□ Waldbronn

**Analytical Sales/
Service**
Worldwide

**PERSONAL
COMPUTATION
GROUP**
Dick Moore
General Manager

□ Corvallis

□ Personal Computer

○ Brazil

○ Singapore

**Personal Computation
Marketing**
Worldwide

HP LABORATORIES
John Doyle
Vice President
Research
and Development

Research Centers

Computer Research

Physical Research

Technology Research

Corporate Development
Fred Schröder
Director

Internal Audit
George Abbott
Manager

**Corporate
Manufacturing Services**
Ray Deméré
Vice President

nstrument Marketing
Bob Brunner
up Marketing Manager
Support Worldwide Sales

The HP Organization

Viewed broadly, Hewlett-Packard Company is a rather complex organization made up of many business units that offer a wide range of advanced electronic products to a variety of markets around the world. Giving it common direction and cohesion are shared philosophies, practices and goals, as well as technologies.

Within this broad context, the individual business units—called product divisions—are relatively small and self-sufficient so decisions can be made at the level of the organization most responsible for putting them into action. Consistent with this approach, it has always been a practice at Hewlett-Packard to give each individual employee considerable freedom to implement methods and ideas that meet specific local organizational goals and broad corporate objectives.

Since its start in 1939, the HP organization has grown to more than 40 product divisions. To provide for effective overall management and coordination, the company has aligned these divisions into product groups characterized by product or market focus. Today there are 10 such groups or segments. Six sales-and-service forces, organized around broad product categories, represent the product groups in the field.

HP's corporate structure is designed to foster a small-business flexibility within its many individual operating units while supporting them with the strengths of a larger organization. The chart on the previous pages provides a graphic view of the relationship of the various groups and other organizational elements.

The organization has been structured to allow the groups and their divisions to concentrate on their product-development, manufacturing and marketing activities without having to perform all the administrative tasks required of a company doing business worldwide. Normal and functional lines of responsibility and communication are indicated on the chart; however, direct and informal communication across lines and between levels is encouraged.

Here is a closer look at the company's basic organizational units:

PRODUCT DIVISIONS

An HP product division is a vertically integrated organization that conducts itself very much like an independent business. Its fundamental responsibilities are to develop, manufacture and market products that are profitable and which make contributions in the marketplace by virtue of technological or economic advantages.

Each division has its own distinct family of products, for which it has worldwide marketing responsibility. A division also is responsible for its own accounting, personnel activities, quality assurance and support of its products in the field. In addition, it has important social and economic responsibilities in its local community.

PRODUCT GROUPS

Product groups, which are composed of divisions having closely related product lines, are responsible for coordinating the activities of their respective divisions. The management of each group has overall responsibility for the operations and financial performance of its members. Further, each group has worldwide responsibility for its manufacturing operations and sales-and-service forces. Management staffs of the four U.S. sales regions and two international headquarters (European and Intercontinental operations) assist the groups in coordinating the sales-and-service functions.

The group management structure provides a primary channel of communication between the divisions and corporate departments.

CORPORATE OPERATIONS

Corporate Operations Management has responsibility for the day-to-day operation of the company. The executive vice presidents in charge of Corporate Operations are directly responsible to HP's president for the performance of their assigned product groups; they also provide a primary channel of communication between the groups and the president.

CORPORATE ADMINISTRATION

The principal responsibility of Corporate Administration is to insure that the corporate staff offices provide the specialized policies, expertise and resources to adequately support the divisions and groups on a worldwide basis. The executive vice president in charge of Corporate Administration also reports to the president, providing an important upward channel of communication for the corporate staff activities.

The Marketing and International offices, through the U.S. sales regions and two international headquarters, insure that—on a worldwide basis—all corporate policies and practices are followed and that local legal and fiscal requirements are met.

CORPORATE RESEARCH AND DEVELOPMENT

HP Laboratories is the corporate research and development organization that provides a central source of technical support for the product-development efforts of HP product divisions. In these efforts, the divisions make important use of the advanced technologies, materials, components and theoretical analyses researched or developed by HP Labs. Through their endeavors in areas of science and technology, the corporate laboratories also help the company evaluate promising new areas of business.

BOARD OF DIRECTORS

The Board of Directors and its chairman have ultimate responsibility for the legal and ethical conduct of the company and its officers. It is the board's duty to protect and advance the interests of the stockholders, to foster a continuing concern for fairness in the company's relations with employees and to fulfill all requirements of the law with regard to the board's stewardship. The board counsels management on general business matters and also reviews and evaluates the performance of management. To help handle these responsibilities, the board has formed various committees to oversee the company's activities and programs in such areas as employee benefits, compensation, financial auditing and investment.

PRESIDENT

The president has responsibility for the overall performance and direction of the company, subject to the authority of the Board of Directors. Also, the president is directly responsible for corporate development and planning functions, and for HP Labs.

EXECUTIVE COMMITTEE

This committee meets weekly to set and review corporate policies, and to make coordinated decisions on a wide range of current operations and activities. Members include the Executive Committee chairman, the chairman of the board, the president and the executive vice presidents for operations and administration. All are members of the Board of Directors.
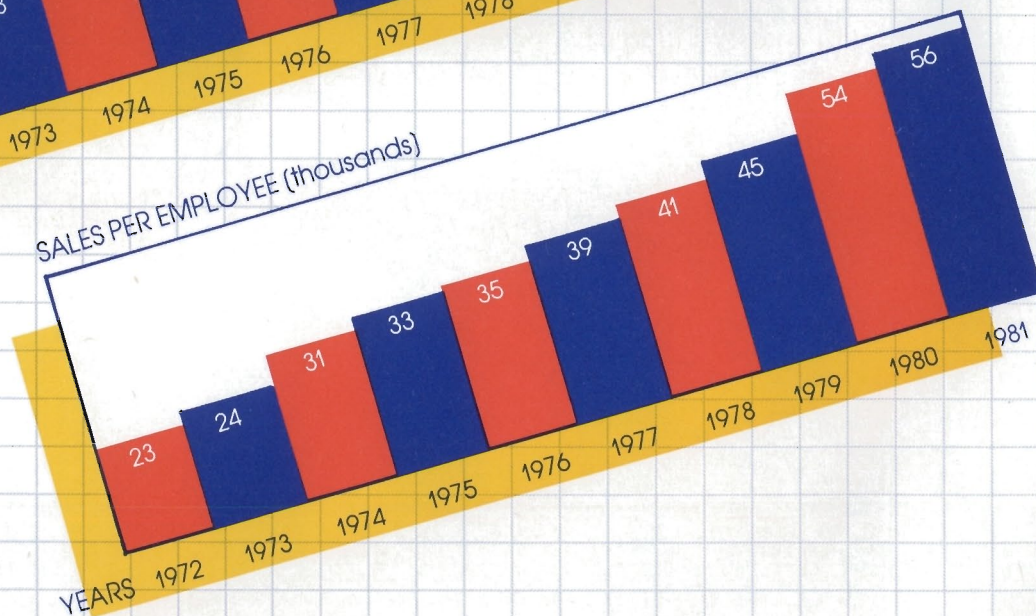
OPERATIONS COUNCIL

Primary responsibilities of this body are to review operating policies on a broad basis and to turn policy decisions into corporate action. Members include the executive vice presidents, product group general managers, the senior vice presidents of Marketing and International, the vice president—Europe and the managing director of Intercontinental.

Taking stock in HP

Just over 69 percent of eligible HP employees participated in the company's stock-purchase plans in Fiscal 1981. Of the 46,449 people who were eligible, 28,784 purchased HP stock certificates under the regular plan; another 3,280 employees in countries that do not prohibit or penalize such investments participated in local variations of the plan. Proceeds from the sale of stock from all plans, including stock options, amounted to $67 million which will be put to use in financing future growth.

a ten-year look

NET SALES (Millions)

Year	Net Sales
1972	483
1973	669
1974	893
1975	985
1976	1,121
1977	1,368
1978	1,737
1979	2,361
1980	3,099
1981	3,578

YEARS

EMPLOYEES (thousands)

Year	Employees
1972	21
1973	28
1974	29
1975	30
1976	32
1977	35
1978	42
1979	52
1980	57
1981	64

YEARS

SALES PER EMPLOYEE (thousands)

Year	Sales per Employee
1972	23
1973	24
1974	31
1975	33
1976	35
1977	39
1978	41
1979	45
1980	54
1981	56

YEARS

the 14 week wonder

JOYCE LINCOLN

Ralph Ferrara, Greeley Division process engineering manager, and assembler Toby Madina check out one of the first 9134 Winchester disc drives developed in 14 hectic weeks.

There's a well-worn saying that the larger the company, the longer it takes to get anything done.

That's one statement that can now be disputed at HP thanks to the company's worldwide chain which enabled Greeley Division to introduce two new products —the 9134 and 9135 Winchester drives—in just 14 weeks.

Srini Nageshwar, Greeley's marketing manager, says it would never have made its January 1 introduction date without the cooperation of a dozen or more divisions both in the U.S. and Europe.

The product was put together so quickly, in fact, that it even beat the rumor mill. As Srini puts it, "HP saw there was a need in the marketplace and decided to get our product out before the competition could."

The Winchester disc drives are the first in HP's 5¼" line and provide a lot of data storage capacity in a small space. They are compatible with both the HP 85 and 125 product lines, as well as desktop and mini computers.

Last September Srini, Rick Spangler (Greeley's manufacturing engineering manager) and others met in Boise with Disc Memory Division people to figure out which division should work on the project. "Since we didn't have any products ready for introduction at the time, Greeley was chosen," says Srini.

That was September 22. Over the next weekend, three Greeley manufacturing engineers—Sean Tracy, Bob Chalstrom and Ron Jones—came up with a prototype.

Five days later a team from Greeley went on a division tour to enlist the support that was crucial to the project's success. Srini and Rick worked mostly with four divisions—General Systems, Corvallis, Desktop Computer and Data Systems—to ask their R&D labs to make sure the product worked with their systems, and to get their marketing departments to include the new peripheral in their marketing plans.

Back at Greeley, a crack team was assembled from all functional areas to work on the project.

Other key ingredients were the product regulations managers in both the U.S. and Europe. "We needed to get through all the safety and radio frequency interference clearances which usually take several weeks," Srini recalls. "Everyone involved caught the enthusiasm and cut through the red tape."

During one crucial period, Judy Lindberg at General Systems Division tested and completed a 20-plus page analysis on a Friday which was needed in Europe the following Monday. To get it there, Srini took a night flight from California to Colorado where he met Geoff Kirk, Greeley's European marketing support engineer. Geoff caught a Saturday flight to Germany in time for Dieter Gann, European product regulations manager, to get the report to the regulatory agencies on Monday morning.

By mid-November, the product was into its pilot run, helped along by Loveland Instrument Division fab shops which made critical parts in days instead of the usual weeks.

To get the product on the January 1 price list, Greeley had to build enough 9134/35s to get an idea of what they cost. "It usually takes eight weeks to put through a pricing proposal but Computer Marketing Group's controller, Russ Martin, did it in less than half that time," Srini remembers.

In December, the product went to Computer Support Division which helped Greeley develop its diagnostic (self-test) strategy.

January was spent training service people and the sales force, all under the direction of Al Herder, Greeley product manager, and service engineer John Gibson.

There were many, many others who contributed to getting the product out the door, adds Srini.

"There was such a 'can do' attitude among everyone," he says. "A lot of people see HP as a big company that is slow to react so we surprised them with how quickly we introduced the Winchester drives.

"It even surprised me. I've been with HP 17 years, and it was both refreshing and encouraging to see HP people all over the world work together to make things happen." **M**

CLOSE UP

CHRISTA SCHLEPPLE

Poised on Japan's Mount Tsurumidahe for a swooping descent by a hang glider marked "HP" is Heinz Schlepple, who competed with the West German team in the third World's Hang-gliding Championship held last December on Kyushu Island.

Result of the 10-day competition: a world championship for the West Germans in class II (gliders with an aerodynamic control system)—the class Heinz competed in. (He earned 14th rank out of 21 pilots, 10 of them professionals.)

Heinz, a plant maintenance supervisor at the Boeblingen facility, has been hang gliding for five years and won a spot on the national team by piling up points in competition. The World Championship offered a special challenge: "Some landing areas were on a higher level than the starting points—after flying distances of more than 12 km!" says Heinz. Also in Japan was Maarten Brandt of HP Amsterdam, the Dutch team coach.
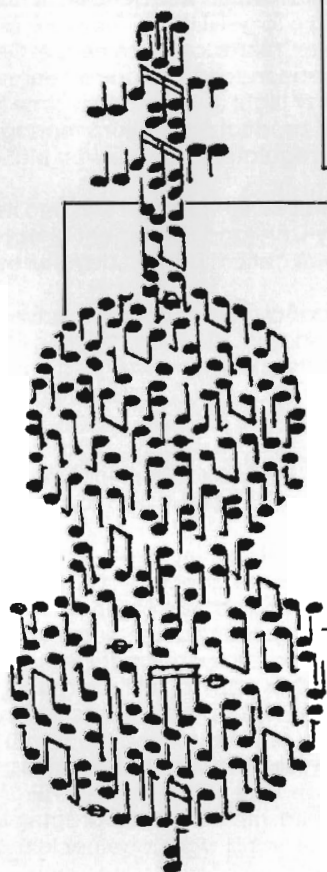
Albert Siu and Brian Picht are making beautiful music with the Boise Philharmonic Orchestra when they're not working at HP.

Albert, a senior personnel administrator with HP and a cellist with the orchestra, began studying music in Hong Kong. "One of the first things I did after arriving in Boise was call the conductor of the orchestra. He arranged for an audition and I've played ever since."

Brian, a mechanical engineer and concert violinist, was president of the Massachusetts Institute of Technology Orchestra. "When I came to interview in Boise, Albert was the college recruiting coordinator. Finding a company in a city where I could play in an orchestra was high on my list of priorities."

Practicing and performing take up to 20 hours a week, but it's time well spent, according to Albert. "Besides, I could never be happy only sitting in the audience."

Retirement parties are nothing new around HP. But the guest of honor at a September party at Santa Clara Division was a 19-year veteran of the division's product line: the HP 5245L frequency counter.

Master of ceremonies Vince Yaras, from the Eastern Sales Region, presented a front-panel plaque to Al Bagley, former division manager. The '45, as it is known, was one of the first high-speed counters to use transistors in place of vacuum tubes. Nearly 38,000 units were manufactured by the division in the 19 years of production.

Other guests at the retirement party included people from the 1962 and current division staffs, production line members who worked on the instrument's pilot and final runs, and marketing employees, then and now.

There will always be more things you want to buy than you have money for." That sums up the financial philosophy of Chet Harmer, accounting manager at Data Systems Division.

Chet is probably HP's most prolific Personal Money Management instructor. He teaches the class 16 days a month, 11 months a year.

When he found there weren't any textbooks available that "answered questions on a level that most people could understand," Chet decided to write one. The result: "How to Run Out of Month before You Run Out of Money." If you're interested in buying a copy, contact Chet at DSD.

How to Run
Out of Month
Before You Run
Out of Money

Chet Harmer

History enthusiast Ron MacInnis and his family stopped at Philadelphia's Independence Hall on his march to the Battle of Yorktown.

Ron, applications engineer in Waltham Division's marketing department, was one of thousands who helped wrap up the six-year celebration of the American Revolution Bicentennial with a re-enactment of the battle which brought independence to the 13 colonies.

U.S. and French presidents Ronald Reagan and Francois Mitterrand and 180,000 tourists watched as the volunteer troops from 23 U.S. states played the roles of Lord Cornwallis' redcoats, George Washington's colonials and Jean-Baptiste de Rochambeau's 85th Regiment.

Hewlett-Packard's
CORPORATE OBJECTIVES

The Statement of Corporate Objectives was revised recently to give emphasis to certain elements of increasing importance in HP's business. The full statement is presented on the next pages, followed by President John Young's comments.

THE ORGANIZATIONAL FRAMEWORK FOR OUR OBJECTIVES

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

If the organization is to fulfill its objectives, it should strive to meet certain other fundamental requirements:

FIRST, there should be highly capable, innovative people throughout the organization. Moreover, these people should have the opportunity—through continuing programs of training and education—to upgrade their skills and capabilities. This is especially important in a technical business where the rate of progress is rapid. Techniques that are good today will be outdated in the future, and people should always be looking for new and better ways to do their work.

SECOND, the organization should have objectives and leadership which generate enthusiasm at all levels. People in important management positions should not only be enthusiastic themselves, they should be selected for their ability to engender enthusiasm among their associates. There can be no place, especially among the people charged with management responsibility, for half-hearted interest or half-hearted effort.
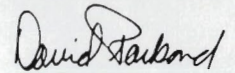
THIRD, the organization should conduct its affairs with uncompromising honesty and integrity. People at every level should be expected to adhere to the highest standards of business ethics, and to understand that anything less is totally unacceptable. As a practical matter, ethical conduct cannot be assured by written policies or codes; it must be an integral part of the organization, a deeply ingrained tradition that is passed from one generation of employees to another.

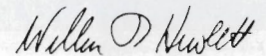FOURTH, even though an organization is made up of people fully meeting the first three requirements, all levels should work in unison toward common objectives, recognizing that it is only through effective, cooperative effort that the ultimate in efficiency and achievement can be obtained.

It has been our policy at Hewlett-Packard not to have a tight, military-type organization, but rather to have overall objectives which are clearly stated and agreed upon, and to give people the freedom to work toward those goals in ways they determine best for their own areas of responsibility.
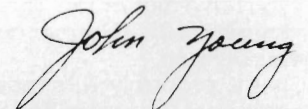
Our Hewlett-Packard objectives were initially published in 1957. Since then they have been modified from time to time, reflecting the changing nature of our business and social environment. The following text represents the latest updating of our objectives. We hope you find them informative and useful.

David Packard
Chairman of the Board

William R. Hewlett
Chairman of the Executive Committee

John Young
President and Chief Executive Officer

January 1982

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.

Profits vary from year to year, of course, reflecting changing economic conditions and varying demands for our products. Our needs for capital also vary, and we depend on short-term loans to meet those needs when profits or other cash sources are inadequate. However, loans are costly and must be repaid; thus, our objective is to rely on reinvested profits as our main source of capital.

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.

The continued growth and success of our company will be assured only if we offer our customers innovative products that fill real needs and provide lasting value, and that are supported by a wide variety of useful services, both before and after sale.

Satisfying customer needs requires the active participation of everyone in the company. It demands a total 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 reasonable 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 right the first time, and doing it consistently, sharply reduces costs and contributes significantly to higher productivity and profits.

Once a quality product is delivered to the customer, it must be supported with prompt, efficient services of the same high quality.

Good communications are essential to an effective field sales effort. Because of our broad and growing line of products, very often several sales teams will be working with a single customer. These teams must work closely to assure that the products recommended best fulfill the customer's overall, long-term needs. Moreover, HP customers must feel that they are dealing with one company, a company with common policies and services, and one that has a clear understanding of their needs and a genuine interest in providing proper, effective solutions to their problems.

3 FIELDS OF INTEREST: To build on our strengths in the company's traditional fields of interest, and to enter new fields only when it is consistent with the basic purpose of our business and when we can assure ourselves of making a needed and profitable contribution to the field.

Our company's growth has been generated by a strong commitment to research and development, and has been accomplished in two ways—first, by providing a steady flow of new products to markets in which we are already well established and second, by expanding our technology into fields that are new but related to our traditional ones. The evolution of the HP product line is a reflection of this two-dimensional growth.

Our first products were electronic measuring instruments used primarily by engineers and scientists. In time we extended our range of products to include solid-state components and instrumentation for the fields of medicine and chemical analysis. Recognizing our customers' needs to gather and assimilate large quantities of measurement data, we developed a family of computers to complement HP measuring devices. By linking measurement and computational technologies, we gained added strength in our traditional, technically

oriented markets and began to serve the broader needs of business and industry.

Today, the interactive capabilities of Hewlett-Packard instruments and systems enable our customers —decision makers in business as well as in technical fields—to gain ready access to essential information, to put it into meaningful form, and to use it effectively in improving the productivity of themselves and their organizations. Helping these customers achieve better results is the unifying purpose of our business. The areas we serve build on each other to add strength to our company and provide additional values to our customers. This guides our interests, our organization and our marketing philosophy.

The broad scope of HP technology often provides opportunities for our company to expand into new fields. Before entering a new field, however, we must satisfy ourselves that it is consistent with our business purpose and that it affords us the opportunity to make a significant **contribution**. This requires that we have not only the technology to create truly innovative and needed products, but that we also have the capability to manufacture and market them effectively and at a reasonable profit.

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 job security based on their performance; to insure 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, supervisors 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.

Job security is an important HP objective. Over the years, the company has achieved a steady growth in employment by consistently developing good, new products, and by avoiding the type of contract business that requires hiring many people, then terminating them when the contract expires. The company wants HP people to have stable, long-term careers—dependent, of course, upon satisfactory job performance.

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 put 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 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 supervisory 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 between operating units is essential to our growth and success. Although our operations are decentralized, we are a **single** company whose overall strength is derived from mutually helpful relationships and frequent interaction among our dispersed but interdependent units.

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, supervisors 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. **M**

During a recent visit to the Lake Stevens Instrument Division near Seattle, Washington, President John Young chatted with employees over a morning cup of coffee.

A MESSAGE FROM JOHN YOUNG

HP's Corporate Objectives have been, and are, of central importance in conducting the affairs of our company and in providing all of us with a common direction as we go about our respective tasks. These objectives were first written down by Bill Hewlett and Dave Packard in 1957 and represented the distilled wisdom of the first 18 years of business. Occasionally the objectives have been reviewed and adapted to changed circumstances. The last extensive update was in 1974. As Bill observed in his message in **Measure** at the time, in comparing the original with the revised version: "Our key objectives have changed little. They have stood the test of time well."

Our company and the world around us have changed a great deal in the ensuing seven years. Accordingly, we have recently reviewed and revised the objectives and presented them at the General Managers meeting at the end of January. In the full text of the objectives, printed in this issue, you will see that the revisions are mainly a matter of emphasis and expanded definition; the central tenets are firmly in place.

Rather than go through the details of these revisions, let me just highlight a few key areas. The first has to do with quality. HP has always been noted for the high quality of its products and services. However, changes in the worldwide competitive environment cause us to reevaluate what high quality means, and to change our expectations of what we must achieve to continue being regarded as a quality leader. To reinforce this point, our 'Customer' objective has been strengthened to make clear that high quality must be designed in, takes a team effort, extends to all services, and —if done well—lowers the costs of supplying products and services. There are no surprises here, and we're active on many fronts across the company to meet this challenge.

The third objective, 'Fields of Interest', is the most changed. It used to say we should not enter new fields unless we have the ability to make contributions in those areas. The new statement is more affirmative: to build on our strengths and to enter new fields only when they're consistent with our business purpose.

The point is this: we do not want to operate as a computer company, an electronic instrument company, or a medical electronic company, etc. Rather, the strength of Hewlett-Packard stems from combining our know-how and products, and focusing them on selected customer-problem areas. By this rewording of the objective, it becomes clear that we want to maintain an integrated, total-team effort with a common purpose. This helps to avoid the very difficult problems that would result from managing a large, diverse corporation having little internal cohesion. This point is restated in objective six, 'Management', where we talk about the need for cooperation and teamwork in maintaining ourselves as a single company whose overall strength is derived from dispersed but interdependent entities.

A third area of change relates to our people. More prominence is given to considerations of health, safety and the well being of people on the job. Additionally, we have clarified our commitment to equal opportunity and affirmative action.

I encourage you to read through the objectives. Strong and steady adherence to their basic precepts adds direction and force to our company; these precepts will be as important to our success in the years ahead as they have been in the past.

John

Moved lately? Change of address should be reported to your personnel department.

NEWS CLIPS

Recaps the newsworthy events, changes and achievements within HP.

REDRAWING THE CHART

Cyril Yansouni has been named GM of a new Computer Terminals Group within the Computer Groups. It comprises all HP facilities involved in design and manufacture of terminal products (Data Terminals and Grenoble divisions and manufacturing activities in Roseville, Calif., and Puerto Rico) and the General Systems Division. Yansouni will also continue as GM of DTD and group headquarters will be in Sunnyvale, Calif.... HP Labs' Computer Research Center (CRC) has been reorganized into three labs: Computer Science Laboratory under Bert Raphael (software and applications); Systems Research Laboratory which CRC director Joel Birnbaum will head as acting director (computer and network systems); the renamed Measurement and Communications Laboratory under Zvonko Fazarinc (network and connection components and circuits for a future generation of the Manufacturer's Productivity Network).

INSTRUMENT GROUPS

Bill Tippett has moved up from marketing manager to GM of the Loveland Instrument Division.... The Civil Engineering Division was merged in January with the Loveland Instrument Division, which will continue to manufacture, market and support the civil engineering product line.... In new marketing assignments: Walt

Sousa to the new post of marketing manager for the Microwave and Communications Instruments Group, with Suresh Rajpal succeeding him as Intercontinental Instrument marketing manager; Tony Bellhouse to marketing manager for Queensferry Telecommunications Division ....Inducted into the Founders Club for 1981: HP Canada's Joe Freer, Eastern Sales Region's Mike Everhart, Neely's Tim Tinti.

DOWN UNDER

David Booker has been named manager of Intercon's Australasian Area and country manager for Australia, replacing John Warmington who retired the end of October after an association of 33 years with HP. Warmington will continue to serve as board chairman of the Australian subsidiary and act as a consultant to the company.

NEWSWORTHY

HP's Santa Rosa facility won the $1,000 grand prize in the 1981 Outstanding Plant Engineering Program of the Year competition co-sponsored by the American Institute of Plant Engineers and Loctite Corporation. It was based on use of computer technology for energy management and space-utilization forecasting, among other programs ....Dave Bloom of HP Lab's Applied Physics Lab has been elected a Fellow of the Optical Society of America....At the end of the second half of the company's 1981 fiscal year, HP distributed more than $45.8 million to nearly 55,000 eligible employees under the cash profit-sharing plan.... The HP-produced movie "Just Three People" (featured in **Measure**, Nov.–Dec. 1980) about three HP employees with physical disabilities is receiving attention outside the company. It has won awards in three film competitions and been shown on public television.

GETTING IT TOGETHER

Introduced on Dec. 21: the Hewlett-Packard Interface Loop (HP-IL), a new two-wire serial interface bus designed for battery-operated instruments. It makes possible low-cost computation and control systems based on HP's personal computing products such as the HP-41C family of handheld calculators. Electronic Design featured HP-IL on the cover of its Dec. 14 issue and gave it a 20-page story inside.

Included in the debut were four new plug-in modules from the Corvallis Division which give the HP-41C and HP-41CV more functions, memory and time-based programming control, and Loveland Instrument Division's HP 3468A digital multimeter which operates on batteries or AC.

OTHER NEW PRODUCTS

Desktop Computer Division's new HP 9836A desktop computer offers a larger CRT and internal dual floppy disc, increased capacity for memory, and PASCAL language....Also from DCD are three modules compatible with the HP 9845 family of desktop computer systems which offer general drawing, PC board layout and schematic drawing capabilities....The HP 1360 graphics system from Colorado Springs Division will support more than a dozen HP peripherals including printers, plotters and external mass storage devices—useful for the single user.... Colorado Telecom's new primary multiplex analyzer HP 3779C/D adds a number of new measurements for testing in all phases of digital telecommunications systems. The result of a major engineering effort, the product has improved speed and accuracy....The Santa Clara Division has brought out HP's first product in the field of waveform capture—the HP 5180A waveform recorder, which is able to reproduce rapidly changing signals accurately.