

# Measure

For the men and women of Hewlett-Packard / MAY 1967

A vacation has been defined as going someplace without having to. The problem today, of course, is finding the right place to go.

MEASURE took note of this problem recently, and began looking into ways and means of solving it for its readers. It found, first, that getting away from it all is quite easy. There still are places where the big crowds don't go. There are untrammelled beauty spots. There are resorts by the hundreds, and ways and means of getting to them quickly. But you have to be willing to pay the price, and that can be pretty steep.

So MEASURE went looking for types of vacations that were different while also within the financial range of most people. The ideas were not easy to come by. Many people,

it was found, think in rather tried-and-true terms when it comes to deciding on where to go and what to do. And most advertising and current literature on the subject takes the expected approach of encouraging the international travel tour or luxury type of vacation.

Well, MEASURE did find, in an account of a river raft trip by an HP couple, that there is low-cost adventure left in the world of the two-week vacation. It found, in the hiking and mountain climbing of a Colorado Springs Division group, the exhilaration of remote, wide-open spaces close to home. It discovered, in the leisurely pastime of a widow employed at the Sanborn plant, that home can provide a base for quite a varied vacation. Finally, MEASURE came upon a number of other ideas — such as house swapping — that suggest creative new approaches to vacationing.



FRONT COVER PHOTOS COURTESY TEXAS HIGHWAY DEPT., OKLAHOMA PLANNING AND RESOURCES BOARD, SAWYER'S INC.

## Down a lazy river . . .

The log of the good raft "Huck Finn II" began on a warm summer day several years ago. The voyage covered a lightly populated northern stretch of California's Sacramento River. The crew was composed of Earl and Virginia Garthwait (Earl is with Paeco Division's technical staff), their daughter Robin, friends Gene and Bev Houghton of Sacramento, and their dog Pete.

After a couple of shuttle runs by trailer, all materials, supplies, and ship's party were deposited on the river beach near Red Bluff, and the raft assembled, launched, and manned. Adventure was soon upon them.

### *First day:*

8:00 a.m. Cast off. Gene tried out pram (small boat used for towing and steering).

8:30 a.m. Into first wide sweeping turn we headed for bank. Hit bushes and nearly lost overhead and fishing poles. Decided to keep a close watch on river from here out.

### *Third day:*

3:00 p.m. Hit gravel bar . . . then motor wouldn't start. Men worked on motor while girls swam.

10:00 p.m. Earl tried to get big fish that kept jumping, but he wouldn't bite. Sang camp songs.

### *Fifth day (July 4):*

7:00 a.m. Arose with a *bang* as Gene lit a firecracker. French toast this morn. No complaints from crew.

4:00 p.m. Had uneventful afternoon. Tied up to island.

Dog chased cows across river. Gone two hours.

### *Sixth day:*

11:45 a.m. Snag coming up fast. Gene started motor in pram and starting handle flew off. Down it went. Motor quit. Earl dived for bank with rope. Grabbed small bush. Gene fell out of boat. Virginia threw him rope. Secured raft. What a time! Open campfire on sand.

### *Seventh day:*

2:00 p.m. Bev almost went over front of raft when we hit stump. Virginia grabbed seat of Bev's swim suit and held her on. Stopped at gravel bar for the night.

### *Eighth day:*

Took over an hour to free raft. Everyone exhausted. No more maps now as last map ended above Butte City. Nearly had collision with Princeton Ferry.

4:05 p.m. While progressing slowly down calm river, Gene completed reading *Huckleberry Finn* to us all.

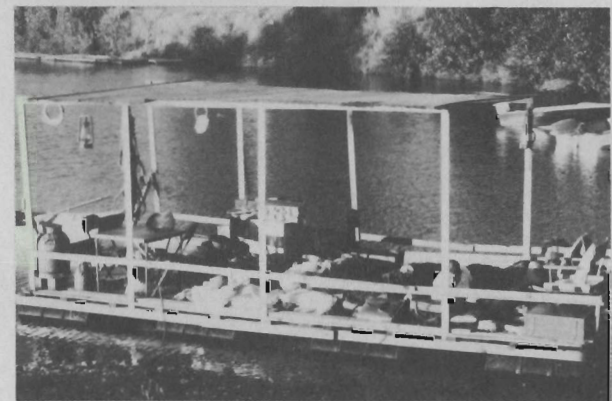
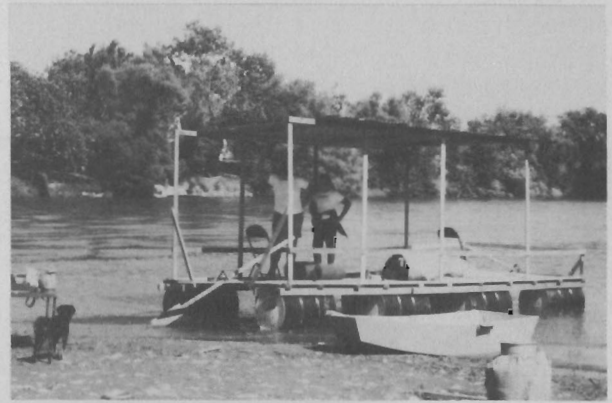
### *Ninth day:*

9:00 a.m. Pull into State Park dock. Saw car and trailer. All hands on deck to disassemble raft (sadly)!

Not everyone is up to such undistilled adventure as the voyage of the "Huck Finn II." Fortunately, there are ways of moving about the country's waterways that provide a sense of exploration without quite so much pioneer effort.

Firms on the larger lakes and rivers (including the Sacramento) now rent houseboats. These aren't cheap, but they will provide plenty of cruising in real comfort. Reserve well in advance.

Or how about a pioneering canoe trip? There's a big frontier awaiting exploration.



## Take the high road . . .

Nowadays, there are more reasons than ever why people venture into the mountains, looking for space, peace, and grandeur. Fortunately, there are more ways than ever of going there, and quite a few means of getting to the very top, if that is one's goal.

There is, for example, the hard way—climbing. A group of about 10 Colorado Springs employees, called the HP Mountaineers, says that climbing to the top of the tallest available peak represents the ideal vacation. Beginners who come under the aegis of Alan Henshaw (tool engineering) learn such fundamentals as “rope handling, dynamic belaying, rappeling, prussicking, piton placing, etc.” After learning to tackle sheer rock walls, they then can look forward to Colorado's 53 peaks over 14,000 feet. Organizer Henshaw has climbed in India, Europe, Scotland (his birthplace), and California as well as Colorado.

To the north, at Loveland Division, employees recently organized a club that sings the praises of the “four wheeler” as the vehicle for mountaineering pleasure. According to Nancy Sorenson, the rewards of ownership—Jeep, Toyota, Scout, or Land Rover, etc.—include “not only breathtaking scenery, but better hunting and fishing, and your choice of camping spots. There is also the driver's satisfaction in com-

bining skill with the machine's power to conquer natural obstacles.”

The Loveland four-wheelers sometimes engage in sheriff's patrol and rescue operations which illustrate the public service type of vacation. In the mountains this can take such other forms as ski patrolling, fire fighting, or serving as camp counselor or Scout leader. Each provides a real change of pace for the suburban dweller—and generally room and board to go with it.

The mountains are anything but hard to find for most HP people. In the Northeast the Appalachians offer 2,000 miles of easy trails to explore. The two Colorado plants are at the foot of the Rockies. And Californians face the choice of going to the Coast Ranges or the rugged Sierra Nevada.

There are other ways of touring the high country besides climbing and jeeping, of course. Hiking is still the most popular, followed by horse pack trips. But you can also get quite far by car, railroad, and bicycle. Peaks also can be reached by motorcycle, snowmobile, helicopter, ski lift—even parachute.

And if you are still not satisfied with the economy represented by any of these vacation ideas, you can always pan for gold. They say it's still there . . . you know, in them thar hills!





Visiting the famed Concord Bridge near Lexington, Anna Fitzgerald is close to the site where "the shot heard round the world" was fired on a memorable day in April, 1775. Here the Minutemen halted the Redcoats and drove them back to Boston.

## The Freedom Trail . . .

More than most of us, Anna Fitzgerald, Sanborn assembler, has spent a lifetime surrounded by history as well as history in the making. As a native of East Boston, Mrs. Fitzgerald lives very close to the sites of many of those events that created the United States. After many vacations touring other historically important parts of the country, last year she decided to see her home town.



The first day she took the Freedom Trail, "a walking tour of the nation's most historic shrines." She began at the Boston Common, stopped in at the State House, viewed the site of the first public school, and visited places associated with the likes of Benjamin Franklin and Paul Revere.



Mrs. Fitzgerald's second day began in a swan boat on the placid waters of the lagoon at Boston Public Garden. Next: the Isabella Gardner Museum with its Venetian garden, gallery of art, and a concert of Old World music.



Then followed a day that included a visit to the Museum of Science and a boat ride down the Charles River to Cambridge and back. Another day Mrs. Fitzgerald's attention focused on Boston's newest skyscraper



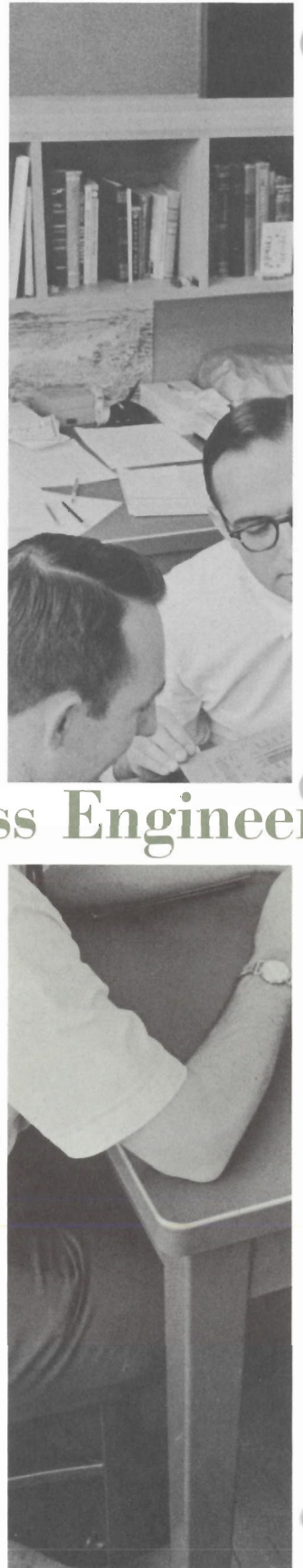
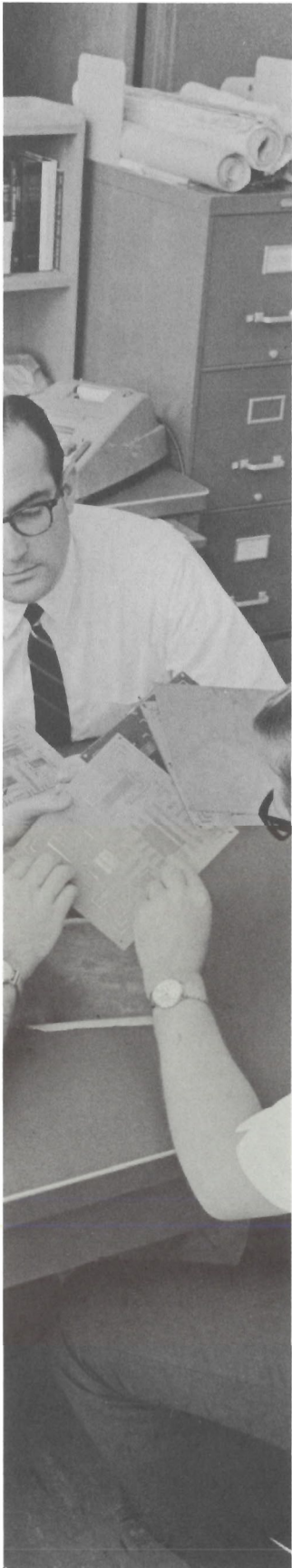
(Prudential Center) and Paul Revere's home. Concluding days during the week saw her take in the Old South meeting place, Faneuil Hall, and the frigate *Constitution* ("Old Ironsides") at anchor in Boston Naval Shipyard.

Along the way, Mrs. Fitzgerald and her sister met many new people from all walks of life and formed new friendships. Her conclusion: an impressive and very relaxing vacation.

Staying close to home is actually one of the more popular styles in vacationing. It allows people to catch up with some of their "homework" and to visit local attractions under relaxed circumstances. Or, as in the case of Mrs. Fitzgerald, it can be programmed to a specific goal.

A relatively new twist in vacations is the home-swapping trend. Vacation exchange clubs have sprung up in various parts of the country. For a few dollars, a Manhattan club will list your home in its international directory, describing the home, and where and when you would like to exchange. It's reported that three- and four-way swaps are sometimes necessary to complete a deal. An easier way might be to arrange a swap with friends in some other part of the country.

But however you do it, apparently there's no place like someone else's home.



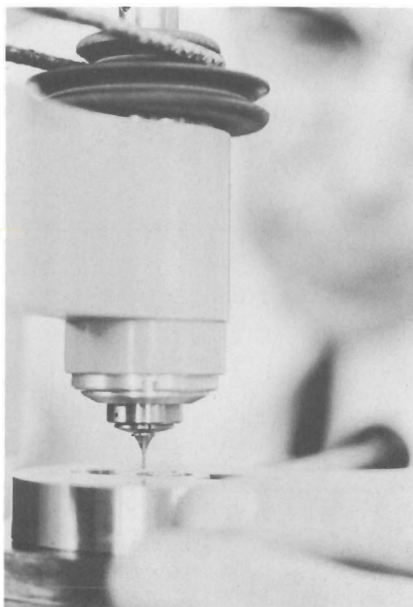
# Process Engineering



Improved methods to laminate multilayer printed circuit boards are discussed by Glenn Affleck, manager of Corporate Process Engineering, left; Ed Miller, manager of Corporate Manufacturing Engineering, center; and Bob Perricone.

## g: turning production problems into profit

Developing new manufacturing techniques is major role for HP engineers. Here, micro-drilling method developed by Larry LaBarre of Corporate Process Engineering creates extremely precise valves to be used in F&M gas chromatographs for injecting minute metered amounts of samples for chemical analysis.



Wiring has been a standard part of HP instruments since the first Model 200A audio oscillator rolled off a makeshift production line in 1939. Now HP has discovered a better way: in many applications, wiring can be replaced with flexible circuits—and at a saving of nearly 40 percent!

This advance and many others like it are the brainchildren of a group of problem solvers in the Corporate Process Engineering department and their counterparts in the manufacturing divisions.

Their production shortcuts — automating processes, making jobs easier, increasing efficiency, developing new techniques and materials—are a significant boost in HP's efforts to push costs down and profits up. Process Engineering's contributions, however, seldom are spotlighted as brightly as other profit-makers, such as new products or big sales.

The corporate process engineers and division production engineers and manufacturing engineers work closely together in a continuous problem-solving effort. Some of their projects have yielded simple answers to small problems, some have brought complex solutions to complicated problems, but all have required the ingenuity that brought these experts to their present important roles.

Over the years their contributions have been many. Among them:

— **Printed circuits.** Turning a schematic or "breadboard" instrument circuit into a printed circuit board had become a major time consumer in the engineering efforts of most HP manufacturing divisions. The problem was further compounded by the increasing complexity of printed circuitry as components became smaller and circuit density became greater. PE's solution: use a computer to lay out the printed circuits. This technique is now being implemented.

— **Automatic injection of samples for gas chromatographs.** Gas chromatographs manufactured by the F&M Scientific Division precisely measure complex gas samples. For unattended operation, some means of regular, automatic injection of precisely measured gas samples had to be devised. PE's solution: develop a metering injection valve more

exact than any equipment available to test it. Patent proceedings are now underway.

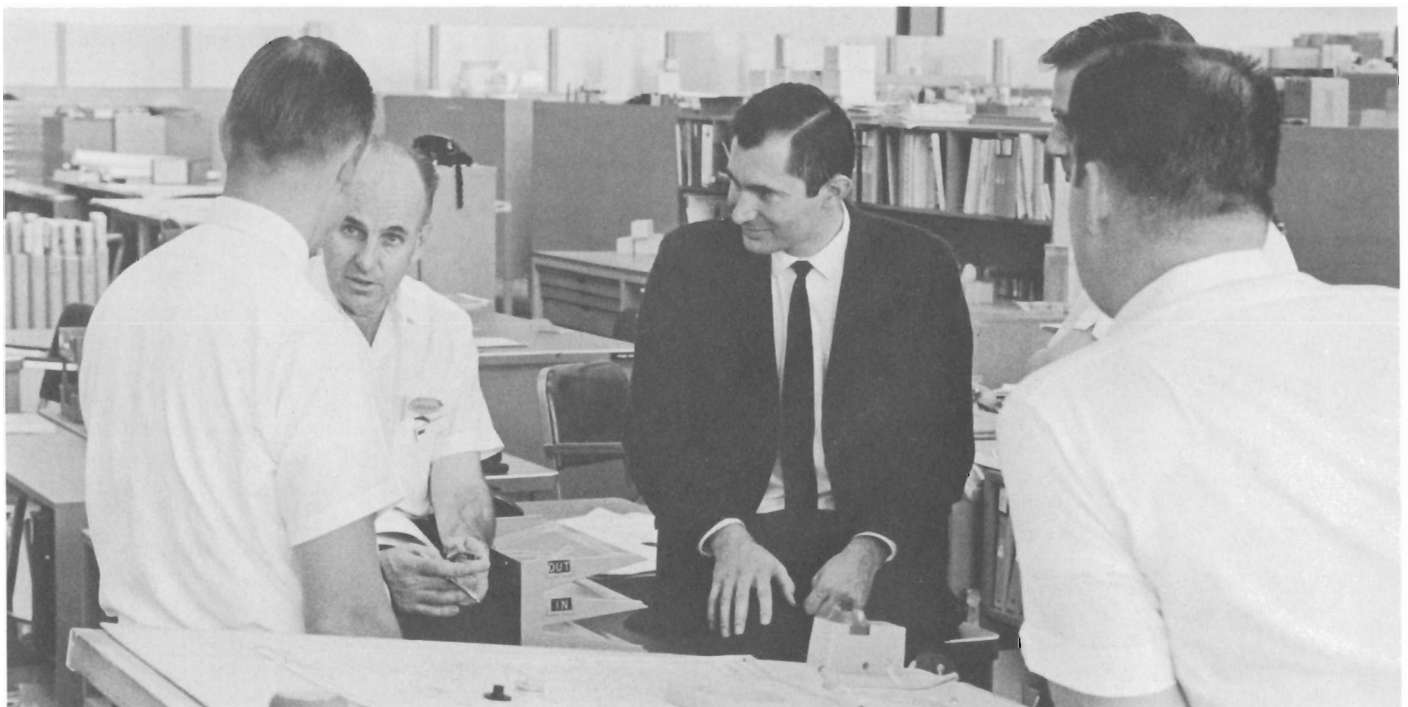
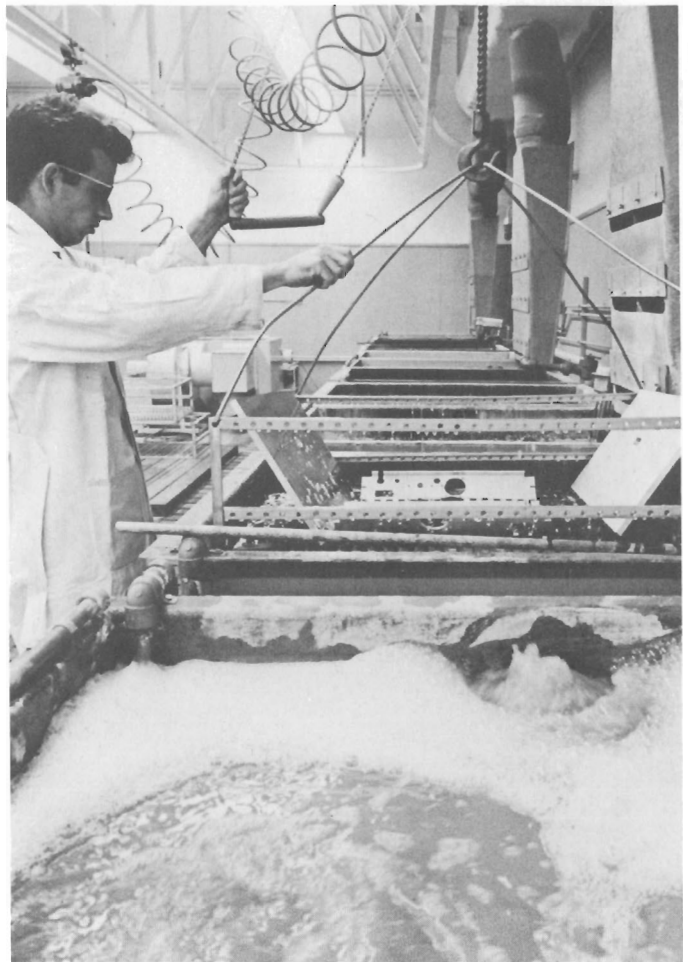
— Increasing ease and efficiency of instrument assembly. Three hands would have helped in gathering the many components of different sizes and shapes, fitting them into the deck plate, then wiring F&T's 5060A cesium beam frequency standard. F&T's solution: make a silicone mold of a finished instrument, fit the individual components into their sockets in the mold, place the deck over them, apply the appropriate fasteners, and wire away. The technique is in use and works like a charm!

— Information exchange. Corporate Process Engineering and the manufacturing divisions were solving many production problems, and these solutions could help other divisions if the information could be disseminated. PE's solution: *Process Engineering News*, a bi-monthly periodical bringing corporate and divisional solutions to process problems to HP's 1,500 production and laboratory engineers. It has proved highly valuable.

So have the process engineers!

New facilities present the process engineer with the opportunity to investigate, plan, and put into operation the most advanced manufacturing technology. Shown is the HP-developed bright dip line of the metal finishing facility located at the new Mountain View Division.

A trio of Corporate Process Engineering staff members discuss the forthcoming implementation by Loveland Division of a new process the department developed in conjunction with HP Laboratories. From left are Jack Anderson of Loveland, Doug Wright, Tom Osborne of HP Labs, Bob Perricone, and Nick Guthrie.





# TEST YOUR HP IQ

How well do you know your company? Here's a chance to test your knowledge. Check the answers you think are correct by marking in the appropriate squares. There is only one correct answer for each question. So go ahead and try for 15!

1. **Total HP employment now is approximately:**
  - A. 6,500
  - B. 12,000
  - C. 8,800
2. **Total sales by HP last year amounted to:**
  - A. \$118 million
  - B. Net profit plus other income
  - C. \$203 million
3. **In 1966, employee profit sharing payments were made:**
  - A. In the form of trading stamps
  - B. By allowing credit at the cafeteria
  - C. Twice—\$1,859,000 in June and \$2,013,000 in December, totaling \$3,872,000 for the year
4. **"Santa Leonor" is:**
  - A. A song sung silently at sundown by the natives of Loveland, Colorado
  - B. A ship carrying HP product exhibits to South American ports
  - C. A sweet wine produced in the Palo Alto foothills
5. **HP's domestic sales are now handled through:**
  - A. Independent distributors
  - B. Department stores
  - C. Four sales regions
6. **For future growth and profitability the company looks to:**
  - A. Real estate values
  - B. Reduced competition
  - C. Development of new products
7. **Between 1965 and 1966, HP employment:**
  - A. Held the line
  - B. Increased by 2,500
  - C. Decreased
8. **Winners of HP employee fund's \$500 scholarships are:**
  - A. Required to study electronics
  - B. Free to attend their choice of college
  - C. Restricted to cases of dire need
9. **HP's federal and foreign income taxes for fiscal 1966 were:**
  - A. \$17.5 million
  - B. Written off against losses
  - C. \$9,900,000
10. **New products HP recently introduced include a:**
  - A. Mix-maximizer
  - B. Instrumentation computer
  - C. Model 200A resistance capacitance audio oscillator
11. **The one corporate objective which governs the success of others is:**
  - A. Payment of taxes
  - B. Profit
  - C. Meeting production quotas
12. **Maintenance and repair of HP products is primarily the responsibility of:**
  - A. Sales engineers
  - B. Service centers
  - C. Manufacturing divisions
13. **HP's basic field of interest can be defined as:**
  - A. Electronics
  - B. Measurement instruments and systems
  - C. Medicine
14. **South Queensferry is the location of new HP manufacturing facilities in:**
  - A. Massachusetts
  - B. Scotland
  - C. Canada
15. **HP's volume of direct sales to the military in 1966 was:**
  - A. The largest single share of company business
  - B. Approximately 15 percent of total sales
  - C. Classified

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## ANSWERS:

- |   |    |   |    |   |   |   |   |   |   |
|---|----|---|----|---|---|---|---|---|---|
| B | 15 | B | 12 | A | 9 | C | 6 | C | 3 |
| B | 14 | B | 11 | B | 8 | C | 5 | C | 2 |
| B | 13 | B | 10 | B | 7 | B | 4 | B | 1 |

## HP news in brief . . .

**Melbourne**—HP will begin direct marketing of all three disciplines—electronic, medical, chemical—in Australia on July 1, with the establishment of HP (Australia) Pty., Ltd., a wholly owned subsidiary to be headquartered here. John A. Warmington, a long-time executive with HP's present Australian electronic distributor, will be general manager of the new firm. A branch office will be opened at the same time in Sydney under Manager John L. Williams.

**Beverly, Massachusetts** — HP has purchased Varian Associates' Quantum Electronics group here. Employing 35 people highly respected in cesium beam tube development and manufacture, the unit is a principal source of these tubes and other components of HP's atomic frequency standards. The company has acquired personnel, equipment, and certain patents. Manufacturing operations will continue here in a small plant to be leased from Varian. Len Cutler, formerly director of quantum electronics research in HP Laboratories, has been appointed manager of the Beverly facility, which is now part of HP's Frequency & Time Division.

**Saigon**—Landis Brothers & Co., Inc., has been appointed distributor for all HP product lines in Vietnam.

**Washington, D.C.** — President Johnson has appointed Dave Packard to an eight-member, blue-ribbon advisory committee to study and recommend adjustments in top federal salaries, comparing salaries in all three branches of government with those received by high officials in industry, universities, and state and local governments.

**Las Cruces**—The marketing office here has moved into its new building, a 3,200-square-foot structure at 156 Wyatt Drive that includes offices and a demonstration room for product service and application seminars. HP customers in southern New Mexico and El Paso County, Texas, are served by the office, which is headed by District Manager Jim Bunn.

**Colombo**—Ceylon has been added to the roster of countries with HP distributors, with the appointment of United Electricals Ltd., which now is marketing HP's three disciplines in this island nation.

**Orlando, Florida** — Orlando area's customer service facility has been expanded, with completion of a 1,500-square-foot addition to the office.

**New York**—That HP's quality measuring instruments are widely accepted was underlined by one of the company's many competitors, according to this item which appeared recently in *Electronic News*: "The Pithy Reply.—The instruments exhibitor at IEEE didn't say a word when asked, 'What are the biggest sales problems in your business?' He just pulled out a card bearing the legend, 'Down with Hewlett-Packard.'"

**Slough**—HP Limited's marketing division recently has set new monthly records: highest order dollar volume (an impressive 161 percent of target) in the division's history, and greatest shipment volume ever achieved by a European unit of HP.

**Palo Alto**—A 30,000-square-foot addition at the Stanford plant is scheduled to be completed and occupied by HP Laboratories next month.

**Dayton, Ohio**—The Dayton district sales office moved late last month into new quarters at 3460 South Dixie Drive. The office, under District Manager Dick Pitner, serves customers in southern Ohio and portions of eastern Kentucky and eastern Indiana.

### *People on the move*

**Eastern Sales Region** — Jay Halprin, field engineer—to field manager; Ed McDonald, medical sales rep (Burlington)—to medical sales field manager; Toi Toivonen, field engineer—to field manager; Barrie Wilmarth, staff engineer—to senior staff engineer (all above West Conshohocken office); Jim Prestridge, marketing manager, Rockaway Division—to New England area manager, Eastern Sales Region (Burlington); Dick Yanko, staff engineer—to field engineer, West Conshohocken office.

**F&M Scientific** — Bob Buchner, quality assurance manager, Harrison Division—to test engineering supervisor, F&M Scientific.

**F&T** — Miriam Osgood, secretary to Vice President, Marketing—to secretary to manager, Nuclear Marketing, F&T; Betty Phillips, secretary to Government Relations manager (Marketing)—to secretary, Standards group, F&T.

**HP-Palo Alto** — Dick Dolan, Alden Erickson, and Larry Shergalis, corporate Engineering (HP Journal)—to corporate Advertising and Sales Promotion staff (HP Journal); Arnold Lieman, corporate Contract Agreements—to Logistics Support and Data (Marketing).

**International**—Jim Schlater, Marketing Manager, F&M Europa, Amsterdam—to Chemical Marketing, HPSA.

**Microwave**—Byron Low, tool engineering, Colorado Springs—to shop services and in-plant engineering, Microwave Division.

**Midwest Sales Region** — Ron Rosen, office services coordinator—to credit manager.



*from the chairman's desk*

In the March issue of MEASURE there appeared an article describing the HP Employees Scholarship program. As you may recall, the article traced the careers of many past recipients of HP scholarships and urged participation in this year's drive for scholarship funds.

The 1967 campaign is now completed, and I am proud to tell you that the results far exceeded any previous drive. Employee contributions to the fund totaled about \$20,000. Coupled with the corporation's regular \$10,000 donation, some \$30,000 will be added to the fund, whose earnings each year finance \$500 college scholarships for deserving sons and daughters of full-time HP people.

This year we will be able to award about 30 scholarships, compared with 22 last year. These scholarships are given to youngsters in various parts of the country to help finance their first year of study at the college or university of their choice.

Two of our divisions—F&M Scientific and Moseley—participated in the drive for the first time this year and their people provided generous support. Moreover, HP people of our other participating divisions together made a contribution considerably larger than in previous years.

On behalf of 1967's scholarship winners and their parents, I want to thank all of you who contributed for your aid and generosity, and for your continuing interest in the education of our youngsters. It's most gratifying to see this unique program increase in scope and importance year after year.

While on the subject of investing in the future, I would like to call your attention to the U.S. Savings Bond campaign to be conducted soon at all HP plants and sales offices throughout the country. This marks the twenty-sixth year of the Savings Bond program, and the twenty-sixth year in which our company has participated.

It is especially important that we lend our fullest support and cooperation to this year's campaign. In addition to supporting our nation's commitments, both at home and abroad, savings bonds add strength and stability to our economy. From the individual's standpoint, they represent an excellent way of steadily accumulating savings for a more comfortable retirement, for financing a youngster's education, for buying a new home, or making other major purchases.

An important feature of this year's campaign is the offering of new "Freedom Shares," treasury notes available to regular purchasers of Series E savings bonds. Freedom Shares mature in 4½ years and bear interest at the rate of 4.74% compounded semi-annually. Information on these new shares, and on the regular savings bonds, is readily available from your campaign chairman.

I hope all of you will seriously consider this practical, profitable way of not only helping your government, but also helping you and your families enjoy a brighter, more secure future.

*David Packard*

# Measure

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Palo Alto, California 94304

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¡SÍ, SEÑORITA!



«La cubierta de la revista *Electrónica*, publicada en Lima, Peru, muestra dos productos excelentes de Hewlett-Packard,» says this *linda señorita*, Yolanda Squarcia of HP's International Operations.

Literally translated, she's telling us that two fine HP instruments are gracing the cover of this Peruvian periodical, *Electrónica*. The cover photo shows a radio-telephone plant in Peru, where operations are aided by HP's 5245L counter (top center), stacked atop a 606A signal generator.

A back-cover advertisement by our Lima distributor, Fernando Ezeta B., and two stories about HP inside the magazine further indicate the company's growing importance in the international marketplace—and the growing importance of international markets to HP.