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HP Intercontinental Operations News

FY 1987 — Third Quarter



**A Salute
to Singapore**



It looks like the sky's the limit at HP Singapore

“The US\$28 million facility expansion is a tangible indication of the confidence HP has in Singapore.”

That was executive vice president Bill Terry's observation in his address at the grand opening ceremony of HP Singapore's new extension in early May. Seeds for the confidence he spoke of were planted over 18 years ago.

HP in Singapore started in 1970 with 62 people making core-memory assemblies in a factory of 48,000 square feet in the Redhill district.

Today it employs 2,700 employees in its fully-owned, modern facility of 530,000 square feet. Every manufacturing area at the plant is highly automated, with robots moving along the factory floor delivering components while others help in the various stages of production.

Singapore's minister of trade and industry Brigadier General Lee Hsien Loong recently remarked that HP's presence has helped to strengthen the nation's electronics industry.

“We are one of only two U.S. companies that have survived the calculator wars of the seventies,” says HPSG's managing director Koh Boon Hwee. “This is testimony to HP's superior technology and innovativeness and HP Singapore's manufacturing capability.”

The company's history reflects the continuing efforts on the part of both management and employees to achieve a highly competitive edge in the international electronics market.

“We started with core-memory assemblies, an extremely labor-intensive activity,” Boon Hwee recalls. “From this modest start, we progressively developed our engineering skills and went on to manufacture opto-electronic LED components and handheld calculators, magnetic data cartridges, panel meters and oscilloscopes, and, most recently, the thermal inkjet printers and keyboards.”

Engineering capabilities

With the opening of the extension, HP has reached another milestone in its history. “When we embarked on the construction of this extension two years ago,” Bill said, “we knew we had to plan for the future. Because of the previous progress made in HP Singapore, we were confident of its engineering capabilities.”

These engineering capabilities were tried and proven with the establishment of the IC design center and the R&D lab for keyboards.

The design center has, to date, completed the design of eight circuits, with many more in progress. It is capable of designs in the latest CMOS technology where line-widths of less than 13 microns are involved.



HP Singapore managing director Koh Boon Hwee with the newly-expanded plant in the background.

The R&D lab has released a family of keyboards that has become the standard in HP for all PCs, terminals and engineering workstations. In the process, lab staff has developed a proprietary plastic-moulding process technology, utilized the IC design center for a VLSI chip to control the keyboard, and made innovations in electronics technology that, in Bill's words, are “truly state-of-the-art.”

These successes can be measured by the large payback HP has received for the US\$10 to \$12 million the company has spent to date on R&D. The Singapore operation has more than fulfilled the expected return of \$20 for every \$1 spent.

Further investments

These early design accomplishments have given corporate management the assurance to take the next step . . . the establishment of a state-of-the-art gallium arsenide phosphide wafer fabrication facility in Singapore, HP's first outside the U.S. The facility will produce the dice that will go into LED optoelectronic and optocommunication devices. This is a logical step, actually a backward integration of activities started 17 years ago.

The first wafer is expected to roll off the line in April next year, six months ahead of schedule “in typical Singapore fashion,” quipped Bill.

ON THE COVER A newly-expanded plant has made HP an even more significant presence in Singapore.

HP Computer Museum
www.hpmuseum.net

For research and education purposes only.

The wafer fab facility is a hefty US\$22.7 million investment in Singapore; add to this US\$18.2 million for R&D in both the IC design center and the keyboard lab, and you have a good measure of the faith placed in this plant.



Boon Hwee introduces HP executive vice president Bill Terry (second from right) to Daryl Arnold, U.S. ambassador to Singapore. Executive v.p. John Doyle (right) and Victor Ang, Singapore sales office general manager, observe the introductions.

Good corporate citizen

HP Singapore has not concentrated just on economic and technological achievements. In a highly competitive industrial climate that teems with subsidiaries of Fortune 500 companies, HP is an acknowledged leader.

When the local government sponsored a program to upgrade the small and medium-sized companies, four top firms were approached. Naturally HP was one of them.

Similarly, when the idea of a training center for upgrading the skills of workers in the electronics industry was mounted, HP took the lead to make this a reality.

Local managers have also lent their time and expertise to the shaping of the policies of various governmental bodies such as the Economic Development Board, Trade Development Board, the local universities and the polytechnic institute.

HPSG's Community Activities Committee (CAC) promotes volunteer work such as visits to homes for the aged or handicapped. HP matches dollar for dollar employees' contributions to charity. It's up to the CAC to channel these funds to deserving organizations.

HP Singapore takes the corporate objectives seriously as evidenced by its commitment to growth, quality, employees and the community. ■



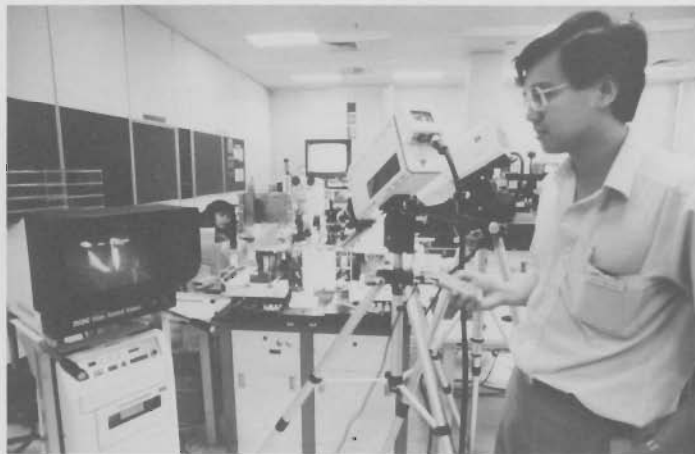
HP Singapore at a glance

- Sixty-two employees started assembling core memories on February 27, 1970.
- Recently expanded plant now contains 530,000 square feet and houses manufacturing for three operations — Components, Computer Products and Integrated Circuits — employing 2,700 people, including 200 in the sales office, whose average age is 31 and whose average length of HP service is 7.8 years.
- These employees make: light-emitting diode displays, optocouplers, bar-code readers, printers, keyboards, series 41 calculators and peripherals, graphics tablets, mice, integrated circuits for computers and calculators. And that's just today. Tomorrow add gallium arsenide phosphide wafers to the list.
- Who's who: managing director Koh Boon Hwee; Components operations manager Tan Bian Ee; IC operations manager Ali Hussain; manufacturing manager Tommy Lau; personnel manager Sunny Chan, controller Bruce Tomberg; facilities manager Mok Chek Koon; R&D managers Larry Brown and Thian Nie Khian; TQC manager Paul Ow. ■

Staying ahead of competitors and customers



Sophisticated failure analysis equipment such as this SEM/EDX system help in troubleshooting.



Use of a high-speed camera plays an important role in spotting equipment and process problems.

Quality is a means of maintaining a competitive lead in the marketplace at HP Singapore.

"Over the last few years, our defectives level has been reduced more than 75 times . . . way beyond John Young's goal of a ten-fold improvement," declares Components operation's materials manager Ho Juan Yang.

"We must always keep ahead of our competitors and exceed our customers' expectations," explains Ho. "Quality improvement is therefore an ongoing and very important function for us."

The focus of the company's quality improvement program begins with understanding the customers' needs. As it is not feasible to establish direct contact with all customers, the Components group has developed its own strategy.

"We choose to work with a few customers with the most stringent standards and with the highest quality awareness in the Japanese market," notes Ho. "If we can meet these customers' requirements, we can probably meet the expectations of customers from the rest of the world."

"We visit these customers regularly, follow up closely on the effectiveness of the corrective actions we have taken, translate their requirements into our manufacturing specifications and establish a quality control system to ensure that the manufacturing process meets the customers' needs."

"We have set up a full range of reliability tests to detect product weaknesses and process variations and to assess product capability. In addition, we have extensive failure analysis capability to analyze and identify the root causes of failure."

The battle against mediocre quality is being fought on other fronts as well.

Engineers and managers are trained on Design of Engineering Experiment (DEE) and Statistical Quality Control (SQC), and supervisors and operators in TQC tools, so that every employee in the organization can adopt a systematic approach to problem solving. Managers stimulated the formation of quality control circles (QCCs).

Key operations such as die-attach, wire bonding and testing have been automated to reduce operator dependency and human error. Every effort is made to optimize and simplify processes to reduce variations.

Working closely with suppliers helps to upgrade the quality of incoming materials.

Not content to rest on the laurels of achievements, Ho says, with a glint of anticipation in his eyes, "Our goal is to have our components survive 20 years in the field." ■

Individual efforts are crucial in quality control circles



Leader of the "Vision" circle Mohinder Kaur receives the QCC meritorious award from Singapore's second deputy prime minister Ong Teng Cheong at the 1986 QCC exposition.

Despite its relatively short history in HP Singapore, QCCs have been quite successful.

Since national QCC conventions were started in 1982, HP's circles have consistently led the field in winning the top awards. In the recent International Exposition of QCCs '86, HP captured the outstanding and meritorious QCCs, outstanding QCC manager and outstanding facilitator awards.

In the quest for quality, individual efforts are crucial.

In the annual National Productivity Award competition for which companies nominate their most productive employee, HPSG's operator Tan Chwee Choo walked away with the award for her consistently good performance and suggestions to improve productivity and quality. Her suggestion to salvage power module assemblies in a simple process saved her department a total of US\$36,000 over two years.

QCC activities were started in Singapore in 1979 and HPSG was among the pioneers.

The first two years were devoted to establishing the circle concept. From 1981 to 1983, the company focused on promoting and propagating QCCs; the participation rate grew rapidly.

Since 1984, the emphasis has been on the quality of the activities, application of statistical quality control (SQC) tools, data analysis capability and problem-solving techniques.

Today, supervisors and operators have acquired the basic tools and techniques; they are now better able to participate in improvement programs and to understand how to maintain the improved performance. Through QCC activities, supervisors have developed their management and communication skills and systematically practiced the HP way of participative management. ■



One of Singapore's quality circles plots strategy.

IC and keyboard functions are state-of-the-art

Back in 1970, when HP opened a plant in Singapore primarily employing assembly workers, the government recognized the potential of the HP name and welcomed the project.

"That judgment proved correct. Today Hewlett-Packard runs a sophisticated manufacturing operation that the country can justifiably be proud of," said Brigadier General Lee Hsien Loong, minister for trade and industry.

The company currently employs more than 200 engineers, about 50 of whom are engaged in R&D functions in two areas: the IC design center and the keyboard lab.

The IC center, which specializes in turnkey CMOS full-custom, standard cell or composite IC design, is the only one outside the US. The engineers here, who have both analog and digital design expertise, have designed circuits with a complexity level of 600k transistors per chip.

The center has chalked up an impressive record of accomplishments in its two years of existence; it has

completed eight IC designs and three more are in progress. Designs have included microprocessor-based keyboard controllers, IR transceivers, high current LED driver, quadrature decoder and calculator chips.

An important element in the center's success is the close communication with customers throughout the development stage up to the point of delivery.

Currently center employees are working on a 600k transistor chip that will include all the electronics needed for a new family of HP calculators.

Established at about the same time as the IC design center, the lab was given the charter to develop a superior keyboard. The family of keyboards released last year by the lab has now become the standard in HP for all PCs, terminals and engineering workstations. This accomplishment is a clear sign of the competitiveness of the keyboards in quality as well as in cost as HP policy does not require divisions to buy from one another. They have the authority and the option to purchase

parts from within HP or from outside sources.

The lab has, in the process, evolved a proprietary plastic moulding technology and made innovations in electronics technology that are state-of-the-art.

The group has also developed and shipped a new graphics digitizer tablet and a two-button mouse. The tablet was the result of the lab's extension of HP-patented technology which was transferred to Singapore from the Sunnyvale PC operation.

Like the IC design center, the lab attributes a major part of its success to a close working relationship with its customers. In addition, it undertakes competitive analysis to establish product positioning and direction for new product efforts.

With the transfer of engineering and industrial design responsibilities to Singapore, the lab is now investigating the graphics input area to further improve HP's market share and to become a long-term leader in the world market. ■



A 3-D solid modeling CAD system is used for product development.



R&D manager Larry Brown shows off a Singapore-developed keyboard.

Teamwork transforms designs into products

At HP Singapore, engineering expertise is not limited to the R&D areas; in fact, the capability to transform R&D designs into high quality, competitively-priced products contributes in no small way to HPSG's success.

Synergy is at work in Singapore. Although there are three operations theoretically independent of each other with different reporting lines, local managers do not hesitate to reach across boundaries to tap each other's expertise and resources.

An example of such teamwork is the Phoenix bar-code wand project which, when it is completed late this year, is expected to be the standard for all future bar-code wands. The Phoenix is the brainchild of engineers from the Components group and the keyboard lab, with external specifications from MSD. Its superior mechanical performance and its low cost, when coupled with the latest Hawk circuitry from San Jose, should make it extremely competitive in the marketplace.

Automation in the Singapore plant is an ongoing, high-priority function.

The Components group's micro-processor development and CAD centers have achieved dramatic results with automated processes, some of which use sophisticated in-house-designed and -built equipment such as the auto-welder and automatic test-handlers.

The group's automation strategy has been to invest heavily in the latest engineering training and tools to achieve breakthroughs in quality and productivity. Sophisticated machinery costing hundreds of thousands of dollars produces such improvements in operator productivity that it is not unusual to see paybacks in less than a year.

One example is the implementation of the complex visual recognition automatic wire bonding process which resulted in a reduction of 200 operators, making them available for other assignments. Quality has also taken a quantum leap in this program so much so that a major customer has remarked on the significant improvements in reliability.

The group's future direction is to master the latest technology in artificial intelligence and vision in order to reach even higher levels of productivity and quality.

Another fountainhead of CAD/CAM activity is the plastic technology center which provides engineering services in part design, tooling and manufacturing process development.

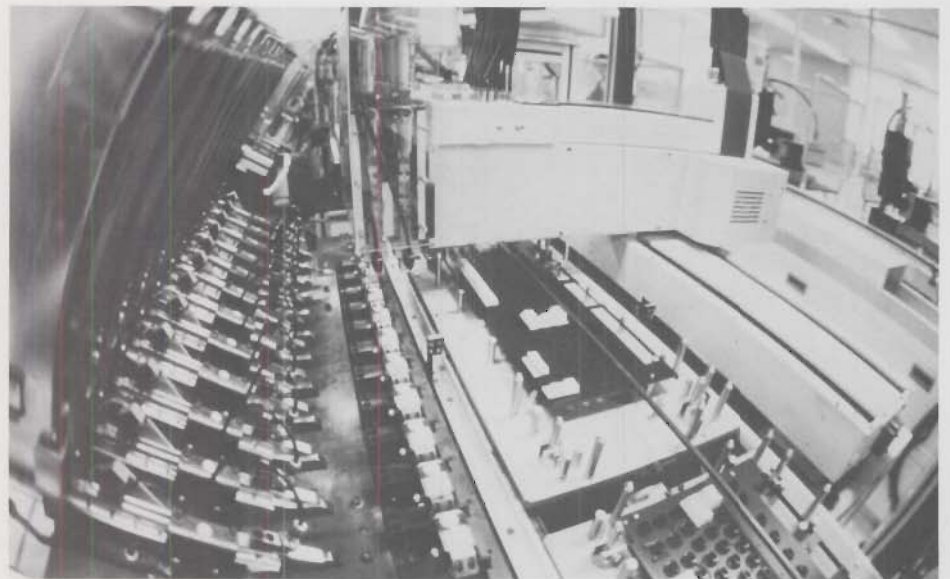
The center's outsert moulding process for keyboards has been strikingly successful: a one-shot injection moulding process introduces 122 plastic components onto the metal plate, resulting in a 50 percent reduction in manufacturing cost and a 1.8 months return on investment. The fully-automated process has a close loop process control system to achieve excellent quality.

The center also conducts competitive analysis on plastic part design concepts, materials, manufacturability and costs, and passes on the results and recommendations to the R&D lab. This integration of design and manufacturing functions has made HP Singapore a "focused factory."

As materials constitute about 50 percent of manufacturing cost, HPSG has wasted no time in developing expertise in materials engineering and procurement. Progress is evident from the fact that the Components group has taken over from San Jose the responsibility for procurement, quality and cost of raw materials.

Incoming parts quality has seen a seven-fold improvement, while the cost of material for products such as the bar-code wand has plunged by 40 percent. Such achievements have occurred because of aggressive sourcing, quality control of vendors' processes as well as substituting material when feasible and redesigning parts to lower manufacturing costs.

Successes at the Singapore plant have been the result of effective execution of HP's manufacturing strategy, which, in general manager Boon Hwee's words, "... aims at bringing together the highest quality material, optimum production processes and highly skilled workers." ■



Manufacturing processes include state-of-the-art automated keycap insertion.

This salute to Singapore would not be complete without a salute to Siak Foon Lee who provided the information and photos for these pages.

MARKETING/SALES/SUPPORT
Rick Justice

MARKETING
Dick Warmington

MARKETING INFORMATION SERVICES
Cliff Olson

MARCOM
Alan Holdship

TRAINING/DEVELOPMENT
Margaret Jones

BUSINESS SYSTEMS MARKETING CENTER-AIA (Cupertino)
Juan Montermoso

CUSTOMER SUPPORT
Paul Balnys

CEO
Don Maston

AEO
Paul Balnys

SUPPORT ADMINISTRATION
Jon Cretarolo

MAJOR ACCOUNTS
Larry Amsden

VALUE ADDED CHANNELS
John Bieske

PERSONAL COMPUTERS
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SALES PROGRAMS

TEST & MEASUREMENT
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TECHNICAL SYSTEMS
Bob Payne

BUSINESS SYSTEMS
tba

MEDICAL
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ANALYTICAL
Mike Muller

COMPONENTS
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CANADA
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SALES/SUPPORT
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SALES
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CUSTOMER SUPPORT CENTER
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PROJECT CENTER
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tba

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PANACOM OPERATION
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SALES
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MARKETING
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U.S. LIAISON OFFICE
Wes Wickham (Palo Alto)

MEDICAL
tba

ANALYTICAL
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BUSINESS DEVELOPMENT
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MEXICO
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VENEZUELA
Ernesto Kolster

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Luiz Barata

BRAZIL SYSTEMS
Paulo Aratangy

ARGENTINA
Rui da Costa

GUADALAJARA COMPUTER OPERATION
Jose Grapa

PERSONAL COMPUTER OPERATION (Guadalajara)
Ophir Toledo

AUSTRALASIA
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MARKETING
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ADMINISTRATION
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PERSONNEL
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QUALITY
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BUSINESS DEVELOPMENT
Bruce Graham

NEW ZEALAND
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SOFTWARE OPERATION
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Toshio I

MARKETING/SUPPORT
Toshitero

MARKETING
Masao T

CUSTOMER SUPPORT
Yasuo K

MAJOR ACCOUNTS
Yukio

COMPONENTS
Go Ko

SALES ADMINISTRATION
Shing

EASTERN AREA
Tsugio

WESTERN AREA
Je

YOKOHAMA
Matsuj

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Gi Naka

MEDICAL/ADMINISTRATION
Katsuto Koh

ADMINISTRATION
Shu

PERSONNEL
Katsuto
Kenichi

QUALITY
Katsumi

HACHIOJI
Mitsuo

PERSONNEL
Y
Mitsuo
Y
Shigel
Y3
Shiro

PERSONNEL
Itsuo S

ENGINEERING OPERATION
Yasuaki



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asaoka
luraoka

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erazawa

SUPPORT
rakisawa

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ayashi

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EA (Takaido)
Kataoka

EA (aka)
nii

MA AREA
Tezuka

AREA
tsukasa

ANALYTICAL
tani (Acting)

TRATION
Asai

NNEL
Kohtani
Akasaka

LITY
oshimoto

FACILITY
hi Mori

D
hi Mori

D
i Mori

O
Kito

O
giyama

G SYSTEMS
ATION
hanatani

FAR EAST OPERATIONS
Walt Sousa

FAR EAST SALES REGION
Walt Sousa

**MARKETING/SALES/
SUPPORT**
Suresh Rajpal

MARKETING
Suresh Rajpal (Acting)

MAJOR ACCOUNTS
Andy Ng

CUSTOMER SUPPORT
John Maydonovitch

PERSONAL COMPUTERS
Khoo Teng Liat

MEDICAL
Mike Blomeyer

ANALYTICAL
John Hussey

COMPONENTS
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KOREA
George Cobbe

TAIWAN
Wen Ko

ASIAN PC OPERATION
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CHINA
Chi-ning Liu

HONG KONG
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MALAYSIA
Paul Chan

SINGAPORE
Victor Ang

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Victor Ang

INDIA
Radha Basu

MARKETING CENTERS

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SECTOR**
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**BUSINESS SYSTEMS
SECTOR**
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QUALITY
Soin Singh

BUSINESS DEVELOPMENT
Doug Thompson

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OPERATIONS**

SINGAPORE
Koh Boon Hwee

**COMPUTATIONAL
PRODUCTS OPERATION**
Koh Boon Hwee

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Ali Hussain

COMPONENTS OPERATION
Tan Bian Ee

CONTROLLER
Bruce Tomberg

PERSONNEL
Sunny Chan

**MALAYSIA
COMPONENTS DIVISION**
Steve Cooper

ASIA PROCUREMENT
Kheng Joo Khaw (Singapore)

**BUSINESS DEVELOPMENT
and MANUFACTURING**
Lee Ting

PUBLIC RELATIONS
Sy Corenson

**MANUFACTURING
OPERATIONS:**

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Mike Forster

MEXICO
GCO
Jose Grapa

PROCUREMENT
Dan Simin (Mexico)

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CONTROLLER
Larry Chang

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LEGAL COUNSEL
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Alexander Huang designs blueprint for sales success

You might call it snatching victory from the jaws of defeat. That's the way it seemed early last year in Taiwan when the Telecommunications Training Institute posted a public notice for private sector bids on office automation systems.

Ideally, posting requests for public bidding is a "best man win" situation: the company that proves it can provide the better product wins the government contract. In this case however, one competitor, Wang Computers, seemed to have the upper hand. Was there any point in pursuing the project? Alexander Huang of HP Taiwan's sales office answered with an emphatic "yes" and his initiative, creative skills and just plain hard work paid off. Here's how.

The Telecommunications Training Institute (TTI) is a government organization charged with training personnel in the fields of computer electronics and communications. By 1986, TTI was already using a combination of Wang, DEC, HP and several other computers and peripherals. Now it was time to implement a plan for a more consistent and cohesive office automation system. An OA design committee was established, headed by Chain-Wen Shen, manager of TTI's computer department. He and his committee were charged with surveying and evaluating the OA system and finally recommending a more cohesive one.

Given his own familiarity with and preference for Wang systems, not to mention that Wang products dominated Taiwan's OA market, Chain-Wen's first move was to contact Wang's office in Taipei. Also, in following government purchasing policy, he posted a public notice for bids on the project, anticipating no significant response from other major computer firms.

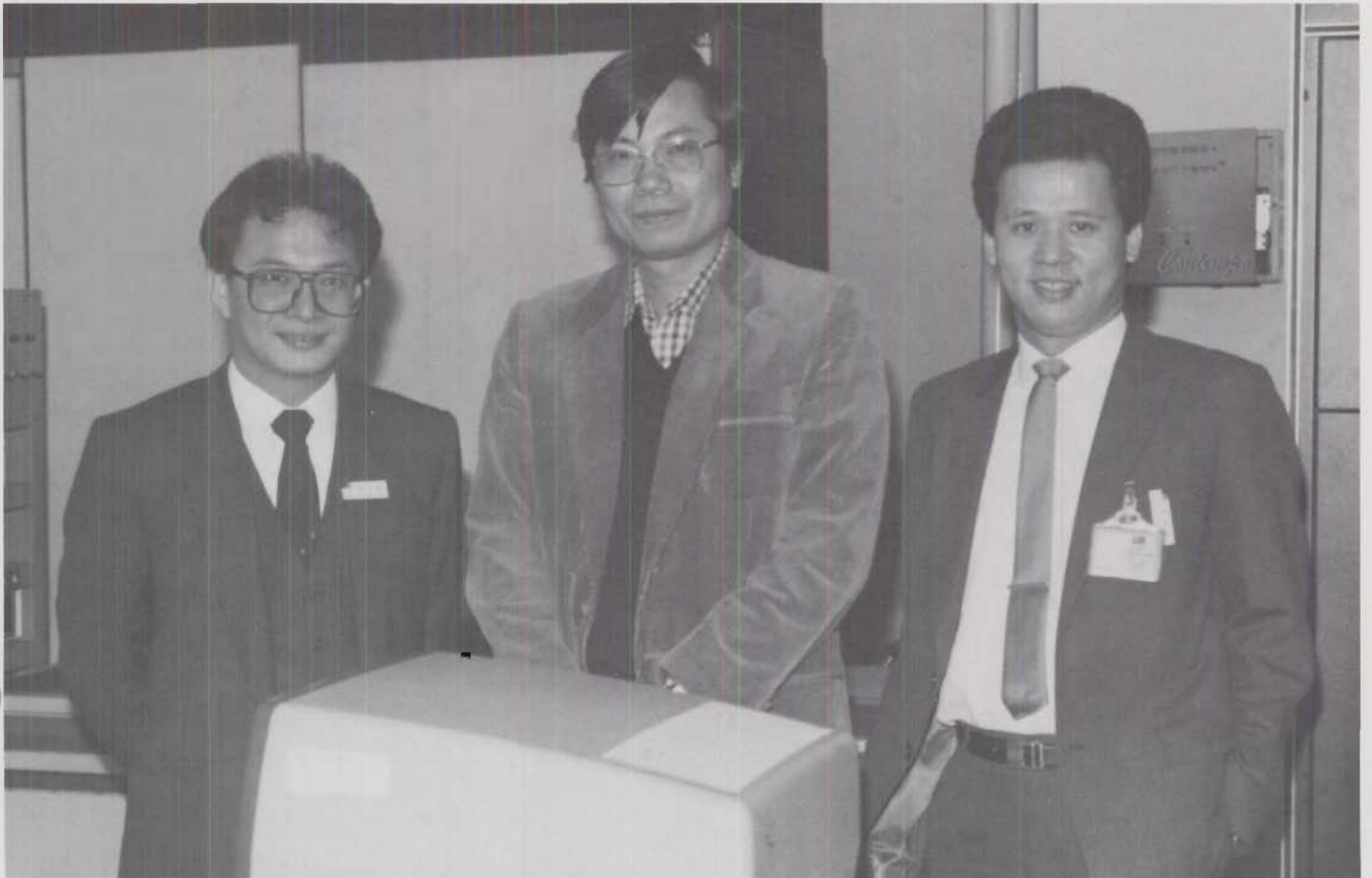
Alexander Huang realized that he would have to develop a careful strategy if he wanted to reverse HP's position as the dark horse in the bidding for the TTI account. With help and advice from other HP staff, he designed a plan and instituted the first phase.

Traditional government decision-making patterns indicated that Chain-Wen would have the final word, so Alexander set out to reduce his influence. Primarily through personal interviews, Alexander meticulously analyzed TTI's organizational structure, personnel background and the existing information traffic patterns. While the results were not entirely optimistic, research did reveal a ray of hope for HP. Shi-Ming Chain, manager of the EDP center, was the HP "expert" at TTI and a possible counterbalance to the Wang influence.

Alexander spent several evenings interviewing Shi-Ming, discussing OA and introducing HP products and the particular role they can play in a quality OA system. Subsequently he visited TTI's director Yen-Len Huang to learn about the manpower being invested in and affected by the existing OA system. Alexander recommended that Shi-Ming become part of the decision-making process of the committee as a means of assuring that TTI got a balanced report.

HP's suggestion to add a second contact for private sector bidders was a strategic move that would give the company a channel through which it could be heard and also could demonstrate its potential as a better choice. Subsequently Shi-Ming replaced Chain-Wen as executive secretary of the committee. Thus Alexander achieved the first goal of his carefully-planned strategy by altering the initial strategic decision-making procedures of TTI's OA design committee.

Next he began to focus his energies on the second phase of his sales tactics: demonstrating HP's dedication to meeting TTI's software needs. When Wang first negotiated with TTI, software services were to be provided free of charge, a service with which HP could not effectively compete. Having discovered this aspect of Wang's proposal through his in-depth research, Alexander came up with a solution. He suggested that the investment, capital and appropriations committee evaluate the cost efficiency of the major computer companies from which TTI purchased its OA products. The committee went one step further and set a budget of US\$25,000 for the design committee's work and the purchase of systems needed to achieve its goals.



A TTI representative meets with Alexander (left) and HP's Patrick Tang (right) to go over details of the institute's new OA system.

Once Wang learned of the budget, the company reviewed its overall sales strategy, resulting in a decision that software, previously provided free of charge with the hardware, should be costed in its bid. TTI's design committee was irked by this unexpected additional cost to the Wang proposal and consequently began to consider its options more carefully.

While eliminating Wang's competitive software edge, HP still had to address TTI's software needs. In order not to increase company costs or affect the internal structure of HP Taiwan for just one account, Alexander approached Je-Chin, a third-party company, with a proposal to work jointly on the necessary software. Besides lowering HP software costs, this increased TTI's confidence in HP's

dedicated service and quality products. After seven months of work on both parts, TTI chose HP.

With contract in hand, Alexander faced just one more problem: how to protect HP's position with TTI from any future official requirements to post public notices for private sector bids. Reviewing the entire case, he concluded that TTI need only replace its original mixture of systems with HP products, upgrade its HP3000/42 to the HP3000/42xp and add on the few necessary Chinese language TITANS to achieve its goal of a cohesive and efficient OA system. Likewise HP would no longer be subject to public bidding procedures. Once-blocked sales channels were cleared and direct negotiations were made possible.

In July last year, TTI officially upgraded its HP system according to Alexander's carefully constructed strategy.

In recalling the process leading to the choice of HP as a long-term team player with TTI, the man who made it happen observes, "Sales is truly a stimulating profession. Spending time, working hard and communicating with the client can usually change decision-making processes that could have hindered sales efforts. Above all, never give up. Always have confidence in yourself and all problems can be solved." ■

HP Taiwan's Eric Wu provided the information for this story.

HP Brazil celebrates its 20th anniversary



HP Brazil general manager Luiz Barata prepares to start the anniversary festivities with a bang or at least a pop from a champagne bottle.



As he headed up HP Interamericas in 1967, it was only fitting that executive vice president Dick Alberding join in the celebration of HP's 20th year in Brazil during a March visit. Luiz Barata takes Dick on a trip down memory lane by way of a display of historical photos, one of which includes the 1973 management team: Carlos Barbosa, general manager at the time; Ary Santos, current sales manager; Oscar Barbosa, government relations manager, and Luiz.

Rep office opens in India

In May, an HP representative office opened in India, reflecting the growing importance the company places on the Indian market.

In FY86, HP had a growth rate of 59 percent over the previous year. India accounted for 11 percent of HP's total sales in the Far East region. The continuing liberalization of the country's policies toward investments and access to local markets, started when Rajiv Gandhi was elected prime minister in 1984, indicate positive prospects for growth in HP markets.

Located in New Delhi, the capital city of India, the HP rep office does not change HP's relationship with long-time distributor Blue Star Ltd., the company's sales and customer support channel in India. The role of the office is to tactically support Blue Star in meeting sales goals and customer satisfaction objectives, in addition to helping HP evaluate its long-term competitive positioning in India.

Radha Basu, a veteran HP employee who has represented the company in India for the past two years, manages the office which currently includes a staff of two. ■



Radha Basu, Dick Alberding and Lee Ting, Intercon business development and manufacturing manager, enjoy their conversation after Marilyn Alberding officially opened the office with a traditional ribbon cutting.



Kano says common sense can fool you

Four years ago, Dr. Noriaki Kano was asked to comment on the status of quality control practice in Malaysia. Based on factory visits to Penang, one of his messages was: "Your workers are working; your engineers have just awakened; your managers are still sleeping!"

HP Malaysia was the first HP division to be audited by Dr. Kano, a professor at the department of management science on the faculty of engineering at the Science University of Tokyo. He is a member of the Japanese Society and the American Society for Quality Control and the Deming Prize Committee in Japan. In 1984, he won the Nikkei Quality Control Literature Prize for the second time. He knows what he's talking about.

Actually, his message back in April of 1983 was not all negative. "Your QC circles (QCCs) are going along the right way. You must, however, try to grasp the effect of QCCs and consider both the tangible and intangible effects. If your circles are successful, the quality trend of your products must show improvement."

To one manager, he commented, "I have been fooled too many times by common sense. I only trust facts and data now. Managers must not talk in general terms; they must grasp the situation based on data. Management must set the climate to encourage people to disclose the problems they see."

By popular demand, Dr. Kano revisited Malaysia in September the following year to audit TQC efforts. There he found "a big change of climate compared to last year. Some of the questions you raise would not be possible if you had no experience implementing TQC."

"It is very good that you are doing comparative testing of competitors' products; you must do it on a continuous basis. I smell competitors here, but it is very misleading to compare competitors from your own viewpoint. You have to do this from the viewpoint of the customers."

In November last year, Dr. Kano did his third audit of HP Malaysia. Some of his observations were:

"I was very impressed by the good implementation of routine management in the production areas; it is the foundation for TQC promotion. In this area, HP Malaysia is the best of the HP entities I have visited.

"You've also made good progress in the area of quality deployment; the quality table has been used effectively. . . . Proceed in this way and I have no doubt that your products will be number one in the world very shortly.

"Engineers and managers are carrying out problem-solving activities using QC story, but there's still room for improvement. Progress has also been made in the Hoshin planning process, but the linkage of plans for some managers and the next level of managers is still weak."

One manufacturing manager from a U.S. division audited by Dr. Kano observed, "He's so good that his summary comments after a one-day visit will keep you busy for the next two years." In fact, HP Malaysia advises any entity using his services to be prepared to work very hard between visits; otherwise his time and HP's time is wasted.

Already HP Malaysia is looking forward to Dr. Kano's next visit when employees expect to hear his approval and commendation for their Hoshin planning and execution, as well as for the problem-solving capabilities of their engineers and managers. ■

Kah Thong Neoh, HP Malaysia's quality manager in Penang, provided the information for this story.

Systems marketing's new home

A new 205,000-square-foot building in Cupertino, California is devoted entirely to worldwide systems marketing, including Intercon's business systems marketing center headed by Juan Monterroso.

Designated as building 46, the new structure reflects HP's belief that presenting an authoritative image to customers requires the right facilities to host qualified visits properly. The ground floor of the building is designed for this purpose as well as to accommodate executive seminars and meetings. It is equipped with 25 conference rooms, two 200-seat auditoriums with advanced audio-visual equipment, classrooms, and a central demonstration area that includes all of HP's products and shows the interrelationship of HP sectors. Other features are a spacious lobby to handle a large number of guests and a glass-enclosed computer center to showcase HP's own information systems activities.

Upper floors of building 46 house the offices of major account marketing, value-added channels marketing, all the sales centers, and group marketing activities of the business systems and technical systems sectors.

Contract meeting

"Creativity and Controls" was the theme of a week-long training session for 23 contract administrators from the regions who met in Palo Alto in late March. The introduction of three major new programs, plus increasing concerns about purchase agreement management, audit issues and discounts were some of the reasons why they got together, according to Mary Rowlands, manager of headquarters' contract team.

"Besides focusing on the administrative side of contracts, we spent equal time on the necessity of managing in a very creative way. We are all part of sales support and our primary objectives are to assist the sales team to achieve their goals."

Mary pointed out that members of her group have two-sided responsibilities. As part of the administrative team, they can act as a check and balance to ensure that proper controls are in place to address exception sales. On the other hand, they can help sales reps design good customer solutions.

Fighting crime

HP gas chromatographs and mass spectrometers, along with more than one-half million dollars worth of analytical peripherals, have been purchased by the state of Victoria in Australia for the country's most modern forensic laboratories.

Credit for the sale goes to FE John Lynch, analytical CEs Bill Thalmeir and John Holford and region analytical support manager Leong Tan who, after working with the labs, observed, "Seeing pathology tests on the blackened lungs of some smokers, you would never want to light up again." ■

Latin America

Rui Da Costa is the new general manager for HP Argentina. He started with the company in Brazil in 1976 as accounting manager. Later he was named administration and finance manager there where he remained until 1982 when he assumed the same position for the Latin America region in Palo Alto. Two years later, Rui became sales and marketing manager for Latin America in Palo Alto, subsequently also assuming responsibility for region support activities. His academic background includes an MBA from Michigan State University with a specialization in international finance and marketing.

New general manager for Hewlett-Packard de Mexico is **Rafael Piccolo** who began his company career four years ago as government relations manager in Mexico. Later he was appointed general sales manager and most recently, operations manager. Prior to joining HP, Rafael spent 15 year in managerial positions with IBM sales in Mexico. He has a degree in civil engineering from the Universidad Autonoma de Mexico.

Three region management appointments have been announced.

Munir Dabaghi is the sales manager for Latin America after having been value-added manager for the region since the end of last year. He has been with HP since 1975 and has held several sales management positions in Mexico. Munir graduated from the University of Texas where he studied electrical engineering.

Alvaro Barrenechea has been named region marketing manager, headquartered in Mexico City. He joined the company three and a half years ago as marketing manager in Venezuela. Alvaro has a degree in mathematics from the University of Texas.

The newly-created position of northern office responsible manager for the region has been filled by **Wes Wickam** who also maintains his role as region market development manager for technical computers and instruments. During his 33 years with the company, he has had positions in production, marketing and administration. In his new capacity, Wes will serve as Latin America representative in Palo Alto and a liaison with divisions, groups, Intercon headquarters and corporate.

Also located in Palo Alto is **Gerardo Garcia** who has accepted the position of Latin America headquarters commercial services manager as well as acting region commercial services manager. He has been with HP since 1981, moving to Mexico City the next year to manage commercial services, then accounting and tax planning, and most recently region finance. Gerry has a degree in industrial engineering from Ohio State University and an MBA from the University of California, Los Angeles.



Rui Da Costa



Rafael Piccolo



Munir Dabaghi



Alvaro Barrenechea



Cliff Olson



Philip Yu



Bruce Tomberg



Alan Holdship

Far East

Philip Yu has joined Walt Sousa's staff at HP Asia headquarters for a period of training and familiarization in preparation for assuming the position of China HP general manager. During this time, he will be located in Hong Kong and will work on special projects related to long-term business activities in China. For the past 14 years, he has been with Honeywell Information Systems, most recently as managing director for the China and Hong Kong operations. Philip has a degree in civil engineering from the National Chung Hsin University in Taipei, a master's of science from Illinois Institute of Technology and a doctorate in information engineering from the University of Illinois.

New Singapore country controller is **Bruce Tomberg**, treasury manager at Intercon headquarters in Palo Alto for the past two and a half years. He has been with HP for more than 13 years, joining the Stanford Park division and holding financial positions at Loveland Instruments and Instruments Support. Bruce has a degree in civil engineering from the University of California in Berkeley and a

master's in financial accounting from the same university in Los Angeles.

The first region major account manager is **Andy Ng**, a graduate of the University of Manitoba in Canada. Prior to joining HP, he acquired sales and marketing experience with NCR, TI, Wang, and most recently with ICL as director of marketing in Hong Kong.

Japan

Three new members have been elected to YHP's board of directors.

Tatsuya Aoi came to Yokogawa Electric Works (YEW) 33 years ago after receiving a bachelor of laws degree from Keio University. He joined YHP nine years later as personnel manager and has been general manager of the western and eastern areas. Currently he is deputy sales manager for all areas.

After receiving a degree in mathematics from Waseda University, **Matsuji Tezuka** worked as an R&D engineer at YEW. He transferred those skills to YHP in 1964 and proceeded to take on the jobs of field engineer, computer sales manager, systems marketing manager and branch office manager. Matsuji is Yokohama area general manager.

Edward (Ned) Barnholt has been the general manager of the Electronic Instruments group since the end of 1984. Starting with HP as an R&D engineer, he was product marketing manager at the Stanford Park division, marketing manager for the Santa Clara division and general manager of the Spokane division. Ned received bachelor's and master's degrees in electrical engineering from Stanford University.

Palo Alto

Alan Holdship has been named Intercon marketing communications manager, transferring from Geneva where he was responsible for managing the European marcom functions related to personal computers and peripherals. He has been with HP in Europe for 14 years, starting in England where he did product marketing for the newly-established calculator business. Alan received a degree in mechanical engineering from Salford College of Technology in the United Kingdom.

New marketing information systems manager is **Cliff Olson** who had been a district application engineering manager at the Neely sales region. His nine years at HP have included experience as a systems and a financial analyst and production section manager in the Manufacturing division. Cliff has an undergraduate degree in electrical engineering and a master's in business from the University of California in Berkeley.

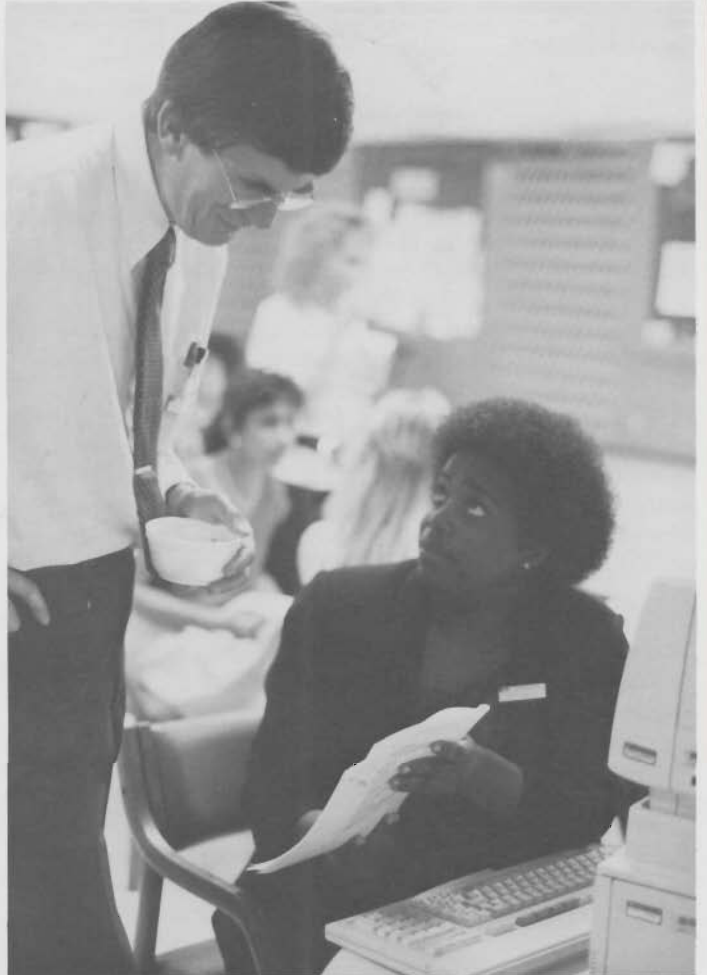
Pat Kallal has succeeded Bruce Tomberg as Intercon treasury manager. He had been MSD divisional controller for four years and before that, he had other cost and general management assignments such as corporate planning and reporting manager. Pat is a graduate of the University of Notre Dame and the Harvard Graduate School of Business. ■

Intercon Gallery



Photo by Martha Maris

SPECIAL SKILLS A group of minority and female students with an interest in math, engineering and science achievement took part in MESA Day at HP headquarters in May. Intercon personnel representative Jill Soltau (left) was a coordinator for the 120 young people and teachers who attended workshops on computer science, mechanical engineering and marketing. She enlisted volunteers Cliff Olson (center), Intercon marketing information systems manager, and Chris Sauer, Australasia markets manager, to help students understand the concepts of marketing, sales and support. "What happened was a lot of synergy," says Jill. "We were extremely impressed with the caliber of responses."



HERE'S HOW Public relations' Patty Boone demonstrated Executive Card Manager at a PC fair held in May at Intercon headquarters. Employees such as information systems' Jan Krebs had an opportunity to see the latest HP hardware and software in action.



TEAM EFFORT A formidable sales force recently gathered in India to present HP solutions to the management of Bharat Heavy Electronics Limited in Hardwar. Members of the team are Doug McDonald, Hong Kong; Jim King, Taiwan; Bob Payne, Palo Alto; Happy Holden, Hong Kong; Mervin Bena, Singapore; and Carl D'Costa, Cupertino.



TOASTING TIME April was a US\$50 million month for YHP, the best in its history, so a celebration was held in the Takaido headquarters after the district sales managers' meeting in May. Toshiteru Suwa, YHP marketing/sales/support head, flashes the familiar "V for victory" sign.

Executive committee reviews progress in Far East

by Alan Bickell

We had two objectives when we hosted HP's executive committee in our Asia Pacific operations at the end of April. The first was to review with the members the very substantial progress that had been made since their last visit. The second objective was to involve them directly in some of the more strategic activities we have ongoing in many of our countries and to gain from their experience in these matters.

We came together in Tokyo for the YHP review and then spread out across Asia to visit Korea, China, Taiwan, Hong Kong, Singapore, Malaysia, India, Australia and New Zealand, with at least one member of the executive committee visiting each of the countries. Lee Ting and Rick Justice joined me as co-leaders. Rather than describing events in each country, let me simply say that the members of the executive committee unanimously expressed satisfaction with the excellence of results currently demonstrated and with the outstanding job done in organizing the individual reviews.

The schedules were varied, and over the course of two weeks, the teams met with many customers, delivered several important speeches, held conferences with key government leaders in a number of countries, inaugurated the new facility in Singapore, held numerous press interviews, participated in employee gatherings, and celebrated 20th anniversaries with HP Australia and HP New Zealand.

I mentioned that our second objective was to seek assistance with a number of key strategic projects.

High on the list is our presence in India. Dick Alberding led the delegation there and spent an active week reviewing the current status of our relationships in that country. Out of

this, we hope to develop a longer-term plan for the evolution of our activities there. We have an excellent working relationship with our distributor, Blue Star, and need to seek ways to make that relationship even more effective.

In Korea, we want to capitalize further on the opportunities Korea can provide HP for high-volume, high-quality, low-cost manufacturing.

The key issue facing us in China is the slowing of that market, as the government reins in procurement to balance its trade position. Our local manufacturing program continues to build and our ability to sell in local currency there gives us a significant advantage. We are working now to bring these elements together, supported by a strong marketing and sales program to add an important new increment to our business in that country.

In Australia, we have seen improvement in the order picture over the last several months and the team is optimistic. Again, a number of initiatives, including the success of the Australian software operation, have placed us in a very strong position in that country. We are recognized by the Australian government as an excellent corporate citizen. Our job now is to build on those strengths, get more momentum into our business and continue to improve the competitiveness of our company through improvements in productivity and asset management.

I could go on at length with some of the far-reaching programs that we now have in place in each of our countries. Value added has really become a way of life for us, and we are seeing substantial results. Let me close by saying that I am very pleased and proud of what we have accomplished and the way we presented our programs.

A special thank you to all who worked so hard to make this year's reviews successful. ■

Alan Bickell is vice president and director, Intercontinental Operations.

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3495 Deer Creek Road
Palo Alto, CA 94304
USA

Alan Bickell, Intercontinental Operations
vice president and director
Sy Corenson, *public relations manager*
Lynn Schulte, *editor*

Member, Public Relations Society
of America
International Association of
Business Communicators

Correspondents: Argentina - Marcelo Iglesias and Ema Martin, Australia - Diane Cummins, Brazil - Milton Brusius and Luiz Barata (Sao Paulo), Marlene Simarelli (Campinas), Canada - Linda Johnson, Hong Kong - Derek Fung and Maisie Koo, Japan - Motoko Takeshita and Yutaka Yamaguchi, Korea - Joo-ok Kim, Malaysia - Steve Cooper (Penang), Kok Lee Chin (Kuala Lumpur), Mexico - Jose Grapa (Guadalajara), Jorge Martinez (Mexico City), New Zealand - Dawn Ewing, Puerto Rico - Luis Calderon and Carlos Zambrana, Singapore - Eng Wee Nah, and Fatimah Hm, Taiwan - Susan Liu and Mi-Mi Huang, Venezuela - Ingrid Porras.