

Measure

For the men and women of Hewlett-Packard/JUNE 1973



the plots thicken...

IT'S TIME TO GET GROWING...

You were born in a conglomeration of steel and concrete known as a city. You live amid clusters of buildings and facilities that make up a place called suburbia. For travel you sit inside a metal enclosure. For entertainment you stare at a glass screen. And you work in a technical environment.

No wonder your thumb twitches.

You're suffering from agrophilia—a longing for the soil. Your urge is to scratch it and make things grow.

"Aren't we all farmers at heart?" asked one HP commentator, rhetorically.

Apparently, many of us *have* been for some time, while others have discovered or rediscovered Mother Earth rather recently, thanks to the rapid rise in the cost of groceries.

Whatever the case, MEASURE has rounded up a sampling of HP's part-time agriculturalists and asked them something about their motives and methods, which are hereby revealed for all to share:



When South Queensferry's **Bill Bryan** speaks about his "highly mechanized chemical factory farm" it's the engineer in him talking. But when he speaks of the way of life of the farmer, of his two-acre intensive poultry farm near the village of Dunfermline, and of the pleasures of country life for his family, he speaks as a marketing man; one who has sold himself on those as benefits. Bill, in fact, has served in both capacities at HP's Scotland plant, first as product marketing manager and recently as an R&D section manager. His "hen business," as he calls it, consists of 2,500 hens in cages, producing some 1,600 eggs per day. Feeding is automated as is the processing. Bill has also carefully calculated other aspects of hen raising: he doesn't hatch chickens, preferring to buy them at 20 weeks old when they are due to start their first egg-laying cycle. This they continue for about 18 months when they go into a moping stage after which egg production is resumed at a lower rate. At this point they are candidates for the broiler. Bill's conclusion: "It's a good life for Sandra and our two daughters—and a nice hobby with a nice payoff!"



Colorado in the grip of winter is a haven for skiers and a horror for gardeners—except for ingenious fellows such as **Frank Urban**, marketing training manager at Colorado Springs Division. Frank and his wife, Judy, decided to garden indoors last year, and built a hot-water heated greenhouse as an addition to their home. The result has been a very successful winter harvest of zucchini, onions, cucumbers, lettuce, tomatoes, Swiss chard, watercress, parsley, bell peppers, and a variety of flowers. This summer they will go outdoors to plant asparagus, broccoli, carrots, radishes, rhubarb, strawberries, pumpkin, cantaloupe, and watermelon, and tend an assortment of fruit trees. That's kind of a sleeper statement, because the produce of the trees, when blended with a large crop of dandelions, will contribute to the Urban's cellar of 120 gallons of wines in eight varieties.



One of **Bob Goudreau's** secrets as a successful grower of groceries has been his ability to convince his four youngsters that it's fun. The MED tool engineer learned this early in life from an aunt who taught him how to plant plants, and gave him a small plot of Maine soil to practice in. Now living in Lexington, Massachusetts, the Goudreaus raise quite a bit of home-grown food: 400 feet of corn, lots of tomatoes, green beans, peppers, radishes, squash, lettuce, peas, and Chinese pea pods. The limitations of the New England growing season has prompted Bob to acquire a greenhouse which he will erect this summer for year-round operations.



An agricultural cooperative on HP property? On mainland U.S.A.? Actually, it's a garden club, and it operates on some of the unused orchard land that's part of the Santa Clara plant property. The idea for this originated about a year ago with **Tim Gonzalez** of electrical tooling. Tim thought it would be neat if some arrangement could be made to permit some gardening, particularly by employees who live in apartments and other dwelling arrangements that don't provide land for personal cultivation. Tim talked it over with **Mike Tracy**, laser production line leader. As a result they made a proposal which management accepted. Today, the club has about 16 active members. In April they turned on the water and subdivided the area into seven plots which now grow tomatoes, beans, lettuce, corn, onions, peppers, eggplant, and sunflowers—all sorts of good things. Even more important, it's good fun.



Can a city-bred cost accountant, **Joe Cardenas** of Manufacturing Division, find happiness on a small cattle ranch in Turlock, California? Can his brother, Manuel, escape from an auto-assembly line in Milpitas to become full-time operator of the ranch? Will Joe's wife and their daughter, Lucia, adjust to the sometimes rough and ready life of the range? All of these and other questions will be answered in time, during which Joe and his family are educating themselves to the weekend ranching business in partnership with Manuel on a 40-acre spread with 26 head of cattle. For the moment, Joe and Manuel are very interested in the economics of how to create a turnaround of 25 animals a month. Selling is no problem. But finding the time to acquire the necessary stock of heifers and to feed them, plus doing the other chores that go with a ranch, is the tough part. Eventually, when his brother is able to devote full time to the ranch, Joe hopes to buy his own small ranch and raise a few head of cattle—as a hobby and to help occupy his wife's parents after their pending retirement.

growing...

You're supposed to laugh, of course, when AMD's **Carra Harden** mentions that she is in the business of growing prunes—the “funny fruit!” Well, Carra, lead illustrator in the Sunnyvale plant's publications department, isn't exactly laughing on her way to the bank. “The orchard,” she says, “just breaks even financially, but it does make it possible for me to live in the country.” Carra is a city girl (Little Rock, Arkansas), and a college graduate in art and journalism who later discovered an affinity for farming. Perhaps the most amazing aspect of her new-found avocation is the lengths she will go to serve it: her 10-acre property is located near Vacaville, California—or, 85 miles north of Sunnyvale to which she commutes each working day! Carra herself is undismayed by the distance, and actually enjoys the trip. She uses the time to plan the purchase of some cattle or the work to be done in the orchard—and to dream about breeding the perfect quarter horse which she hopes to race some day.





Looking for high productivity with low overhead, **Bruce Begg** of Manufacturing Division's transformer assembly, installed a few rabbits in his Sunnyvale yard. Supply soon began to outstrip demand. "They got out of hand," he now says, recalling the sight of 70 rabbits hip-hopping around the patch. So Bruce liquidated his bounding assets at the height of the beef boycott earlier this year, then turned to more manageable critters, namely bees. "They're very self-supporting. Just set them up in hives and there's very little else you have to do." Bruce "robbed" the older of the hives recently and came away with 70 pounds of honey. The wax went for candles and leather work, the honey into jars. "Once you've eaten it unprocessed, you'll never again want to touch store honey. And it's very good for you!"

When Rita Randolph, the **MEASURE** correspondent at Colorado Springs, arrived at **Don Owens'** ranch there were 53 head of cattle. When she left there were 54, a "bonus" having occurred during her visit. Of course, it's the kind of bonus that ranchers hope for each spring. Don, a technician at the Colorado Springs Division by day, operates a 640-acre ranch by nights and weekends. He and his wife Jolene bought the spread five years ago to raise cross-bred cattle—for meat and some extra income. They also milk a cow—not a bad idea when there are four little pair of farm hands to feed.



Shirley Roberts, cash administrator at the North Hollywood headquarters of Neely-Western Sales Region, was probably only about the 499,999th working wife and mother to be shocked by the soaring price of food this year. She decided to make her protest in the form of a vegetable garden like the "victory garden" her parents had made of their lawn during World War II. "At one time," she said, "produce was so reasonably priced that there was little financial incentive to grow your own. But I've discovered there's more to it than that—the kids enjoy watching things grow. And so do my husband Cal and I. It's the newest neighborhood status symbol!"



To look at **Carmine Indindoli's** backyard is to contemplate the workings of a gourmet gardener. Carmine, an HPA production engineer (optoelectronics), actually has two gardens. One is his summer garden where he tends lush-looking strawberries, asparagus, artichokes, shallots, and various leafy green vegetables. The shallots, by the way, are what Carmine calls "essential ingredients" of tartar sauce or a bechamel sauce. Then against the south wall of his home he has discovered an ideal location for a winter garden and the growing of such items as cabbage, broccoli, cauliflower, and spinach. They even survived last winter's deep freeze. Meanwhile, there are also 18 fruit trees, chickens, geese, two turtles, and 400 grape cuttings. These last represent the beginnings of growing ambition—to establish a small vineyard in the Los Gatos hills. There, Carmine hopes some day to be able to offer cabernet and pinot noire grapes to individual buyers for their own wine making—and of course to enjoy his own handiwork.

growing...



The spirit of pioneering is still alive and well in California's Santa Cruz mountains. About five years ago, **Vern Haines**, manager of the Stanford Plant's TWX room, and his wife Betty, PBX operator for Manufacturing Division, took over 25 hilly acres as part of an estate that had been ranched by the Haines family since 1894. Their goal is to attain self-sufficiency—build their own home, clear the land, grow most of their own food, and raise registered horses as a source of supplemental income. Part of that goal has been achieved: they now live in comfortable trailer quarters on the property, rows of vegetables brighten the scene, and telephone service has been installed. But it hasn't been easy: brush and forest has recaptured much of the one-time orchard property, varmints raid their chickens, and the work seems never ending. Still, it's a great adventure, one they share often with other members of the family and with friends, all of whom seem to find something rewarding in the effort.

HPA's team strategy for mass markets...

□ In an expanding market, how can HPA Division maximize the effectiveness of the components field salesman—and yet cover 10,000 more customers for optoelectronics products?

The answer is:



TEAMMATES: George Bowden, HP components field engineer at left, discusses approach to a customer with a distributor's outside salesman, Ron Keefer of Elmar Electronics. The relationship allows HP components men to concentrate on larger and more technical accounts.



...the "stocking" industrial distributor!



No, he is not the same as the "rep"—the manufacturers' representative system—that HP employed for some 25 years as its primary field sales organization.

The key difference is that the stocking distributor stocks quantities of many component products at a number of locations for resale to numerous customers. Yet, as far as HPA is concerned, all of this activity may be the result of one consolidated order from one industrial distributor.

As Milt Liebhaber, HPA marketing manager, describes it: "Generally, it wouldn't pay our components sales engineers in the field to call on all potential new customers individually. But working through industrial distributors, who have the organization to represent and warehouse many lines of component products, thousands of new customers have been brought into the HPA fold."

Implied by that statement, of course, is a decision adopted a couple of years ago by division manager Dave Weindorf and his HPA team: It called on HPA to develop the capability of producing and marketing optoelectronic products in large quantities at low cost. It was a strategy designed to add a major dimension to HPA's role in marketing components outside the corporation as well as giving the entire HP organization self-sufficiency in these important products.

In selecting industrial distributors to cover these broadened markets, HPA in effect sought a method by which the work of HP's components sales force could best be amplified. The technical strength of the HP field sales force complements very well the broader customer coverage provided by the distributor sales force with its combination of outside and backup inside salesmen. Jan Black, HPA's distributor sales manager, describes it as "leverage" situation: "The figures for our three distributors in the U.S. show some 120 salesmen making outside calls, and about the same number on the inside taking phone orders. That covers a tremendous number of accounts—up to 10,000—that our HP components sales engineers would probably never call on. It's much the same situation in Europe.

Maintaining stocks of many components is a key function of industrial electronics distributors in serving the many needs of their numerous customers.

"An HP guy is assigned a certain responsibility for liaison and training with the distributor office in his territory. He'll also work with the distributor people as a consultant and specialist. In other words, the distributor's office becomes more or less one of his accounts. Meanwhile, he's still calling on the larger accounts."

The key distributor offices are stocking locations—buildings that house not only the local sales and administrative staffs but also a sizeable warehousing operation. These stock thousands of different components readily available to customers. At the present time, HP optoelectronic products are carried in 22 stocking locations of the U.S. distributors—10 by Schweber Electronics in the Northeast states to the Great Lakes, and Florida and Canada, 6 by the Wyle Distribution Group (Liberty Electronics and Elmar Electronics) in the Western states, and 6 by Hall-Mark Electronics in the South and Mid-West. Similar distribution arrangements have been made with Celdis Ltd. in the United Kingdom, I.S.C. in France, Ingenieurburo Dreyer covering northern Germany, EBV Elektronik in southern Germany, NV Diode in the Netherlands and Interelko in Sweden.

The distributor organizations are big businesses in their own right. One of the largest, for example, had sales from industrial distribution of more than \$42 million with pre-tax profits of almost \$4 million and a payroll of over 150 people.

Describing this business, one of the firm's officers said: "We are really a systems component center. It's our job to assess the total component needs of a customer and bring every possible choice for him to consider. In the case of competing lines, it's the job of the supplier's distributor manager—Jan Black for HPA—to give our people enough information and sales 'edge' to become preferred."

And how is the distributor relationship working from an overall point of view? Al Oliverio, U.S. marketing manager for Electronic Products Group, describes it as a success—one that is contributing significantly to the HPA goal of leadership in the bright new field of high-performance, low-cost components. □



Customers can call distributors and obtain quick answers about small and assorted lots of components. In this way, HPA products have been made available to many new users.



**NOW
WE'RE
IN THE**

X~RAY

BUSINESS!



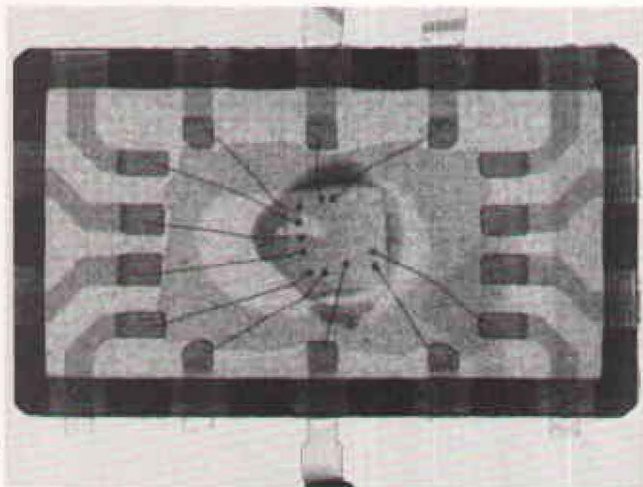
A product technology described by President Bill Hewlett as "very interesting and promising" was added to the HP family last month. It became official when shareowners of Field Emission Corporation at McMinnville, Oregon, voted unanimously to accept HP's purchase offer. The technology—electron field emission—brings to HP a way of constructing x-ray tubes that is relatively new to the industry yet with a proven record of successful application both in medical and industrial areas.

As Mr. Hewlett told a gathering of securities analysts recently, "Field emission x-ray operates at high voltages, no filament, and low power. This arrangement allows storage of needed power in a condenser for immediate use. The higher voltage creates a stronger picture which is very useful in chest x-raying. The system is also enjoying good growth in a variety of law enforcement operations including bomb detection."

Femcor will be operated as the Oregon Division headed by Dr. Walter Dyke, its founder and former president. In turn, the Oregon Division will become part of vice president Dean Morton's Medical Electronics group. Medical x-ray sales will ultimately become the responsibility of HP's medical field organization. Industrial and scientific sales will be handled by a separate group, responsible directly back to Corporate Marketing.

Of particular interest to the HP medical team is a new 350kV chest x-ray machine. Significant advantages are claimed for it in chest survey work compared to the lower-voltage machines that have been used for this purpose. The Model 815, based on Femcor's leadership in field-emission x-ray tube technology, offers the user considerable benefits in terms of size, weight, cost and reliability. Moreover, high-voltage exposure with the 350kV machine results in a lower skin dosage of x-rays and greatly improved visualization of the patient's chest volume.

(continued)



1.

1. Use of Fexitron with high-resolution film provides industry with an important tool for viewing the micro detail of products such as the integrated circuit shown greatly enlarged above. On the page at left are various views of other important uses of Femcor equipment, including x-raying of body tissue and animalistic research, plus an exterior view of the McMinnville, Oregon, facility.



2.



3.

2. Portable mini x-ray system, the Fexitron 802, has found rapidly increasing market in law enforcement operations, particularly for inspection of packages and baggage suspected of containing bombs. The x-ray tube head can be operated at distances up to 100 feet from the power supply, and the battery pack allows it to go anywhere that wheels can take it.

3. Cabinet x-ray has wide variety of medical as well as industrial applications. Major medical markets include pathology laboratories as well as "instant" on-the-spot pathology studies performed near operating rooms.

X~RAY

In addition to the Model 815, the Oregon facility manufactures a neonatal x-ray machine using field emission tubes, and a line of cabinet x-ray machines using conventional thermal emission (thermionic) tubes. Other products include portable detection units, pulse electron accelerators, and industrial systems for analyzing components.

Walter Dyke is a graduate of McMinnville's own Linfield College. During World War II he became a researcher on the air-borne radar project at M.I.T. (his work won him a Presidential Certificate of Merit) after which he acquired his Ph.D. in Physics from the University of Washington. He then returned to Linfield College as a professor of physics and director of research. This led to his founding of Linfield Research Corporation Institute, a corporate subsidiary of the college, responsible for developing field emission technology. In 1958 he established Field Emission Corporation.

Located almost midway between Salem and Portland, Oregon, the McMinnville operation occupies a 53,000

square foot plant, and has a payroll of some 150 employees including the field sales and service organizations in the U.S. and the United Kingdom (the latter responsible also for European coverage).

Two HP people have been transferred to fill key positions that Femcor had open at the time of the merger. Frank Culver, previously MED regional sales manager for Eastern Sales Region, will become marketing manager. Chuck Walker, formerly of EPG finance staff, will become administrative manager for finance and personnel.

Reports from McMinnville and Waltham indicate a high degree of enthusiasm over the acquisition. Mainly, there's a feeling that it will open doors to new opportunities for both. Dean Morton, HP vice president and MED general manager said: "For us it presents an opportunity to enter the very large radiography market with products that really contribute to the field!" □



4. Versatility of x-rays is revealed by this "stereotaxic system for neurosurgery." Here, a Fexitron 810 provides biplane radiographs for accurate positioning of probes during neurosurgery of the skull.

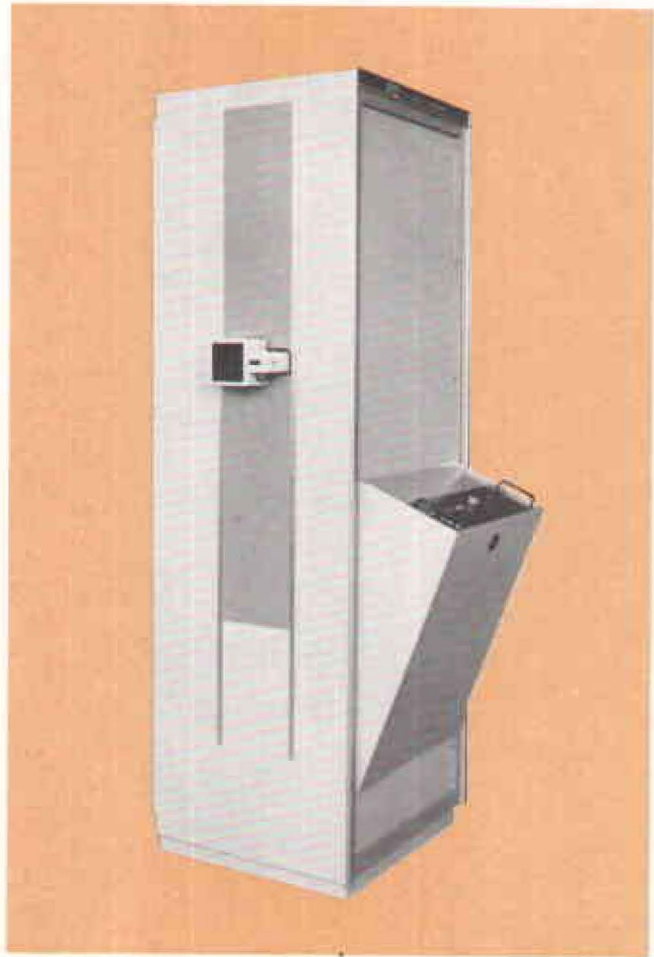
5. A clinically proven nursery x-ray system with life support capability, the Fexitron 848, is another example of Femcor contributions in the field of radiography.

6. Field emission x-ray technology allows higher voltages with less power to enhance the visibility of soft tissues deep within the body. The 300kV x-ray machine shown here also provides wide latitude of the view. Field emission of electrons is the result of electromagnetic stimulus rather than the traditional heating filament (thermionic) method. Femcor uses both technologies.

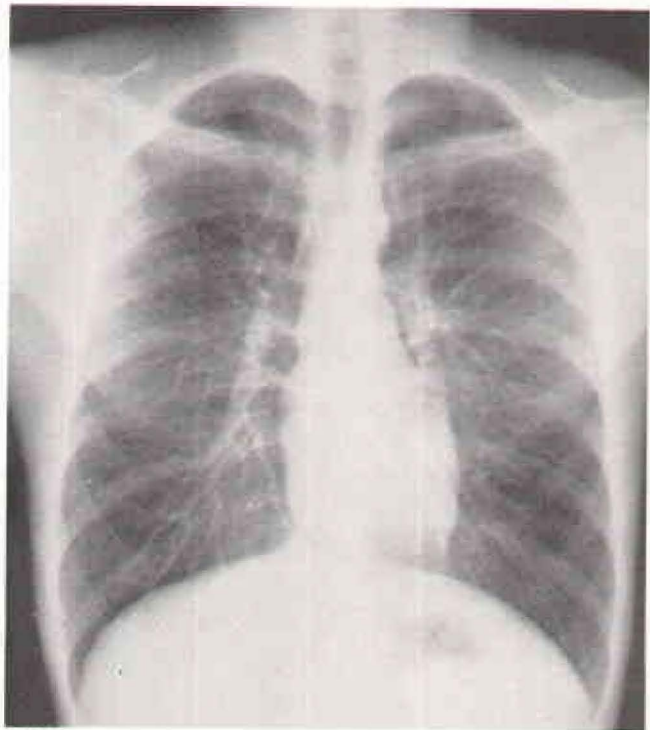
7. Chest x-ray shown here was performed by a Fexitron 8150, using the higher voltages permitted by field emission. Penetration is said to improve about 50 percent over the usual 150kV equipment in common practice.



5.



6.



7.



Two of a kind:

The first scientific calculator to be offered in both pocket-sized and desktop models has been placed on the market by Hewlett-Packard. The new models are the battery-powered HP-45, which weighs just nine ounces, fits into a shirt pocket and costs \$395 in the U.S.; and the desktop HP-46 which has the same capabilities as the HP-45 plus a built-in paper-tape printer for permanent record keeping and costs \$695. More powerful than the successful HP-35 shirt-pocket calculator (now priced at \$295), more than 75,000 of which are in use, the new calculators are designed for science, engineering, surveying, navigation, statistics and mathematics applications. Under the revised employee discount purchase program, HP employees may purchase calculators at the standard 30 percent off list price, with a limit of one unit of each model number per employee.

News in Brief

Palo Alto — The company has reported a 40 percent increase in sales and a 70 percent increase in earnings for the second quarter of the fiscal year.

Sales for the second quarter ended April 30 totaled \$163,622,000, compared with \$116,572,000 for the corresponding quarter of fiscal 1972. Net earnings amounted to \$14,569,000, equal to 54 cents per share on 26,615,975 shares of common stock outstanding. This compares with earnings of \$8,573,000, equal to 33 cents a share on 26,265,484 shares, during last year's second quarter.

Dave Packard, board chairman, said the company's incoming orders for the quarter amounted to \$175,393,000, a gain of 37 percent over orders of \$127,920,000 booked in the corresponding period of 1972. For the six month period ended April 30, orders totaled \$331,468,000, up 39 percent from a year ago.

Sales for the six months amounted to \$290,588,000, a 36 percent increase over the first half of 1972. Net earnings rose 53 percent to \$23,254,000, equal to 87 cents a share. This compares with earnings of \$15,202,000, equal to 58 cents a share, during last year's first half.

Packard noted that 1973 first-half earnings included a gain of about five cents a share realized by virtue of translating certain assets and liabilities held outside the United States into dollars at current exchange rates. He also said that no provision has been made for any possible change in the taxation of earnings from foreign subsidiaries which could result from bills now before the Congress.

Packard said virtually all of HP's operating divisions are reporting a higher level of business in 1973.

"International markets have been particularly strong," he noted, "with

orders from international customers amounting to \$139,235,000 for the six-month period. This represents a gain of 46 percent over the corresponding period of 1972. Domestic orders for the same period have risen 35 percent to \$192,233,000."

Los Angeles — A special "Golden Supplier" award has been presented to Hewlett-Packard by ITT Gilfillan, Los Angeles-based manufacturer of radar systems. The award recognizes suppliers who maintain a high quality of product with low rate of rejection, who meet delivery commitments, and who demonstrate an attitude of interest and cooperation.

ITT Gilfillan, a division of ITT, is a customer for HP signal generators, power meters and 180 Series scopes used primarily in computer testing.

From the president's desk



Last month, I commented on the fire that we had had in the Palo Alto area, and how a group of people had risen to the occasion so magnificently. I also suggested that probably this type of independent action occurred more often than realized—unseen and unheralded actions that really make the company what it is.

After I wrote the letter, I got to thinking that what is true of HP people is also true of our products; that although we have glamour products making the front pages, they in fact, are supported in an unseen way by the less spectacular but very fundamental traditional instrument line that is the company. The new market areas we enter often result from targets of opportunity where it is relatively easy to get in and make a major contribution, but also where the vulnerability for competition is great. The opportunity we have may be short-lived, and thus the products for these market areas must be given top priority.

A completely opposite situation exists for our more traditional product lines in the field of electronic test and measurement—counters, microwave instruments, voltmeters, signal sources, oscilloscopes, and so forth. In these areas, it is hard to single out the unique performers. Due to their maturity and sophistication, they provide interwoven and almost continuous coverage in the traditional measurement field. To be effective, a competitor must attack the whole line, and this is a formidable prospect indeed.

Not only are our traditional product lines good, but the people who sell them are superbly qualified. These field sales people know their business and they make a hard job look easy. The products they represent are the bread and butter items that support almost everything that we do. They have supplied a technological base from which other areas have sprung. They have provided the profit that has paid the bills for the cost of entering into new fields. The HP name that they have created has been the banner under which other products have gained acceptance. They represent over 50 percent of our sales, and normally more than 50 percent of our profits.

No one in the company should feel that because these items do not receive the same level of front page news that it is a question of "out of sight, out of mind." These products are the backbone of the company, and will continue to be so.

Bill Hewlett

Up the ladder of Fortune

New York — Hewlett-Packard attained 267th rank among the 500 largest U.S. industrial firms in 1972, up from 292nd in 1971, according to the *Fortune* 500 directory issue (May). Most significant was HP's 8th ranking in the new "combined return" category which is based chiefly on adding together the returns an investor would have received in the form of dividends and price appreciation of a stock held through the year.

The *Forbes* annual directory issue (May) shows HP listed as 411th in sales for 1972 among all U.S. corporations (industrial and non-industrial), up from 455th in 1971. The publication also rates HP as 72nd in revenue growth and 40th in profit growth for the period 1971-72.

Measure

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