



# Measure

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

# A man's next best friend is his chef....



At YHP cafeteria near Tokyo, at left, the choice is between chopsticks and fork. The meals, displayed at right, reveal Japanese ability to prepare food that appeals to the eye as well as the taste.



□ On upper floors of Manhattan skyscrapers, the latest way to exhibit superstar status is to have lunch served privately in your office by an English butler. At Hewlett-Packard plants and offices, you more than likely serve yourself, or you might be able to persuade a fellow employee to fetch some food on disposable dishware from the cafeteria. The food, however, will probably be just as good to eat—and much better for your pocketbook.

Cafeteria service is indeed a common experience for people in the larger HP organizations, and generally it is well liked and patronized. But within that experience there is a wide spectrum of arrangements as to how cafeterias are run, what they offer, and how they got their start—some of them quite enlightening in their fashion.

One story began on St. Patrick's Day some years ago when the chef at the Stanford plant thought to honor the occasion by coloring the mashed potatoes green. This action was not generally appreciated. Today a food service organization—Manning's Inc.—operates the cafeteria along with four other HP cafeterias in Northern California divisions.

Another HP peninsula cafeteria operator, Guckenheimer Enterprises at Automatic Measurement Division in Sunnyvale, had a far from ordinary origin. Stewart Ritchie founded the organization during the time he was a medical student at Stanford University. Determined to pay his own way through school, he first set up sandwich sales on campus, then branched to the former Systems Division located on Page Mill Road at that time. There he offered readymade sandwiches on an honor system of payment. Today, his fancifully named organization provides full cafeteria service to AMD, and has added at least a dozen other industrial locations to his roster—to the point where still-young Dr. Ritchie pursues the food business fulltime.

**Cover:** Very proud of his cooking—and rightly so according to the 1,500 to 2,000 people per day who make use of the Stanford plant cafeteria—is Chef Nino Williams. Chef Nino, who is actually employed by a food service organization named Manning's Inc., learned his culinary skills in the HP kitchen.



HP Singapore depends on prepared foods brought in by an outside food contractor. Cafes and other stores are located only a short distance from the factory, but quality low-priced food at canteen attracts four out of five employees.



A long tradition in the restaurant business is behind the Loveland Division cafeteria operation. Stan Williams, the operator, recalls that his grandfather opened Williams Cafe in Longmont, Colorado, in 1903. In 1950 Stan took this business to Berthoud, coming in contact with HP about ten years ago when he was asked to run some food vending machines. Today his Food Management Service Inc. is a major operation in northern Colorado. At HP he employs 15 people who serve as many as 1,100 people a day, plus special events of one kind or another.

Food itself is a many-varied thing around the HP world. HP Singapore reports that no cooking is permitted on the premises, but the canteen operator brings in an assortment of packaged lunches consisting usually of rice, vegetables and meats. Most popular are the steamed meat dumplings. Prices are about 20 percent less than nearby cafes.

At the Hachioji factory near Tokyo, Y-HP offers a full three meals a day due to the presence of 150 bachelors living in dormitories on the site. The bachelors have breakfast available at 26 cents and supper at 38 cents. Two kinds of

At the South Queensferry plant in Scotland about 80 percent of people buy luncheon at the cafeteria. This is not surprising when you consider that a lunch consisting of soup, main course, and dessert comes to about 48 cents. For slightly more you can have a "special" such as steak or scampi.

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## next best friend

lunch are available to all employees. The light lunch costs 34 cents, while the a la carte menu offers noodles, curried rice and beef stew at prices ranging from 11 cents to 57 cents. Such prices are said to be from one-half to one-third those charged by local restaurants.

Of course, it is rather well known to HP international travelers that the HP plant at Boeblingen in South Germany follows local custom in providing beer-dispensing machines. Hot and cold meals are also available for lunch, precooked by a company in Stuttgart. Actually, due to proximity to town, to local tradition and the 45-minute lunch break, many HP people there go home for this meal.

When large enough, as HP Ltd. is with 310 people at its sales headquarters near London, England, sales organizations have added appropriate food services. At the Slough office, employees prepare a lunch menu that offers the normal three courses, including three choices of main course. Prices are generally about half those of local restaurants, and nourishing low-calorie foods are available.

At European headquarters in Meyrin, Switzerland, wine is available with lunch—again a tradition of the country.

A very “HP type” story comes out of the cafeteria at the Paramus, New Jersey, office of Eastern Sales Region. There, Chef Carl Giardina operates a service that is praised as much for the spirit of amiability as for the food.

Carl came to HP in 1971 after operating two pizza shops in New York: “I was making very good money. But my hours were horrible. I found I had no home life, and my son was then two years old—and I didn’t know him. So I sat down and asked: ‘How can I stay in the food business and yet lead a normal life?’ Cafeteria service seemed to be the answer, so that’s when I started looking—and when HP also happened to be looking.”

But pizza is one thing; good food and food management are something else. Carl understood this, and approached Personnel with an idea about attending a highly recommended course in food supervision. It would involve eight months of four nights a week, three hours a night in New York City. The company said ‘Do it,’ and he did—with top honors in the class. Today, Carl is putting that training to the test not only in Paramus but also at the cafeterias at the New Jersey Division and the new Eastern Sales headquarters office at Rockville, Maryland.

Beyond these diverse origins, of course, are several principles underlying almost all company cafeteria operations.

Convenience is one basic concept: Since so many HP facilities are located beyond normal walking distances from stores and restaurants, internal food service of some kind is highly desirable.

Another principle is reasonable cost consistent with good quality. One way this is achieved is by HP providing the cafeteria space and capital equipment; the cost of rent and kitchenware does not show up in the price of the food. In addition, most of the HP divisions provide a limited subsidy for cafeteria operating costs.

The real point or question, of course, is whether the various food service operations meet the needs and wishes of HP people. But since that’s really a decision for the individual, let’s hear from some:

Chef Carl Giardina at Paramus, New Jersey, sales office samples the soup. Carl is now coordinating food service also at New Jersey Division and new sales headquarters near Washington, D.C.





**what some customers say...**



Michael Fournell puts the Stanford food service to a tough test: Can a bachelor find happiness in the company cafeteria? His answer appears below.



"For the same meal," said Michael Fournell of Corporate public relations, "I would have paid much more in New York." He was referring back to the cafeteria of the firm where he recently worked as assistant editor. A bachelor, Michael says the midday meal is important to him because he doesn't care to go to a lot of trouble cooking for himself at night.

Two men at the Medical Electronics Division who live singly have the same motivation. Walt Pienkos, personnel administrator, has been relying on the Waltham cafeteria for over a year now for most lunches and some breakfasts: "Perhaps a certain degree of 'sameness' sets in after a while, but this can be true at home or anyplace. I've done some shopping lately and I'm not sure I could produce the same meal they do here at the price they offer it, which doesn't

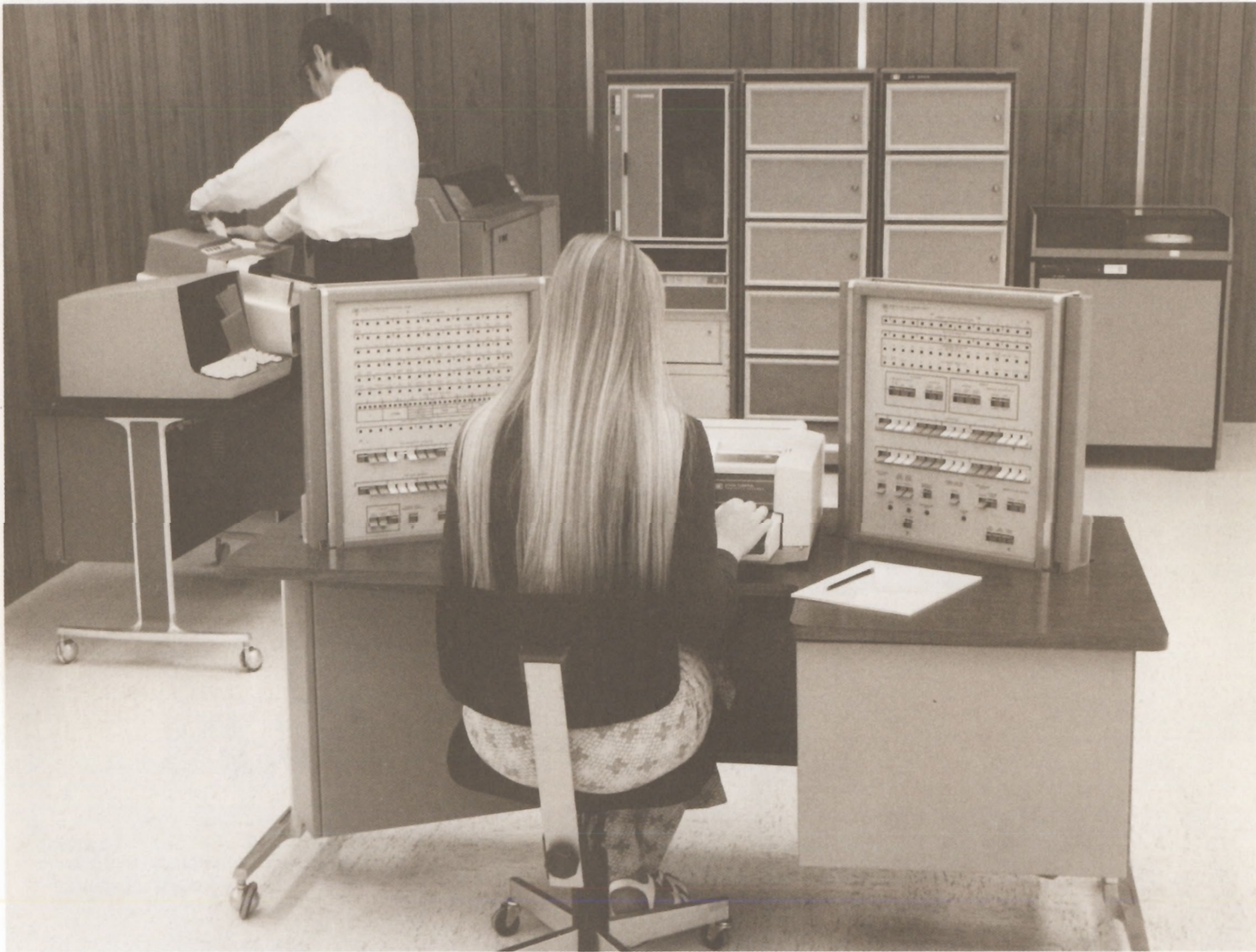
even allow for my time and trouble. Obviously there are economies of scale in a cafeteria operation, plus a substantial subsidy."

George Breed, MED customer service manager, estimates it would cost him twice as much to eat outside: "I eat breakfast here, and right now the biggest customers in the morning are the construction men. Truck drivers used to time their deliveries for lunch. Those guys know a good bargain."

At Automatic Measurement Division, project engineer Verne Kilbo eats two cafeteria meals a day—breakfast and lunch—for less than two dollars a day: "They're good meals, too. My wife puts in a long enough day at our rubber-stamp business, so this way she doesn't have to worry about me." □

HP

3000



# A new way of thinking

That headline was the theme for the HP 3000 Computer System at a recent Data Systems Senior Sales Seminar. At the seminar over 120 field salesmen and systems engineers from Data Systems and EPG Systems sales forces experienced the new 3000 system. There was quite a bit of excitement in that experience—for here was represented the largest and most complex product development ever undertaken by the company, onstream with a unique and exciting range of capabilities.

What's new about the HP 3000? First and foremost is a new operating system. The operating system software—the Multiprogramming Executive (MPR/3000) as it is called—is a complex program that tells the system hardware what to do and when to run a user's program. An operating system like MPE is similar to a juggler—each user of the system is a ball, and the operating system keeps track of where each one is and which one needs to be handled next. The old operating system was a good juggler, but sometimes when it got too many balls in the air at one time, it would drop a few. And it didn't juggle as many as Data Systems thought it would when the 3000 was announced.

Bill Foster, member of the software development team, noted that "The computer industry has a habit of announcing a product before it's ready. It's almost a tradition, one that's designed to attract a customer's attention before he buys something else.

"In our case, when the first 3000 was shown at the 1971 Fall Joint Computer Conference in Las Vegas, the hardware was fairly complete, the software about 30 percent along. In promising delivery in late 1972 we got ourselves in a jam. An operating system such as MPE/3000 is very complex. Some portions of the system did not go as quickly as first anticipated. But the end result is we now have a reliable operating system that is state-of-the-art. Also we have now developed a level of expertise in software design and implementation that is among the best in the industry."

Today, one year after a decision was made to hold off intensive marketing for further development on the operating system, the operating system is now a seasoned, polished professional "juggler."

The MPE is not all that's new about the HP 3000. Recent customer tests of the new operating system show the 3000 is a very significant contribution to the computer marketplace. What it offers is a whole new way of thinking about the man-computer interface.

For the user sitting at a 3000 terminal it means he has at his fingertips full access to any of the very advanced and considerable capabilities of the system. Or he can easily switch to a more traditional way of accessing the system—via a batch input device. In either case he has multiple programming languages available to him, and techniques normally associated with larger computer systems.

Making such sophisticated computer capabilities available on a mini-computer system represents a new way of thinking for the company also. It enables Data Systems to sight in on a particular segment of the computer systems market, namely the market for batch and multilingual terminal systems priced under \$500,000. For capabilities found on the 3000, a customer typically had to use a large computer system costing \$500,000 or more. The HP 3000 provides its users the same capabilities found on the larger systems. While the larger systems can handle more users than the 3000, many people could not justify the added expense for the extra users.

For many people the 3000, priced at \$185,000, represents a new alternative—a new state-of-the-art way to solve their problems. With the 3000, HP maintains its technical leadership in the mini-computer, the first to offer a mini-based single language time-share system, the first to offer a disc-based real-time system on a mini. And with the 3000, HP is the first to offer a system that brings advanced on-line computing capabilities to the mini-system user. HP is the first to shoot for this market, and Data Systems people believe the company is from two to three years ahead of competitors in this aim.

Paul Ely, Division General Manager, said, "As far as the original system is concerned, in my view the problem was created when data sheets and other descriptions of the product were published before development was complete. Based on these we went to customers and made commit-

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## a new way of thinking

ments that had deadlines that proved much too tight. Actually, the people here almost pulled off a miracle in the computer hardware department, it's that good.

"But we learned that introducing computer systems is no different than introducing any other HP product. In the future we won't be making announcements until development is completed.

"Overall, the 3000 is a unique and powerful contribution. It's a mini-computer system with the functional power of much larger systems. It offers the individual user characteristics on a level with computer systems costing three to five times as much. So for the functional operating group, we offer a real cost effective solution to the problem of getting timely answers from computers. He is no longer forced to choose between the limited flexibility of a smaller dedicated system, or using the services of a remote large multi-million dollar giant computer. He can get computer capability where he needs it—at his operation—and when he needs it, not when some remote operation required it. With the 3000 and our 2100 line, we can really offer the right kind of solution for many of the problems encountered in educational and industrial areas. We are going to use a 3000 in our manufacturing area for exactly the same reasons our customers will—there is a real need for advanced, but flexible, computer capabilities in the \$175,000 to \$250,000 range."

According to Bob Cornell, systems integration manager, "The fact that the HP technicians who put the product together and test it are very high on the 3000 says something significant. If they like it and are excited about its possibilities, then our customers will be too."

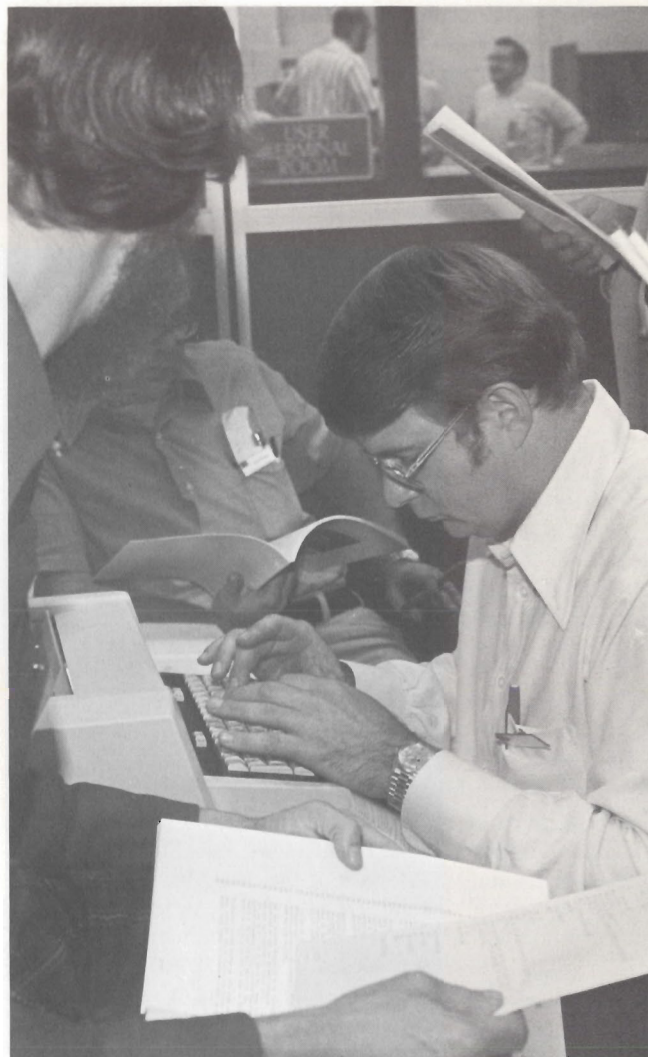
This view was confirmed by members of the 3000 marketing team. Bruce Noel described the present 3000 users as pioneers in their fields: "These are the achievers, the ones who like to take on problems and solve them with new methods. It was rough having to tell them a year ago

Mike Halaburke, Data Systems district manager at the Lexington, Mass. office, operates an HP 3000 terminal during the recent senior sales seminar at Cupertino. According to Mike, "When you sit down and use this system you really get a feeling for the advanced capability available at a terminal. The 3000 is the kind of product you like to show off on your competitor's home ground—it's going to make them sit up and take notice."

that we needed to work on the system some more. But we continued to work with them, and they share our excitement over what the 3000 can do today. The new operating system has been installed on over twenty systems now. User enthusiasm and feedback confirms our belief that we have a great contribution for the small-medium computer system user.

"Working with these customers has also given us valuable insights on where and how to sell the system—we have a much better handle on the real contribution the system represents and what it means to customers. So we can put together a real effective sales campaign."

Nev Griffin, 3000 product marketing manager, noted that "We have a system that is priced right for a majority of the small-medium systems market. And the swing is definitely toward the type of system we have with the HP 3000. With the development edge we have, and the HP sales team, it's going to be tough for competitors. So we forecast profitable growth for HP in this exciting area." □





# computer language

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Computer people, like electronics people, talk a language all their own. Some definitions of the following computer terms and phrases will aid the first-time traveler:

**Time-share**—a method of allocating use of a computer that allows many users to develop or run programs at the same time on the same computer. Each user gets a 'slice' of time on the computer. The computer is fast, so it can 'keep up' with each user.

**Batch**—Another method of allocating use of a computer. Here the user tasks (i.e. developing or running computer programs) are run one at a time, typically in the order they are entered. Think of a gas station with a single pump: In 'batch,' the cars would be filled up in the order they appear in line. If the pump were being 'timeshared,' the attendant would service many cars at the same time—a couple of gallons in one car, a couple of gallons in the next car and so on.

**Multiprogramming**—A technique that utilizes a computer system more efficiently. Again, let's look at the gas station attendant. Rather than wait while the gas is being pumped into the car, he wipes windshields, checks the oil. He is 'multiprogrammed'!

**Operating System**—A complex computer program that tells the system hardware what to do next. For the gas station attendant, his 'operating system' is his brain—i.e. it signals him to move to the next car, to the windshield, and so on.

**Central Processing Unit**—The hardware section of a computer that does the calculations and data manipulation.

**Terminal**—A device that is used to communicate with the computer system. There are many types of terminals—typically they have a keyboard to enter data and a way to display data (print-out or cathode ray tube display). Many terminals look similar to a typewriter—the keyboard enters data and the computer communicates with the user by printing out information.

**Language**—A user tells the computer what he wants it to do via a programming language. Like any 'language,' there are conventions to express various tasks. Some programming languages are English-like (an example in the BASIC language: LET A = B), while others are oriented to specific types of problems (engineering, business, etc.).

**Hardware**—The actual physical equipment.

**Software**—The programs, languages, and operating systems that are used by customers to apply the computer to a specific problem.

**Compiler**—A program that translates user commands, written in a particular language, into the many detailed, step-by-step commands for the hardware. These step-by-step commands tell the hardware what to do to 'execute' or carry out the user commands. For each language, there is a compiler.

# “How do you find Penang?”

Picture, if you will, a tropical island: Coconut palms. Forests of fern. Humid sea breezes. Rubber plantations. Colonial township.

Victorian architecture. Ox carts. Smiling people. Witch doctors. Does that put you in mind of the 20th Century?

Then consider Hewlett-Packard's experiences in such an environment, specifically on Penang, a 110-square mile island only a mile or so offshore from the lush west coast of mainland Malaysia.



A lively gathering resulted when two shifts of employees at HP Penang met with company directors for a buffet lunch early last month. The visit by directors followed a board meeting in Japan and a stop at HP Singapore.

As HP people have found, Penang certainly has the tropic island characteristics. But it also has a stable, informed and forward-looking administration, one that has taken appropriate action to fill a void left by the departure of the one-time British administration. That event left major bases empty and businesses unpatronized. Largely because of this, unemployment became quite high in recent years.

The Malaysian government thereupon set out to rebuild the economy. As part of the program it set up a free trade industrial zone for the purpose of attracting industries that could employ many people, train them to new skills—but not be a threat to the environment.

HP got its first look at Penang nearly two years ago. At the time it was looking for a plant site to back up its Singapore operation which was reaching a point where additional facilities would have to be found. Penang was among a number of such sites examined.

According to Bill Doolittle, vice president and director of International Operations, HP people including Bill Hewlett were particularly impressed by Dr. Lim Chong Eu, Chief Minister of the State of Penang, and his staff. Dr. Lim made clear his interest in Hewlett-Packard, and HP in turn recognized the opportunity represented by Penang. In brief, here was official encouragement, economic incentives, attractive environment, favorable geographical location, and most important a people with a high capacity for learning and performing work that requires patient and meticulous attention—and who were in real need of such work.

Only four months were required by Penang contractors to complete HP's new 40,000 square foot building which meets all HP standards including air conditioning and fire safety.



Victorian-style building that formerly housed Red Cross and where HP Penang got its start, serving as a training and headquarters building until new plant was opened recently.

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One distinctive feature of HP Penang is the free bus service provided between plant and Georgetown, a 10-mile ride.



## Penang

Several other electronic component firms were already in business in the free trade zone when HP made the decision one year ago to commit itself to Penang. The company bought four acres of former coconut swampland in the zone, contracted for local architectural services, and meanwhile leased a former Red Cross building so that a program of training could be launched.

The training mission was accomplished by an interesting interchange with HP Singapore. Liong Wong, an electronics engineer (EE from U.C. Berkeley, MBA from McGill University) who joined HP Singapore as core memory production manager, became Penang manager. A group of Singapore plant girls flew to Penang to launch training, while a number of Penang girls flew to Singapore for training and first-hand observation there. By May almost 300 Penang girls were trained in computer-core stringing, and HP Penang was ready to provide its own training programs.

Meanwhile, pile drivers went to work in the swampland, sinking about 500 piles to a depth of 40 feet as support for the building. In a matter of four months from the start of above-ground construction, the 40,000 square foot building was ready for occupancy. Considering that it meets HP standards all the way, including air-conditioning and fire-sprinkler systems plus all the usual comforts, it represents exceptionally swift construction by any standard.

But being 10 miles out in the country from Georgetown, where most employees live, how do you get a thousand auto-less people to and from work? You lease a dozen buses, and you offer free rides to anyone wearing the HP dark blue uniform. In downtown Georgetown, in fact, you can see signs that say such things as "HP Bus Stop #3."

Finally, a traditional Malay ceremonial feast known as the Khanduri, presided over by a Bomoh or spirit exorcist, was held as part of the official opening.

That effort and those of the many others responsible for the startup of HP Penang must have been on target. As of October, the plant was operating two shifts with a total of 1,050 people producing a variety of components including core memories for HP's minicomputers and certain light-emitting diode (LED) display units.

Which appears to answer the most-often asked question put to HP directors during their recent visit to Penang (by way of Japan and Singapore): "How do you find Penang?" the girls asked the directors in the course of a mass buffet luncheon of all employees. The visitors had no trouble answering that one.



Salmiah Haroon was one of the first people hired by HP Penang, and worked several months in the former Red Cross building in Georgetown where HP initiated training and production: "The first plant was a good place for people to learn about HP. But it's much nicer here. The canteen food is good, and the bus rides are fun. The only change I would make is the music. It's too slow. I like real hot music."



Doom Lim Ang, an industrial nurse, reported herself very pleased to be back from nurse training in London, England, and to have joined HP in May. "The girls appreciate the buses the company provides. It's too far and too hot—over 80° and very humid—for bikes. I've never worked in a factory before, but HP seems a good company. It's the only one in the Free Zone to give free bus service. And people are friendly here. One thing I don't look forward to is the durian season (see photo to left.). It's a very acid fruit, nice to taste but with a strong smell. Some of the people eat too many durians—and come to me with upset stomachs."

Maria Malik, personnel officer, came to HP Penang about six months ago after a similar position in another electronics firm in the Free Zone. "HP compares very well. We're still very new here, but our growth has been so fast! There were about 300 people working here when I joined. Three months later there were 600. By the end of the year we will have 1,100 people!"



Tan Kong Cheok, a "stringer" in the core memory department, came to HP from a clerical job which she found boring: "I like stringing cores. It's easy to do. I'm on the second shift now. Actually the morning shift is better for me. It leaves the evenings free. But I enjoy the rotation. I talk to my friends about coming here. I tell them it's a good place to work. They like my uniform. I'll leave only to marry. But I would like to go to California."



Misriah Abdullallah was one of some 20 girls at the Singapore plant brought to Penang to provide training. Now back home, she saw not too many differences between the people of the two plants: "My family worried about me going to Penang. But the people there were very nice, very friendly. I think the plant is a good place to work. Singapore people will be very pleased when our own new plant is built." □

## News in Brief

**Palo Alto**—Hewlett-Packard has received a \$2.8 million contract for more than 130 cesium beam frequency reference oscillators from the U.S. Navy Electronics Systems Command, Washington, D.C.

The HP instruments will provide precise frequency measurement and control for Navy shipboard communications systems.

The new oscillator is an improved version of HP cesium beam clocks, the most accurate commercially produced precision instrument in the world, according to Al Bagley, manager of HP's Santa Clara Division.

The unit purchased by the Navy was initially developed for use in the aircraft collision avoidance system approved by the Air Transport Association.

HP cesium beam clocks are used by most national standards laboratories for time keeping. In addition, they are used in worldwide navigation, communication and tracking systems based on precise time and frequency.

The oscillators were developed by HP's Precision Frequencies Sources Group, Santa Clara, California. The contract is the largest ever received by the Santa Clara Division.

**Cupertino**—As part of a general product repricing, Data Systems Division has reduced prices of its computer memory products by as much as 60 percent. The effect of this repricing is a lowering of prices by an average of 10 percent across the division's entire line.

Ed McCracken, division marketing manager, said that under the new price schedule users can buy a

32K minicomputer for \$5,000 above the price of a 16K computer. The previous price difference was \$10,000 (U.S.). A 32K HP Series 2100A minicomputer now costs \$17,750, and a 32K Series 2100S system computer is priced at \$18,750.

"Previously, in moving from an 8K mini to a 32K mini, a user was faced with a 3 to 1 price increase," McCracken said. "With our new prices, the difference is about 2 to 1."

Prices also have been lowered on HP microprogrammable accessories. For instance, floating point now can be added to HP-2100 systems for \$500, compared to \$2,500 previously.

"The lower prices on our memory products are due to reductions in the cost of manufacturing," McCracken said. "HP has delivered more than 6,000 minicomputers since entering the field in 1967, and this experience has resulted in more efficient, economical manufacturing."

Prices also have been lowered on HP systems. The 2000E and 2000F time share systems and 2121 disc systems have been reduced by 10 percent in price.

In addition to its traditional minicomputer line, HP has reduced prices of its 3000 virtual-memory operating system. The cost of a typical system has been dropped to \$185,000 from \$205,000.

Prices have been increased on some HP peripheral products, reflecting the higher costs of components and materials used in manufacturing. For example, the 7970 tape drive has been increased by 10 percent.

"The overall result for customers is that it will be significantly less expensive to purchase core memory products, less expensive to buy systems, and slightly more expensive to buy stand-alone peripherals," McCracken said.

**Palo Alto**—Eberhardt Rechtin, former Assistant Secretary of Defense for Telecommunications, has joined Hewlett-Packard Company as manager of telecommunications.

He will work directly with the Office of the President on telecommunications affairs for the company.

HP board chairman Dave Packard said, "The newly created position is a recognition of the close inter-relationships that are increasingly important between instruments, computers, calculators and the electronic communications between them.

"Advances in each field are resulting in new needs and opportunities in the others. By increasing its interest and involvement in telecommunications, HP hopes to improve its contributions to the whole field of instrumentation, data transmission and data processing."

**McMinnville, Oregon**—Hewlett-Packard will begin construction early next spring on a new 65,000 square-foot manufacturing and office building here.

Walter Dyke, general manager of HP's McMinnville Division, said the new building will enable HP to consolidate its local operations on company-owned property. The division currently occupies four leased buildings totaling 38,000 square feet, plus two company-owned buildings totaling 17,000 square feet.

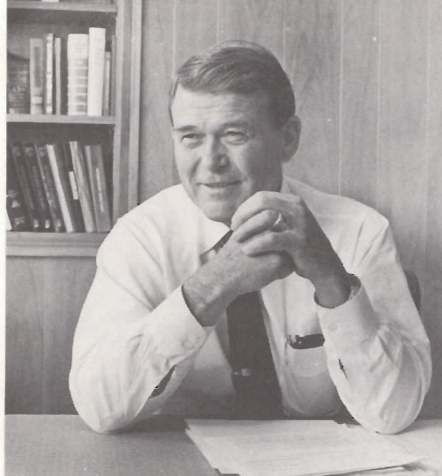
When the new building is completed in the fall, 1974, HP will have 82,000 square feet of building space in McMinnville.

HP is acquiring 54.5 acres of property adjacent to its previous land holdings, increasing its total in McMinnville to approximately 100 acres.

"This property is available for present and future expansion of the division," Dyke said.

The McMinnville Division manufactures and markets high-voltage field emission and thermionic x-ray generation systems for medical, industrial and scientific applications. Its product line includes chest x-ray systems, portable detection units, pulse electronic accelerators and industrial systems for analyzing components.

Formerly Field Emission Corporation, it was acquired by Hewlett-Packard last May. The division has more than 100 employees.



## From the president's desk

Last week I received the following telegram from Secretary of Commerce Frederick Dent:

“ARAB PETROLEUM PRODUCTION CUTBACKS AND EMBARGOES ON EXPORTS TO U.S. MAKE INEVITABLE SEVERE SHORTAGES OF WHOLE-RANGE PETROLEUM PRODUCTS ESSENTIAL TO U.S. BUSINESS AND PUBLIC. IMPACT OF THESE SHORTAGES WILL OCCUR WITHIN MONTH. TO STRETCH EXISTING SUPPLIES AND MINIMIZE DISRUPTION TO ALL AMERICAN BUSINESS, I URGE IMMEDIATE ADOPTION STRONGEST ENERGY CONSERVATION MEASURES POSSIBLE WITHIN YOUR COMPANY AND URGE YOU TO INFORM YOUR EMPLOYEES SERIOUSNESS THIS SITUATION AND VITAL NEED THEIR FULL COOPERATION BOTH IN PLANT, ON ROAD AND AT HOME. FAILURE TO CONSERVE NOW WILL AGGRAVATE EXTENT OF SHUTDOWNS IN MONTHS AHEAD, WITH SERIOUS ECONOMIC CONSEQUENCES FOR COMPANIES, EMPLOYEES, AND COUNTRY. URGENT ACTION IS REQUIRED TO MEET THIS CRITICAL SITUATION.”

I believe that Secretary Dent's telegram only serves to underscore the really critical energy situation that faces this country. I find it hard to understand how the United States ever let itself get in a position where any group of nations could so adversely threaten the vitality of this country. It's not as though there hadn't been adequate studies on the impending energy needs of the U.S.—there had, in fact, been several such studies prepared by highly qualified sources. It was simply that as a nation we did not take their findings seriously. We went blindly ahead increasing our energy uses by about four percent a year and, predictably, crossed from a supplier nation to an importing nation at the beginning of this decade.

If that was not bad enough, we have allowed ourselves to be conned into delay after delay in our nuclear energy program—the only real long-term relief in sight—by the efforts of a very small, uncompromising segment of the environmentalists who were in many cases moved more by emotion than by the realities of life. These are much the same people who have successfully blocked the Alaskan pipeline, and who have fought so bitterly all forms of surface mining—although studies show that this method is far safer than underground mining, and need not destroy the landscape when proper controls are set.

But looking ahead, under a set of very conservative estimates prepared by the Center for Strategic and International Studies at Georgetown University—even assuming a full go-ahead on the development of alternate sources of energy, and a considerable reduction in the rate of increase of energy used—we must expand our oil import program by almost three to one in the decade ahead.

I paint you this gloomy picture because there is much that all of us can and must do to conserve our energy resources. One of the least efficient users of energy has traditionally been the automobile. Substantial improvement can be made here by the use of smaller vehicles that emphasize fuel economy. It may be necessary for the Environmental Protection Agency to review its commitment to emission standards that have resulted in greatly reduced fuel economy of the modern car. The EPA should be willing to accept some slight compromise in present emission standards, if this relaxation can be accompanied by substantial fuel economies. As a company, we are moving toward smaller cars that provide better mileage performance, and we are beginning to convert our truck fleet to diesels. As individuals, we also can help in this respect by reviewing our own driving needs and asking, “do I need a car this big, do I need all the power, can I become part of a car pool to and from work?”

There are other ways energy can be conserved, and at HP we are trying several. A few degrees drop in the thermostat setting in winter and a little less air conditioning in summer will mean a substantial reduction in fuel demands. Still further improvements can be made by more optimum adjustments of both heating and cooling systems, such as increasing the amount of air that is recirculated. Similarly, fuel savings also can be realized at home by suitable adjustments of our furnace and air conditioner thermostats. At HP we are also rewiring a number of our plants so that it will be possible to have a much lower level of night-time illumination.

How long will we be faced with an energy shortage? I must say that I do not know. But for whatever the period, as a company, and individually, we are going to have to change our energy consumption habits. It is just something we will have to accept until such time as the more long-term programs can be installed and made effective.

*Bill Hewlett*



## Is this the company car of the future?

In view of the growing energy fuel shortage, Hewlett-Packard has indeed specified the purchase of medium or small-sized autos as transportation for its far-flung sales and manufacturing organizations. Here we see the ultimate: The Borg-Warner "Vintage Car of the Future" conceived by Artist Roland Emmett. A model of this creation is now touring the U.S., powered chiefly, it would seem, by publicity. Following are its salient features, by the number:

1. **POWER PLANT** powered by boiled after-shave lotion with a flying cherub booster and a turbine of silver coffee spoons.
2. **ANTI-POLLUTION UNIT:** a ballet of flowers which renders the exhaust enjoyable to butterflies and bees.
3. **SOLARMATIC** sun-and-planet automatic transmission with expanding universe configuration.
4. **PUSSIEFOOT** gravity braking system.
5. **RETRACTABLE FOG-LAMPS** comprising cut glass decanters half-filled with liqueur.
6. **CONTROL BOUQUET:** rotates dials, switches and lighted cigar under the eye of the driver.
7. **SELF-PLAYING HARP:** provides tunefull trills and roundelays.
8. **SAUSAGE BARBECUE:** to sustain the car's occupants when caught in impenetrable traffic jams.

## Measure

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