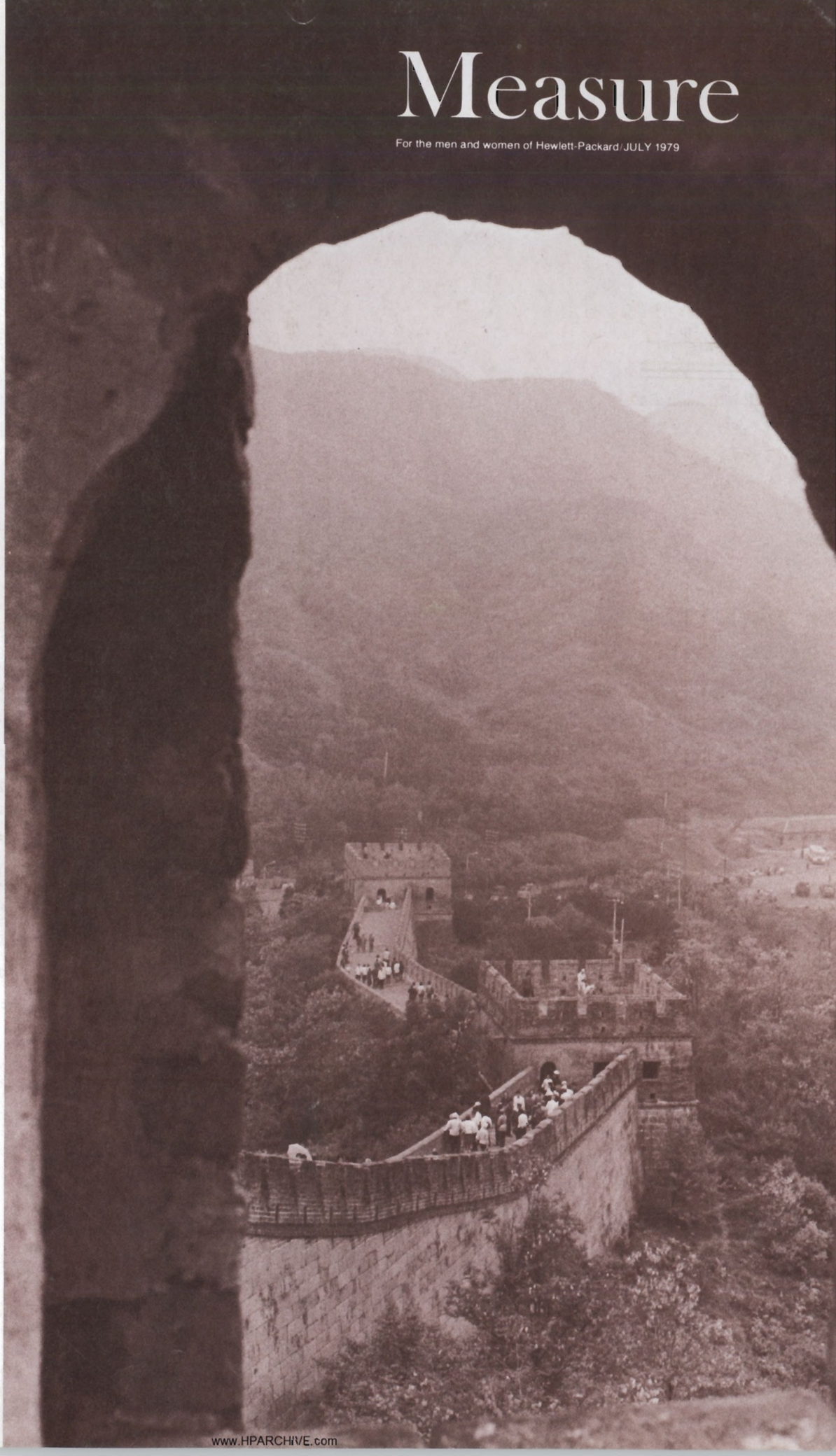


HP
GOES
TO
CHINA

Measure

For the men and women of Hewlett-Packard / JULY 1979





Some of the HP roadshowers pose atop the Great Wall: From left—Dean Morton, Bert Desmond, Frank Ryan, John Young, Blake Peterson, Bruce Farly, Art Fong and Eob Frankenberg.

The roadshow to Beijing...

"Knowledge begins with practice, and theoretical knowledge is acquired through practice"

—Mao Tse-tung

When Hewlett-Packard took a "traveling roadshow" of five, week-long technical seminars to Beijing (Peking), China, in June, the company did something apparently no other American firm has done before. In addition to the usual seminar materials, HP brought along nearly 5,000 pounds of its best and most up-to-date equipment to make sure seminar attendees got a lot of hands-on practice to complement generous doses of theory.

The response was instant and gratifying. According to ICON's Lee Ting, seminar organizer and leader of the ten-member HP delegation, both seminar attendees and Chinese officials were surprised and excited about the 91 boxes of hardware. At the end of the seminar, three end-users attending the sessions made arrangements to purchase most of the equipment.

"People at the China Council for the Promotion of International Trade, who sponsored our visit, told us that other companies presenting seminars had brought only slides and overheads," said Lee. "One company did bring in a computer, but it was a very outdated one."

Don Hawke, Instrument training administrator who handled logistics for the

seminar, described a telling scene that occurred when seminar attendees were helping take the top off a crate containing an HP 1000 computer.

"When they saw the equipment, a whole chorus of spontaneous 'oohhhs and ahhs' went up. It was like it was the most beautiful sight they had ever seen," Don states.

At first seminar participants were reluctant to touch the equipment, notes Bruce Farly, Logic Analyzer product manager.

"They eventually realized we really wanted them to use it as much as possible, and then they had a field day," he states. "I even changed my presentation around to give them more hands-on time."

The HP team...

The five, week-long seminars were offered concurrently, eight hours per day, in rooms in the International Club, Peking Hotel and MACHIMPEX Building. Sessions were conducted in English and translated through interpreters. Slides, overheads and other visuals were in English and Chinese. Topics included: RF and Microwave Measurements (conducted by Dave Widman, European product manager, and Blake Peterson, Santa Rosa's international product sales manager), Automated Test Systems (by George Stanley, Instrument Group training manager, and Bob Frankenberg, Data Systems Division R & D section manager), Engineering Design (by Art Fong, Corporate engineering design manager), Data Domain Principles and Measurements (by Bruce Farly, Logic Analyzer product manager), Series 9800 System 45 Desktop Computer (by Bert Desmond, Desktop Computer Division product manager, and Frank Ryan, Desktop Computer Division applications product manager).

The 180 participants, who ran the gamut from college professors to research engineers, came from all over China. Some reported they had traveled three days by train to reach the sessions.

Participants' enthusiasm was practically unlimited. All eight seminar

COVER: Section of the Great Wall, photographed by George Stanley.

Art Fong (center in photo at left) with attendees at the engineering design seminar. Below, Bert Desmond and Frank Ryan conduct the desktop computer seminar with translator's help.



leaders report that the groups they taught listened with unflagging attention and eagerness to all facets of the presentations.

"Even when temperatures hit an uncomfortable 95 degrees in the unair-conditioned seminar rooms, you were aware you still had the group's complete attention," says George Stanley. "It was really a nice feeling, and I think encouraged us all to do the best job we could to justify such enthusiasm."

Special visitors...

Another facet of the HP "road-show" which generated considerable interest was the visit from HP president John Young and executive vice president Dean Morton.

John and Dean spent four busy days in Beijing. They dropped in on the seminars, and hosted a luncheon for attendees. Then they held meetings with officials from the Chinese Institute of Electronics (Chinese Electronics Society, roughly equivalent to IEEE), and from the foreign trade organizations which act as intermediaries between Chinese end-users and foreign companies wishing to supply goods. They also met with the head of measurement manufacturing design and production for all of China, and spent an afternoon visiting a microwave instrument factory. At Tsinghua University (China's M.I.T.), they toured the integrated circuits and computation laboratories.

In talks with Chinese government officials, John and Dean discussed the country's long-range plans for economic development.

"They have a great appetite for technology," John states. "We were

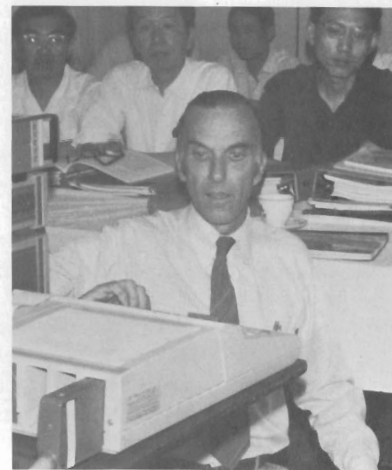
trying to get some estimate of what their priorities will be in this area compared to other development goals and financial capability to judge what HP's prospects are over a period of time."

They also talked about HP's products and how the company goes about supporting its equipment.

"We discussed how one supports sophisticated equipment—that is, the training, spare parts, repairs, software backup, and so forth," noted John. "We explained how in the U.S. and other countries we have developed an infrastructure of support. Right now, of course, it is not possible to establish such direct support because foreign companies are not permitted an official presence in China. Currently the Chinese repair HP equipment they have by looking at our manuals and ordering spare parts from us."

John notes that the reaction to their visit and to the seminars was "extremely favorable, but relationships will have to be developed over an extended period of time."

"The seminars were apparently a very big event in Chinese electronics life, and had dramatic impact across a broad range of end-users from around the country," he states. "They could have taken the easy course and filled



George Stanley demonstrates HP automated test system.

the seminars with people from Beijing. Instead they brought people in from all over the country who could particularly benefit, but at a lot of extra effort in logistics. The support from our Chinese host organization couldn't have been better."

The seminars were aimed at end-users, and came about through a series of events and circumstances—some planned, some unplanned. Last October, Neil Wilhelm, General Systems

(continued)

HP goes to China

Division software/firmware project manager, visited China as part of a delegation from the IEEE Computer Society. While there, he made several key contacts, which he passed on to Instrument Group marketing manager Bob Brunner, who made a combination business/pleasure trip to China in December. Bob was interested in finding a way for HP to reach end-users, and looked up the people Neil had suggested he talk to. He eventually was referred to the Chinese Council for Promotion of International Trade. They were enthusiastic about his suggestion that HP offer technical seminars, and the preliminary details were hammered out before Bob left China.

Reaching end users...

The seminars' major goal of reaching Chinese end-users was attained, says Lee Ting.

"All the equipment we sold following the seminar was to end-users who attended," he notes. "Being able to reach end-users directly is still the key to our marketing efforts in China because end-users determine purchase requirements and have the budgets. The Chinese foreign trade organizations which act as intermediaries between us and the end-users are important, but they do not create the purchase needs.

"Overall," Lee adds, "I feel we took a Class A production to China. From what I could determine by talking to many people, HP was the first U.S. company to do a seminar on such a grand scale. That fact, combined with the John Young and Dean Morton visit, has certainly left a very strong and lasting impression with the people there—users as well as officials from the ministries, foreign trade organizations and various other organizations with which we came into contact. That can't help but auger well for future business with China."



The China business...

When HP Instrument Group marketing manager Bob Brunner visited China last December, on a long shot he looked up an old engineering classmate from the University of Illinois. With the help of the Chinese electronics society, Bob was able to locate Hu Han-chuan, and the two men and their wives spent an afternoon together.

Hu and Bob had studied at Illinois together through 1949. However, their lives took very different paths, and in a sense Hu's story is China's as well.

"In 1949," explains Bob, "Hu's student visa was terminated by the U.S. government, when the Chinese Communists took over China and the Nationalists moved to Taiwan. Hu returned to China and apparently practiced his profession up until the time the Cultural Revolution came along. Although he didn't talk about it, it was clear he had been deeply affected by the turbulence and dislocation of the Cultural Revolution.

"He had obviously been out of his profession for quite some time—indeed, was probably sent down to the countryside to work like a lot of other Chinese professionals and intellectuals. Only one of his three children—who were aged 22 to 25—had finished high school because of the Cultural Revolution's disruption of the educational system."

But now Hu, like many other professionals in China, has been welcomed back into the mainstream following momentous political changes that occurred after the death of Chairman Mao Tse-

tung. Not only has the new leadership "rehabilitated" Chinese intellectuals and professionals but it is looking to them to help lead the Chinese nation on an incredibly long march toward modernization.

The four "modernizations"...

The goal is to make China a modern industrial state by the year 2000, and a program of "four modernizations"—in agriculture, industry, the military and science—is the blueprint for reaching that goal. The new, more pragmatic Chinese leaders have completely reversed the country's former policy of isolationism and economic self-sufficiency, and China is now actively seeking cooperation with Japan and the West. The government estimates it will expend \$600 billion on developments by 1985, including a hefty \$75-85 billion on imported capital goods.

What kinds of opportunities does that spell for U.S. business in general, and specifically for a high-technology company like Hewlett-Packard which could supply the type of equipment and technology the Chinese need for their modernization program?

While most analysts agree that there is considerable chance for American companies to do business with China, they also note it is unlikely there will be a high trade volume in the beginning.

Bob Brunner is seen during Peking visit last December when he worked out the HP seminar program with Chinese officials.

People power is China's greatest resource. Here it is used to divert a river.

While U.S.-China trade this year will hit a record \$2 billion, U.S. exports to China will probably only total about \$10 billion by 1985—well below U.S. sales to Africa over the past five years.

In addition, as Stanford Political Science Professor Harry Harding notes, the economic/commercial relationship between the U.S. and China still has not been fully normalized.

"The trade agreement worked out by U.S. Secretary of Commerce Juanita Kreps with the Chinese this spring must still be passed by Congress, and that possibility was hampered by the failure of Trade Ambassador Robert Strauss to negotiate an agreement limiting Chinese exports of textiles to the U.S.," he says, "Until such an agreement is reached, the large textile lobby in the Congress will probably oppose the trade agreement."

If passed, the trade agreement would grant China most favored nation status, and also includes provisions on such issues as dispute settlement, business facilitation through exchanges of trade offices, trade promotion via industrial exhibitions, protection of patents and copyrights, and much more favorable duties on imports.

Another factor affecting passage of the agreement, says Harding, is the growing determination in Congress to lump Russia and China together in bilateral trade matters.

"What some congressmen are saying is that if one communist power gets most favored nation status, the other should, too," he states.

Some other barriers...

There are other barriers to doing business with China. Says Harding, "The Chinese still don't have a legal structure in place, and that means no rules of the game—no regulations on investment, no tax structure, etc. Right now there are no courts in China for the resolution of commercial disputes. Chinese agreements with companies provide that disputes will be resolved through 'friendly discussion.'"

Harding adds, however, that the Chinese are now working on a whole set of laws to govern foreigners and foreign investment in China.

Many business people also wonder about the ability of the Chinese to finance the technology they want to import. Indeed, after a year-long buying spree, the Chinese recently announced they were retrenching, and the government issued new guidelines for buying technology. Further, China is still very capital-poor with less than \$5 billion in foreign reserves and an economy based on agriculture with industry that is ten to thirty years out of date.

The bright side...

But there are brighter aspects, too. China's oil reserves are at least three times as large as those of the U.S., and experts predict China can easily produce

more oil than Iran by the end of the decade. And, as A. Robert Abboud pointed out in a recent NEWSWEEK article, the Chinese are willing to borrow to finance their growth and they have an impeccable credit rating. Just as other growing economies have done, China can borrow ahead to purchase productive plant and equipment investment, and the resulting added production and exports should more than cover the cost of servicing the debt.

Although they may be able to overcome the problem of financing through loans, joint ventures, and development aid, there is still considerable question about how much technology their pre-modern society will be able to absorb. Transportation and communication systems are rudimentary, and there are severe energy shortages.

"Their absorptive capacity may be the real limit," notes Harding. "They don't have the infrastructure right now to integrate a lot of technology into their overall economy. For example, do they have the operators, managers and manpower to take a steel mill they purchase and make it run? Can they provide the raw materials, transportation system, etc? A case in point is a steel mill purchased from Germany that was unable to be used because there was no electricity available to run it."

But perhaps the biggest question of all for those considering doing business in China is the stability of the political situation. Will the trend toward polit-

(continued)



HP visitors (left) view assembly line in Shanghai Electronics Factory #3. Parts and assemblies move by belt.

HP goes to China

ical and economic liberalization hold steady, or will there be another sudden shift to the left and an abrupt closing of the door again? Will a population raised on Maoist ideology for the past thirty years be able to deal with the Western capitalistic ideas and values that will inevitably flow in with the imported technology?

Some say yes, some say no...

According to Harding, the Chinese have a long-lived ambivalence about their economic, political and cultural relationship with the West.

"Importing technology from the West has always been an emotional and controversial issue in China," he states. "There have always been factions that have argued that Western technology is needed if China is to be strong and modern. Others have argued that bringing in technology will also include importing Western institutions and philosophy, and that will be corrupting.

"The Chinese feel that their traditional culture was corrupted at the turn of the century when China began borrowing from the West," he continues, "and now some are afraid it will corrupt their revolutionary values. The Chinese have made it clear they want Western technology, but not Westernization. They want to import computers, but not the strip tease."

Will the Chinese be able to have their cake and eat it too, so to speak? Or will the rapid infusion of massive doses of technology bring about disruptions in the society similar to those which occurred in Iran?



John Young and Dean Morton hear about plans to expand campus from faculty members at Tsinghua University near Beijing. The HP visitors also saw the university's integrated-circuit and computation laboratories.

"Some argue, of course, that the cost of breaking away from a foreign trade based economy will become greater as China becomes more modern," he states. "They also assert that it took a Mao to personally intervene to cause the great shift to the left and the Cultural Revolution. No one now has that kind of institutional and social base in China."

On the other hand, he observes, "People don't always make decisions on economic costs and gains. The ambivalence and oscillations on Western-style modernization pre-date Mao and will undoubtedly survive him."

So which is the most credible prediction—political stability or political upheaval?

"Right now," shrugs Harding, "you can pick your analyst as to which theory you believe about where China is going."

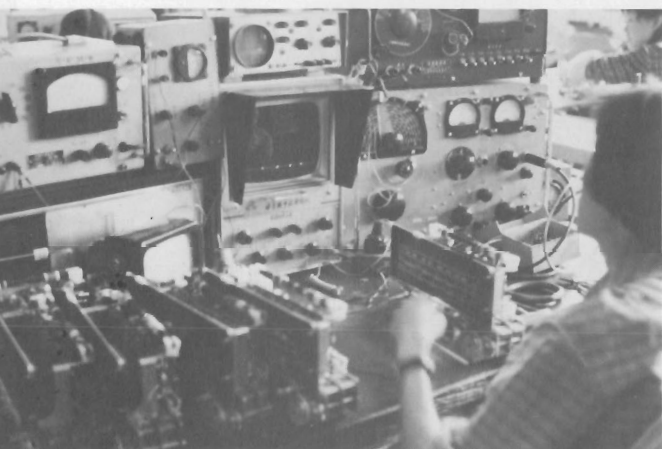
For the record...

The recent seminars in Beijing are just one more step in a progressive business relationship between HP and the People's Republic of China which began back in 1972. That was the year Vice President for International Bill Doolittle and then Far East Area Manager Lee Ting journeyed to China for discussions with the Chinese Machinery Import-Export Corporation.

"After that visit we received a number of requests for quotations and actual contracts," notes Bill. "We could fulfill only a small proportion, however, because of the need for appropriate export licenses."

Business was sporadic through 1974, he continues, then things cooled off—probably because of the political upheavals going on in China. Then David Packard spent a couple of weeks in China in 1977 with a group of U.S. businessmen invited by the Chinese government.

Activity began to pick up in early 1978 and the pace quickened considerably, just prior to and following U.S. recognition of China in late 1978. A \$1.2 million deal for distance measuring instruments was concluded in early 1979, and several others are under consideration.



Test technician in Shanghai Electronics Factory #3 checks out RF products using test equipment manufactured in China.



In search of Chrysanthemum tea...



HANGHAI, Dec. 16, 1978
—Chinese gardens are designed to enhance aesthetic appreciation and engender philosophical attitudes.

Form, texture, color and space arrangements tend, ideally, to create a sense of calm and composure. Significant is the shape of a window; equally important is the vista it presents. In a garden teahouse each window may have a different shape framing an exquisite view. The effect, then, of strolling through a teahouse is similar to viewing paintings hanging in an art gallery.

The Garden of the Mandarin Yu is such a garden. It dates from the 16th century and occupies a spot in old Shanghai where some years ago foreigners dared not wander. Here, in 1853, following the Opium War the Small Sword Society met secretly and planned an uprising to oust foreigners from China. Quelled at the outset, a hundred years will pass before their aim is achieved.

We are foreigners here, eighteen American visitors in search of the magnetic and elusive mystique of China. Our group walks the zigzag bridge spanning a small lake between teahouse and pavilion and leaves the serene garden. Immediately we are in Shanghai's Old Chinese quarter of narrow lanes at odd angles and blind alleys. There are crowds in the streets and crowds in the shops. Linguistic and construction sounds enclose us.

Two of us wish to purchase bulk Chrysanthemum tea. Our guide offers to assist, waves us on, and breaks into a brisk trot. We dodge around scaffolding, duck under low beams and speed after our Chinese guide. He pops into a shop. We follow. Brief exchange. No Chrysanthemum tea. At the third stop we win. For transporting the tea I choose a handsome metal container decorated with pictures of the Mandarin Yu Garden on blue background outlines with tracery of gold on brown trim. Tea is packed in container and yuan is paid to the shopkeeper. Outside in the street we meld with the masses carrying loads, pushing carts, moving rubble and raising roofs.

A message in Chinese blares over the public address system. For us it blends with the setting. Our guide stops, turns to us, eyes sparkling and begins to translate:

"The People's Republic of China and the United States of America have agreed to the normalization of relations...!"

"This is an historic moment!" he pronounces and claps his hands.

Chinese come from the shops to join the throngs in the streets. Hundreds of Chinese and two foreigners stand in a Shanghai street this December day clapping their hands with enthusiastic optimism, spectators to the making of history.

Virginia Brunner

(continued)

Rising interest...

One indication of China's increasing interest in HP is the number of Chinese delegations who have come to call over the past year.

Some six delegations have passed through HP, ranging from computer people looking at American computer technology to telecommunications experts shopping for equipment for a domestic space communications network.

The most recent visitors were high-level delegates from the Chinese Scientific and Technical Association. They spent a morning at HP listening to presentations on the company's organization and objectives, and also toured Stanford Park Division.

The group was obviously impressed that Bill Hewlett and Dave Packard turned up to chat and have lunch with them, and they were even more impressed when Dave proffered an invitation for China to send some people to HP for training.

Rising to offer the delegation's thanks, the group leader noted that the major purpose of their visit was to "promote friendship."

"Friendship," he said, "is an excellent basis for doing business."

At Stanford Park Division, manufacturing manager Don Summers meets with visiting team of Chinese telecommunications experts.



HP goes to China

First impressions (professional)...

Computers will play a key role in helping China become a modern industrial society, and that will require importing both hardware and technology from the West, says Neil Wilhelm, General Systems Division software/firmware project manager.

Neil spent 19 days in China last October as part of a delegation from the IEEE Computer Society which was hosted by the Chinese Electronics Society. The group visited universities, manufacturing facilities and research centers in six cities, and came away with the impression that China has a lot of catching up to do.

"The Chinese are developing their own computers, but they are limited right now by their technical know-how, manufacturing know-how, and knowledge of how to run a modern business," he states.

"In some areas they're just moderately behind. Their integrated circuits seem to be at a 1970-72 level of integration, for example, but production skills and capacity are low," he states. "However, their peripherals, software and construction practices are 20 years out of date."

Instruments are also in short supply in China, Neil observed.

"The computer factories had few oscilloscopes, and most of the debugging was done with loudspeakers connected to

the logic signals. Those instruments we did see were often Chinese copies of Tektronix or HP equipment."

Tools from the '30s...

"We saw soldering irons that looked like they were from the 1930s," he notes. "And one thing that amazed me is the simple things they lack that we take for granted—like copying machines. Think how difficult reproducing and disseminating information is without copying machines."

Fortunately, the Chinese "do a lot with what they have," says Neil, and they are also eager to learn. The IEEE group was invited to China to "criticize" Chinese production facilities, and to give hints and suggestions for improving them.

"Our hosts were always seeking advice and asking 'how can we do this better?' and 'what are we doing wrong?'" says Neil. "Criticism is not negative or pejorative to them. It means to make comments that will be helpful. And that kind of attitude is going to be extremely valuable as China strives to reach technical parity."

When Chi-ning Liu's parents took him away from China 30 years ago, he left behind two older brothers who were in university. This spring when he went back, he managed to have a family reunion as well as to act as a technical liaison for HP.

"It was good to see my brothers again, and to meet their families," he states. "I was amazed how close I felt to them even though I hadn't seen them for so many years."

Chi-ning spent almost a month in Canton, Shanghai, Beijing and Xian where, thanks to arrangements his

brothers had made, he visited major hospitals and medical research facilities and gave a number of lectures and seminars. Formerly of Andover Division and its liaison at HP Labs, he recently was named as Intercontinental's market development manager for the People's Republic of China (PRC).

"Because of the Cultural Revolution," he notes, "technical people in China are 10-15 years behind in their knowledge. They were eager to talk to me and to learn. I could speak for three hours straight and not hear one sound—they were concentrating one hundred percent."

In some ways, China's medical treatment is not as sophisticated as the West's, observes Chi-ning, although they do have basic skills and equipment.

"Physicians' knowledge seems to be up-to-date, but equipment is about 15-20 years old," he states.

In at least one area, though, they are ahead of America.

"China's survival rate for coronary artery disease patients is considerably higher than in the U.S.," he says. "That's because they keep patients in hospital two to six months. Can you imagine doing that here with the cost of medical care in this country?"

Chi-ning met with a number of important Chinese officials during his visit. While in Beijing, for instance, he conferred with the Deputy Minister of Health. The director of the Institute of Biomedical Engineering flew down from Szechuan with fourteen of his engineers to consult with him.

A special relationship?

Chi-ning is certain there are good opportunities for HP in China, and he even envisions a special relationship.

"HP can certainly provide some of the tools they need for their modernization program," he says. "We could transfer knowledge to them on how to select, use and service our equipment. That will be helpful to us because they could be our first level service people. It would also pass knowledge on to them. They would benefit and we would benefit."

It is important to stress that HP will help them upgrade their technology as well as sell equipment, says Chi-ning.

"We should think in terms of a long-term relationship, not a short-term one. We should take the attitude of friendship in the beginning, and do things to help



Chi-ning Liu (center), HP's new market development manager for the People's Republic of China, is seen in discussions with key faculty members of Jiao-tang University in Xian, Chi-ning's birthplace.

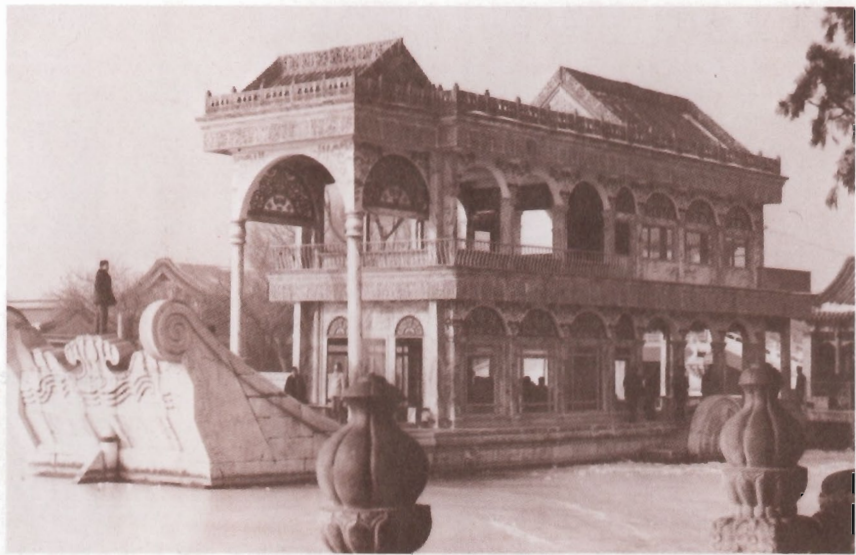
them out. Friendship in China is a very good basis for business relationships.”

HP must also stress its full capabilities in contacts with the Chinese, Chi-ning advises.

“Most technical people there still think of HP as an instrument company. We have to let them know about our other capabilities. We must introduce ourselves at a very professional level, and provide them with inputs about us and our equipment.”

He adds one final warning:

“It is important that we have people dealing with the Chinese who understand and respect their culture. The Chinese are not the Russians, the Americans or the Japanese. They have their own great history and they refer constantly to that history in their thinking and decision-making.”



Famed Beijing “landmark”, the Empress’s marble boat built with funds intended for naval vessels.

First impressions (personal)...

It’s an incredible experience to be in a country that’s been sealed up for 30 years, but is now opening its doors. They are so eager to learn about everything.”

George Stanley’s view of China is one shared by many of the members of HP’s delegation. Some of the 10 were able to do some sightseeing and traveling after the seminars, and came away with the impression that the Chinese are undergoing a “crash course” in understanding the West.

“The whole nation seems to be studying English,” says George. “People approach you to practice speaking English, and I even had several ask me to look at their English homework to make sure it was correct!”

Several delegation members reported hearing Voice of America broadcasts, and noted that people were listening to them eagerly.

“There was also some news about America and the West on TV,” says Bruce Farly. “I didn’t understand everything I saw because of the language barriers, but I did recognize a news clip on gas lines in California.”

The Chinese evidence tremendous interest in anything connected with America. Several HPites took along snapshots of their families and life in the U.S., and found that displaying them attracted instant crowds.

“We were sitting on a park bench, and a lady brought her child over and we took her picture,” says Bert Desmond. “Then we pulled out pictures of our children and people on five park benches unloaded and ran over to see. It was amazing.”

The HP group got a warm reception wherever they went.

“People really seem to think a lot of America and Americans,” notes Bert. “America is *Meiguo* in Chinese, which means ‘beautiful country’ and they certainly treated us like we were beautiful people. Everyone was so warm and kind. At one point some students gave us Mao badges as tokens of their friendship. And the waitress in our hotel gave Frank Ryan a pin with the U.S. and Chinese flags crossed.”

One of the group’s tour guides was an English teacher at Nanking University who was intent on learning about American slang and idioms.

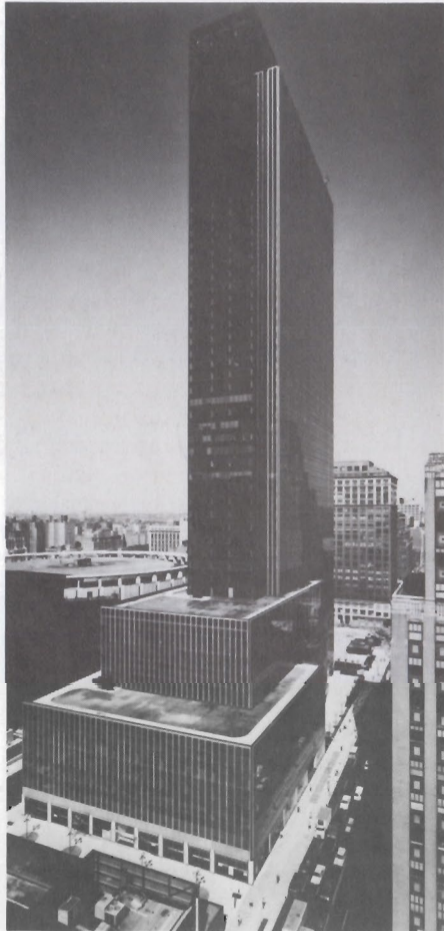
“She said we were ‘walking dictionaries,’” laughs Blake Peterson. “She wanted to learn as much slang as possible so she could teach it to her students. She also asked us definitions of words like ‘bottom line,’ and so forth.”

An experience of the trip that stands out in everyone’s mind was the two-hour trip by mini-bus to the Great Wall.

“Most of the HP people were there, along with our three Chinese interpreters,” recalls Bert Desmond. “We were singing songs, and the Chinese really liked ‘America the Beautiful,’ so we taught them the first verses and then we all sang it together. It almost brought tears to our eyes.” □

EDITOR’S NOTE: The China beat was not new to Judy Hansen, public relations representative for HP’s Intercontinental Region and editor of its Intercom magazine, who prepared this report for MEASURE on HP’s newest business frontier. A graduate from the University of Michigan in journalism and Asian studies, Judy spent nearly three years working and studying in Asia, employed as a writer and editor for a variety of commercial and business publications in Japan, Hong Kong and Taiwan.

HP ROUNDUP



Everything's HuP in NYC!

HP has added a new dimension to its sales activity in New York City—57 stories up! The location is #1 Penn Plaza at 34th Street and 8th Avenue—very central to the world's highest-density sales territory. In addition to serving as a base for sales and service people, the office has been designed as a showcase for HP products, particularly systems products. Employees visiting New York are invited to add the office to their list of "things to do in the Big Apple."



At this time of year particularly, the sounds of hammers, saws and concrete mixers are heard almost everywhere throughout West Germany's Black Forest. And like Fritz Schächinger of the bench repair department at Boeblingen Division, the builders are mostly do-it-yourselfers.

Such building appears to be in the blood or culture of Schwabian natives like Fritz. He learned building from his father, who learned it from his father. Seven other members of the repair group are building homes. All ten members of his bowling team have built homes. His sister built her home. And like Fritz, all of them share their skills when needed in return for past or future help. Even the design of Fritz's home was done by a fellow member of a local handball team.

The workmanship is anything but amateurish. Built like a fortress, the Schächinger home has many luxury features, including wine cellar, sauna, and elegant tiled floors—all at far less cost than obtainable commercially. It's enough to make a contractor cry.



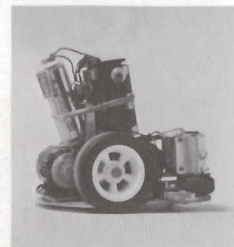
While thousands cheered...

Before 17,000 track fans in Berkeley last month, three of four HP relay runners posed for a victory portrait! Competing alongside some of the world's best athletes at the 1st Annual West Coast Brooks Meet of Champions, they won first place in a field of eleven teams entered in a special event known as the Runners World Corporate Cup. Shown are Roger Quimby of Neely Santa Clara who ran the 440-yard leg, Hershall Jenkins of Santa Rosa Division (2 miles), and Alan Housley of Data Systems (880 yards). Not shown is Hank Lawson of General Systems (1 mile). Their win entitled HP to a premier position in regional and national competition in the newly formed Corporate Cup Relays.



GENEVA—The final score of the final HP Eurocup challenge football (soccer) match said: "Böblingen 1, Winnersh 0." A taut game between well-matched HP sides. The real triumph, though, was the tournament itself involving 500 HP people on 14 men's and 2 women's teams. In order of finish they represented Böblingen (Germany), Winnersh (U.K.), South Queensferry (Scotland), Madrid (Spain), Grenoble (France), Milano (Italy), Geneva (Switzerland), Frankfurt (Germany), Waldbronn (Germany), Stockholm (Sweden), Brussels (Benelux), Amsterdam (Holland), Orsay (France), and Zurich (Switzerland). In the women's contest the Swiss team out-scored Frankfurt 3-0.

For host Geneva and especially organizer Kurt Doerig and committee, the tournament was a major undertaking. Among other things, it involved several hundred rooms at ten hotels—doubly scarce during the Ascension Day weekend. All men's teams played a minimum of four games. And as a finale, everyone was invited to a barbecue which required a whole beef carcass.



RATS!

□ Harvey Wallbanger, the robotic rodent from Santa Clara Division who was undefeated in Micromouse maze racing last year (MEASURE, Nov. 1978), has learned a bitter and perhaps terminal lesson about modern technology: If you don't keep up, it'll get you down!

And down he went, coming in a distant second at the national Amazing Micromouse Maze contest held in New York last month by the National Computer Conference. The race culminated a year-long program sponsored by IEEE's *Spectrum* magazine.

It seems that Harvey stood too long on his technological laurels, mainly because his Santa Clara Division sponsors (Gary Gordon, Ken MacLeod, and Gary Sasaki) felt they didn't want to tinker with a winning style. Yet, basically, Harvey was an old-fashioned mechanical micromouse without any of the fancy electronic gadgetry—microprocessors, computer memory, electronic sensors—of the other competitors. Speed and a simple but clever steering system were his weapons in negotiating the maze.

Meanwhile, some engineers from rival Battelle Northwest Laboratories worked their way up the evolutionary Micromouse ladder, and in their third prototype came up with the winner. Ironically, it copied Harvey's basic right-wall following system but added a technological twist in the form of photo-electric sensors.

But Harvey is not without honor or prizes. His second place (out of some 5,000 original entries) brought home a video-game machine which the Santa Clara trio donated to HOPE, a San Jose organization for the handicapped. □

GOAL: More women in HP engineering



Margo Hammell moderates the HP career panel for students attending the national conference of the Society of Women Engineers.



At the HP exhibit booth, product marketing engineer Cathi Merigold of Stanford Park Division (left) demonstrates a four-color plotter to S.W.E. delegates.

□ Getting acquainted with Hewlett-Packard was an easy matter for attendees at the Society of Women Engineers' annual national conference in San Francisco June 29 through July 2.

HP's own women professionals were on hand in impressive numbers to describe the company as a major employer of engineers, and to share their own experience working in a variety of engineering roles.

On the opening Friday evening, 150 HP women engineers and managers drove up from the Palo Alto and Cupertino area by the busload to entertain student delegates at a wine and cheese party. More than fifty HP women took turns staffing an exhibit booth at the conference with information about the company, its products and technology. They represented 17 divisions throughout the U.S. along with corporate groups and Neely sales region.

The day before the conference opened, women engineering students from S.W.E. chapters on 200 campuses held their own meeting at San Francisco State University. They had two chances to hear panels of HP women engineers present some realistic advice on working in industry:

- A carefully researched and rehearsed discussion on the transition from college to industry was given by five Colorado Springs Division engineers.

"Decide exactly what you want to do," advised Carolyn Finch, who returned to her profession with the encouragement of her husband and three children. "It helps the company to make a good match when you're interviewing." Don't be afraid to ask questions when you get on a job, added moderator Charlotte Berry. Both are development engineers at the Springs. Other panel members were project leader Debbie Ogden and software engineers Izagma Alonso and Patty Geffen.

- The variety of ways to use an engineering degree in industry was showcased by the afternoon panel moderated by Margo Hammell, an industrial engineer on special assignment with Corporate Recruiting who organized the HP activities at the conference.

The nine speakers came from a wide spectrum of functional areas involved in getting a product to market, including R&D, information systems, marketing, manufacturing supervision and tool engineering, production engineering, quality assurance and finance. Adding the manager's perspective were Sally Dudley and Carolyn Morris from the General Systems Division, Cheryl Katen of Corvallis, and Glenne Young of Data Systems Division.

Panelist Sue Powell, from Cupertino Integrated Circuits Operation, returned to the podium during the conference as one of four engineers from HP invited to present technical papers on their work. The others were Mary Haahr of Santa Clara Division, Gail Hamilton from Colorado Springs Division, and Lynn Roylance from HP Labs.

While the conference planners made it clear that no recruiting should be done by corporations during the meeting except on an official recruitment day, the highly visible HP presence throughout was evidence that the company intends to go all out in meeting the ambitious goals set for hiring more women engineers next year. □



Product marketing is a high visibility job which provides an overview of the entire corporation, Carolyn Morris, a product marketing manager at GSD, tells women engineering students. At right, panelist Cheryl Katen of the Corvallis Division.



The role of engineering in R&D was explained to students by HP panelist Diana Bell (right) of General Systems Division. Listening is Sue Powell, also in R&D at CICO.



Tips on smoothing the transition from the college campus to industry are given by a panel of engineers from Colorado Springs Division: (from left) Patty Geffen, Izagma Alonso, Debbie Ogden, Carolyn Finch, and Charlotte Berry.

HP News

Start-up scheduled at Spokane

PALO ALTO—The start-up of Stanford Park Division's new Spokane Manufacturing Operations in eastern Washington is set for August 1.

Mac McGrath, Spokane Manufacturing Operations manager, transferred to the new location from Palo Alto last month. For the past year, McGrath has headed planning for the new Spokane activity while continuing to serve as Stanford Park Division manufacturing manager. Replacing him in the latter role will be Don Summers, who has been signal generator production manager for the division for the last six years of his 13 years with HP.

Operations will begin in an interim leased facility now nearing completion. On April 12, HP exercised an option to purchase 157 acres of land in Spokane for construction of its own building, scheduled for completion in February, 1981.

CSG's New Computer Support Division

CUPERTINO—HP's Computer Systems Group has consolidated the Customer Engineering Operation (hardware support) and Systems Engineering Organization (software support) into a new division known as Computer Support Division. Headed by Bob Puette, it replaces the former Computer Service Division which Puette also headed and takes over responsibility for SEO activity formerly managed at the group level. Dick Warmington, formerly Intercontinental Calculators regional marketing manager, has been named marketing manager for CSD.

Admin Systems Manager

PALO ALTO—Bill Ashton, formerly Santa Rosa Division controller, has been named Corporate administrative systems manager. He replaces Hank Morgan who has left the company.

New Singapore Desktop Operation

SINGAPORE—Steadily increasing responsibility for production of desktop computers here has resulted in creation of Desktop Computer Operations (DCO) as part of the Desktop Computer Division. Manager of the new operation will be Liong Wong.

New Intercon Posts for Ting, Lin

SINGAPORE—Lee Ting, Intercontinental's Far East area manager since 1972, has been named general manager of HP's manufacturing operations in South East Asia (Singapore and Malaysia) replacing Dick Love, who will return to the U.S. Lok Lin, general manager for HP's Taiwan branch since 1972, will replace Ting as Far East area manager.

Ting relocates to Singapore in August, while Lin will remain in Taiwan until the end of fiscal year 1979. Love is completing a three-year assignment in South East Asia, and will fill a new post as Intercontinental manufacturing operations manager.

New ICON Headquarters

PALO ALTO—The headquarters and distribution operations of Intercontinental are now consolidated in a new leased building on Deer Creek Road, across the street from the facility occupied by HP Labs. The new Icon address is 3495 Deer Creek Road, Palo Alto, CA 94304.



PALO ALTO—Groundbreaking began last month at the site of HP's new Corporate headquarters building, following final approval from the City of Palo Alto. The new plans call for a building more energy efficient and less expensive than the original design. Both the sawtooth roof and underground parking features have been eliminated.

From the president's desk

In the latter part of May some of our senior managers and I reviewed HP activities in the Far East. Much has changed since my last visit, and I'd like to share some observations with you on our current program.

Our first stop was Japan and Yokogawa-Hewlett-Packard, our joint venture with Yokogawa Electric Works. We're coming up on the 16th anniversary of the founding of this company, and our team there shows the maturity of working together over a long period in developing our strong position. Historically, we have had HP resident directors at YHP to provide a liaison function with HP operations. This year we agreed that arrangement was no longer necessary, and we have now shifted to regular director meetings with members from HP, YHP and YEW to coordinate activities. Dean Morton, Bill Terry, Paul Ely, Bill Doolittle and Alan Bickell will be representing HP on the board of directors of YHP.

Japan is our fastest growing country, and is challenging Germany this year for the largest sales volume outside the U.S. To help keep pace with this expanded activity, we have changed our internal YHP organization to create subdivisions for our main product areas of computation and instruments. These groups provide some manufacturing as well as marketing support, and in the case of instruments, manage their worldwide product line program as well. This change has been very helpful in meeting the growth in these key areas.

We have always done well in instruments, but fully establishing our computer product lines has made a significant difference. Japan must be the most competitive environment in the world as its national companies work toward establishing a domestic base to try for world leadership in computation in the 1980s. It will be a very interesting period.

Our next stops were our manufacturing plants in Singapore and in Penang, Malaysia. These are major activities with total employment exceeding 3,000. Some locally manufactured products are exported directly to worldwide markets such as handheld calculators, lower-cost oscilloscopes, and a wide range of optoelectronic devices. A great deal of assembly work also is performed in support of HP manufacturing plants in the U.S. and other countries.

Our plant in Singapore is about two years old. It is very attractive and well laid out by any HP building standards. Its distinctive feature is the escalator which facilitates shift changes of up to 1,500 people arriving and departing in a 10-minute period of time in this five-floor plant. In Malaysia, we are proceeding to more than double the size of the Penang plant mainly to support the growth of optoelectronics and other components.

These facilities are very important to HP in that the lower production costs help to keep our products competitively priced, and a favorable tax environment helps to finance our growth. At the same time, HP makes an important contribution to the economics of developing countries and helps to improve living standards. I had a one hour meeting with Lee Kuan-yew, the Prime Minister of Singapore and architect of the transformation of that country over the past 15 years. He was very knowledgeable concerning HP operations and paid us the nice compliment of saying HP represented the model

for responsible citizenship in his country. At a meeting later in the week, Dr. Lim, the Minister of Penang, Malaysia, was equally complimentary about HP's activities. We're working with him now to develop a joint recreational facility and a housing program to improve opportunities for our employees.

While we were in the Far East we also touched base in many other areas. Dean Morton joined Lok Lin for the opening of our new office in Taiwan. This was no small event as there were 300 guests and full coverage by TV and newspapers. I visited our distributor in Manila and had conversations with officials on business opportunities. Bob Boniface went on to Australia, and Bob Watson traveled to Korea (a very fast-moving market) for meetings with our distributor there.

Another new HP sales company, HP Hong Kong, has just been incorporated, and John Toppel from Neely Sales is in the process of transferring as manager. We had a get-together in our small office there, and I'm afraid the visitors outnumbered the employees. Hong Kong is a key crossroads and commercial center, and we expect the computer business to be the leader here.

This issue of MEASURE has extensive coverage on the HP seminar in the People's Republic of China. Dean Morton and I joined the final days of this high visibility event to have discussions with senior officials in the government as well as influential leaders in professional societies and technical universities. Arranging a seminar with full provision for hands-on equipment sessions was a first for any company visiting China, and it made a big impression. The logistics were difficult, but our instructors and support people did an outstanding job.

It's clear that the demands for advanced computation and measuring equipment are very real, for the universities and industry are far behind. This, however, is only one of many areas that will compete for resources within the PRC, and only time will tell how business will develop. At this point, the Chinese know we're interested and we've made many important contacts to work with in the future.

As I've thought back over our trip, I'd say that our Far East activities are in very fine shape. We have many opportunities for expanded business in countries that are dynamic and fast growing. Most of all I'm impressed with the high quality of the people we have pursuing HP interests. We used nearly every lunch and dinner as an opportunity to meet and know them better. These functions ranged from lunches with cross-sections of all employees to a unique dinner cruise on a Chinese junk in Singapore harbor with the local management team.

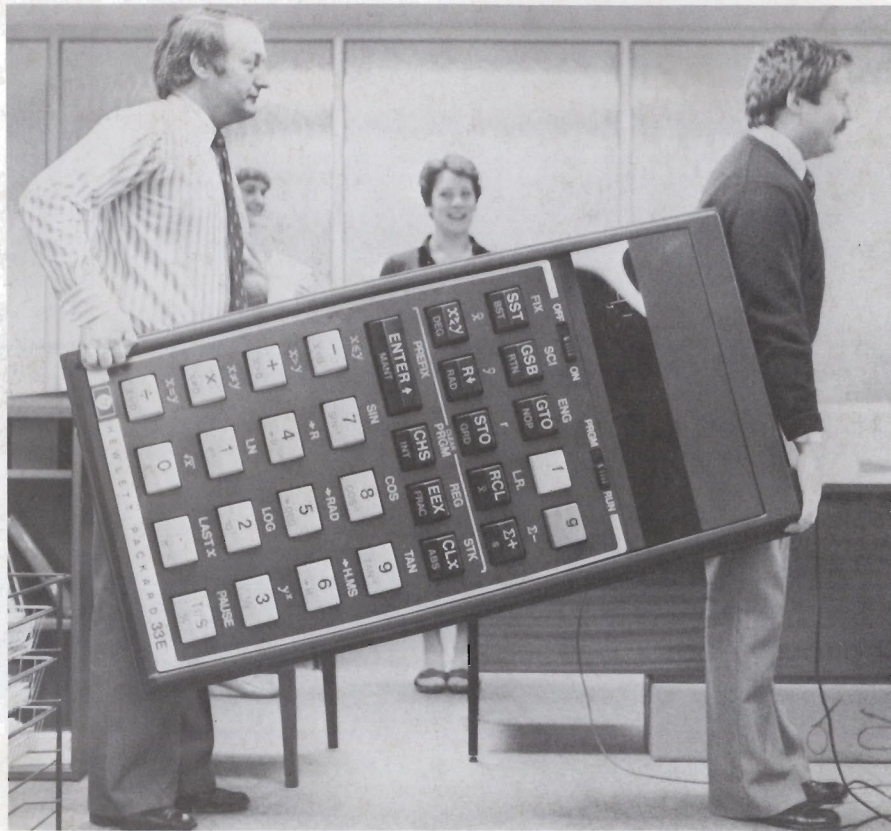
Overall, it was an arduous schedule for a two week period, but well worth it in that we could convey personally that these operations, while far away, are important to the continuing progress of our company.



King Kong's Calculator

□ If that's really an HP 33E program-
mable scientific pocket calculator, then
we've got some exceptionally small peo-
ple working for HP in England. Of course,
Barrie Bell, Lorraine Bull, Sue Pallant
and Mick Berry of the Manchester office
are exceptionally normal people.

But in answer to your questions: "No,
they're not hand-delivering it to a giant
customer—it's on its way to a promo-
tional event," and "Yes, Kong works
exactly like a 33E—but it also gives the
user a good workout when performing
lengthy calculations on the monster key-
board." □



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