



Measure

For the men and women of Hewlett-Packard/NOVEMBER 1975

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Beyond the statistics:

Affirmative Action is personal action

□ *"Follow Equal Opportunity Road until you come to the fork. Then, white males stay on the main road; minorities, women and handicapped people follow the street marked 'Affirmative Action.' And when you're ready to climb the ladder, there's a separate one marked AA."*

Ludicrous as it may sound, that's the way some people—and companies—think Affirmative Action works. But is that the HP way? Ken Capen, coordinator for Equal Opportunity and Affirmative Action programs throughout HP, doesn't think so. "My philosophy is that we should not build a separate organization and a separate parallel pathway for AA," Ken ex-

plains in his patient, thoughtful manner. "The things we must do to help women and minorities progress are things that make sense in terms of employee relations. We must strive to weave a responsiveness to AA objectives into all our regular personnel activities such as employment and development, not set up two systems like a fork in the road — one direction for AA groups, a different way for other people. AA is accomplished through the supervisors and through their supervisors, and so on up to the top. All else is support. And you measure progress by the number of minorities and women in higher job levels, not by how much money you're spending on the program."

Ken feels that many people measure AA programs by their visibility. "All too often, Affirmative Action is evaluated in terms of the showcase program. People ask me how much money we spend on AA, how big an AA organization we have, who do I report to, and so on. It's apparent that these people judge AA programs by how big a splash they make. Outside of HP managers, I can't recall that anyone has ever asked me what progress we've made in achieving actual bottomline results."

In the ideal world, men and women of all races would be educated, employed and promoted on the basis of their abilities and individual ambitions, and it wouldn't be necessary to spell out equal opportunity in precise legal language. But we live in an imperfect world of stereotypes and prejudices. To insure equality of opportunity, the momentum of history and tradition

must be overcome by the force of law.

U.S. Equal Employment Opportunity legislation makes it illegal to discriminate on the basis of race, color, sex, religion, national origin, age or disability. Going a step further, the Affirmative Action laws require companies doing business with the Federal Government to actively recruit and develop minorities and women, and they establish procedures for measuring and reporting progress. Recent regulations require special AA programs to advance the employment of qualified handicapped people, and AA programs for Vietnam and disabled veterans will also be required soon, according to federal officials.

The intent of the law and the objectives of Hewlett-Packard are certainly in harmony. HP wishes to be an asset to every community it operates in, and to make the best use of its human resources. If there is any hang-up, it's that of getting busy supervisors and managers to understand that AA is not something to be left to the employment office. It's the responsibility of everyone who has a say in hiring, promoting, recommending people for transfer or informing them of opportunities for training and advancement. The supervisor must not only be committed to AA, but must understand and avoid the subtle discrimination that even fair-minded people unconsciously engage in.

The Equal Opportunity Workshop — a training program developed at the corporate level and widely used in the divisions — presents some tough questions and actual case histories illustrating ways supervisors can discriminate without meaning

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With the help of HP's Marsha Johnson, two Cupertino (California) High School students learn about computers by operating a CRT terminal. It was part of Black Students Day, held recently at Data Systems Division.

Affirmative Action

to. For instance, would you refuse to hire a woman with children if she hadn't first assured you she had made satisfactory child-care arrangements? Think about it, and consider whether you would require the same thing of a male applicant with children. Should you turn away a qualified Mexican-American from a job that calls for customer contact because he has an accent? Is it logical to assume that a married woman wouldn't be interested in a job that involves traveling, or in one which might require a future transfer to another location? Are there justifiable reasons for not hiring a man to work in a predominantly female assembly or clerical area, or for a woman to work in an all-male machine shop?

The answers to many of these questions don't come easy. Dick Shores, production manager for Stanford Park Division, worked with the training staff to develop the original EO Workshop several years ago, and has conducted some of the workshops in his division. He thinks supervisors come away from the sessions with a better understanding of their own deep-seated biases. "Many of them got out of school ten or fifteen years ago," he explains, "before there were courses in black studies or women's awareness. The EO Workshop is a way of bringing these people up to date."

The hard facts

While the actual results are improving, HP still has a long way to go. The percentages of minorities and females in most of HP's divisions are equal to or greater than the representation of those groups in the general population. However, when we break them down into the various job categories, although we see much improvement, we find the percentages taper off at the higher managerial and professional levels.

This fact is partly explained by the predominance of white males in the na-

| *AFFIRMATIVE ACTION PROGRESS | | |
|-------------------------------------|-------|-------|
| | 1970 | 1975 |
| <i>Managers & Supervisors</i> | | |
| Minority | 3.7 % | 5.2 % |
| Female | 2.4 | 7.4 |
| <i>Professionals</i> | | |
| Minority | 4.6 | 9.3 |
| Female | 2.8 | 10.7 |
| <i>Technicians</i> | | |
| Minority | 9.6 | 12.9 |
| Female | 8.4 | 10.5 |
| <i>Office & Clerical</i> | | |
| Minority | 8.6 | 17.7 |
| Female | 76.1 | 78.8 |
| <i>Skilled Workers</i> | | |
| Minority | 10.3 | 15.5 |
| Female | 14.7 | 20.7 |
| <i>Semi-Skilled Workers</i> | | |
| Minority | 19.4 | 27.6 |
| Female | 70.9 | 79.2 |
| <i>Service Personnel</i> | | |
| Minority | 34.1 | 43.1 |
| Female | 3.3 | 7.2 |
| TOTAL | | |
| Minority | 11.4 | 16.6 |
| Female | 37.9 | 39.9 |

**Percentages based on total U.S. Employment*

tion's engineering and business schools. The balance is better than it was a few years ago, but the change is slow. In certain fields it's still difficult for many women and minorities to get a good education.

Just how difficult it can be is illustrated by the experiences of Wilma Watkins, a customer engineer for Data Systems Division. "When I was in high school I was interested in taking a mechanical drawing class," she related. "I was told the class was for boys and that I should be interested in home economics. But I wanted to be a chemical engineer. I even applied to MIT and was accepted, but black women engineers were unheard of. I finally went to the local teachers' college."

Wilma achieved her objective, eventually earning a master's degree in physics from Fisk University, but she feels she

could have accomplished more in a shorter time if her career goals had been readily accepted.

Non-technical areas of the company seem to be more fertile ground for Affirmative Action. At Automatic Measurement Division, the materials organization managed by Dave Bylund has done remarkably well with a mixture of degreed and non-degreed personnel. As an example, six out of eight purchasing professionals are minority or female, according to Dave, and four out of seven production schedulers. "Females with technical degrees are still pretty uncommon," he agreed, "but there are many females and minorities with varying backgrounds and education who have some technical orientation. These people do well in materials groups."

Dave also described an organizational



Ken Capen, HP's full-time Equal Opportunity and Affirmative Action coordinator at the corporate level.



Jay Roche, shown working out a problem with supervisor Lillian Weeks, is one of more than 20 men in Lillian's PC operation at Waltham. Supervisors and managers generally report little or no "backlash" at HP.

technique used at AMD and the Colorado Springs Division that helps give people the experience they need in order to advance. "We break our groups up into small working modules. We might have a small unit of buyers, for instance, with a senior or lead buyer in each unit. That way we give people administrative experience and prepare them for management responsibility."

Merle Swigert, building services supervisor for the Stanford plant, has demonstrated that even a department with little room for advancement can be an important steppingstone for Affirmative Action. Merle's custodial crew — largely made up of minorities — has perhaps the highest turnover rate of any department in the company.

Normally a high turnover of personnel would indicate that something's wrong. But in this case something's definitely right, because most of the custodians move on to other jobs in the company. Merle encourages his people to take opportunities for training or transfer, and there are people in skilled jobs throughout the Bay Area divisions — many of them lead persons and supervisors — who started out as custodians. Some are in the HP apprenticeship program, learning to be electricians or electronic technicians. "I would say the average time in

custodial work is about a year, but we have transferred people in six months. It's a continuous job of hiring new people and training them, but it's something I feel we should do. I can walk through the machine shops here or through the Cupertino plant or Santa Clara and see people who worked for us as custodians. It's really very rewarding."

Debunking the stereotypes

Gaining equality of opportunity for women also means overcoming the traditional division of jobs into "men's work" and "women's work." The idea that a carpenter is a man and a switchboard operator is a woman simply has no place in modern society.

What about the persistent belief that women are more dexterous and therefore better at assembly work? "That's nonsense," Dick Shores responds. "Look at the watchmakers. We have five men and one woman who are former watchmakers, now doing precision mechanical assembly."

Lillian Weeks, a production supervisor at the Waltham (Massachusetts) Division, oversees the work of 44 people, about evenly divided by sex. She became a supervisor early in 1974, and she admits to having had some reservations about supervising male assembly workers. But she has

actually had few problems. "When I was made supervisor," she says, "I got more resentment from the females than the males. I thought it would be just the reverse. For some reason, women sometimes feel it's easier working for a male supervisor."

Even as we move toward equality for women, the difference between male and female attitudes is sometimes a matter of differing goals — perhaps because men feel more pressured by society to get ahead. Male production workers often view their jobs as temporary stopovers. Jay Roche, a young man working in Lillian's area, places himself in that category and says he hasn't decided on a career yet. On the other hand, Pat Costa, who has been with the Waltham Division for over 11 years, enjoys wiring and soldering printed-circuit boards, and is quite satisfied to remain in her current position. "There's plenty of opportunity if you want it," she says. "I just like the fact that there's very little pressure in my job."

But as the feminist movement gathers steam, more and more women are beginning to see themselves in supervisory and management positions, and also in skilled jobs formerly reserved for men. The roster of the various apprenticeship programs in the Bay Area shows a number of women successfully training to be electronics

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Affirmative Action

A new videotape entitled "Anyone Who Wants to . . ." was produced recently at the HP Television Center in Palo Alto. Designed for use in a revised version of the Equal Opportunity Workshop, the tape explores the subtle effects of institutionalized racism and sexism.



technicians — a field that was practically all male just a few years ago. Carole Lea left a job as an accounting clerk at AMD to become an industrial electrician's apprentice, and can often be seen atop a high ladder, working on the wiring or installing a light fixture. Her biggest problem adapting to her new environment was the blisters on her hands. She likes the work, and the men accept her without any reservations.

How much men expect of women is a matter of opinion. Lillian Weeks feels she's watched much closer in her supervisory position than a man would be. "It seems to me I have to prove myself more than a male supervisor. I have to do a little better job than a man."

According to Rod Foley, calculator sales manager for the Midwest Sales Region: "Men here will usually bend over backwards to help a woman get into sales. I think people are conditioned to accept less from a woman, rather than expecting more."

Even when they're measured by the same standards as white males, women and minorities have other hurdles in a sales organization. As Rod puts it, "It's different from a job where you deal with the same people all the time. In sales you have to be confident that you'll make a good first impression. But I don't think it's

as much of a problem as it used to be, because people are becoming more open-minded."

How are we progressing?

It's true that the winds of change are being felt everywhere, but for some people the change isn't coming fast enough. One black professional, who prefers to remain anonymous, feels that HP has more than its share of high-caliber blacks but isn't doing all that it could to develop and promote them.

A female supervisor confided: "I don't see any woman in my division becoming a functional manager very soon. I don't think men consciously put up roadblocks, but they're conditioned by their upbringing. If a man has an MBA people automatically think he should have a good job. If a woman has an MBA she's likely to be offered clerical work. I know it'll take time, because these attitudes change very slowly. If my daughter wants a career things will be better for her."

But the rate of change is accelerating, and HP continues to find new ways of pursuing its objectives of fair and equal treatment for all employees. A task force is currently studying several concepts, collectively known as "human resources planning," which have Affirmative Action implications. The task force, headed by

Ben Hill of the corporate recruiting staff, hopes to establish career development programs, some methods of forecasting employment requirements and identifying potential candidates for management positions, and systems for accurately surveying the interests and skills available within the HP population.

Affirmative Action for the handicapped is also a current concern, although HP has been active in hiring and training people with various disabilities for many years. Handicapped employees are considered in the design of all new HP buildings.

Ken Capen views Affirmative Action as a management and supervisory state of mind more than a "program." He resists what he calls the "where-do-I-sign-up" syndrome. "People often have the impression that AA is something you enroll in and graduate from" he explains. "What's really lacking is not a bigger and better laundry list of courses, but more person-to-person career planning. The individual needs to know that the company cares."

When you look beyond the figures as we have, beyond the corporate objectives and statements of policy to find out what HP supervisors and managers really think, you find that the company *does* care. And the company hopes *you* care, because that's the HP way.

Reaching out: Another side of Affirmative Action

For the most part, Affirmative Action is a nearly invisible force working at all levels within the company. It's in the day-to-day relationships between employees and supervisors. It's a manager taking the time to be sure hiring standards are realistic, enrolling someone in a training program, encouraging one employee to tackle more challenging tasks, or working out career plans with another.

But HP doesn't exist in a vacuum. The community and the university system educate the people we hire, and in turn, HP tries to make sure what is being taught is relevant to what modern industry needs.

That's the *visible* side of Affirmative Action — reaching out to the community to help the educational process, and attract more high-caliber minorities and women to Hewlett-Packard as well.

The company has always recognized its obligation to support higher education. Now, an increasing amount of HP financial support goes to minority colleges, and much-needed laboratory equipment is given through the instrument donation program. In addition, HP matches employee gifts to colleges and universities.

At this moment several HP engineers, still on our payroll, are teaching in southern universities as part of the loan and exchange programs begun by several divisions, and one professor is gaining practical business experience working at HP.

Direct aid to students is another aspect of the help we give. Under the Business Management Fellowship Program, sponsored by the federal Office of Minority Business Enterprise, HP employs disadvantaged youth — mostly from minority groups — each summer while they're in college. The students must maintain high marks to stay in the program. "This is not a 'make-work' situation," explains Aaron Kennedy of the professional recruiting staff. "Each successive job assignment should be increasingly challenging. We want these young people to get turned on to HP."

At the high school level, the programs are slanted toward career-guidance activities. A "Black Students Day" at Data Systems Division — sponsored and conducted by the black employees — recently



Executive Vice President Bob Boniface chats with Bob Hymes, one of the student summer hires in the Business Management Fellowship Program. Hymes spent the summer working with Bob Coutts (in background) at Automatic Measurement Division in Sunnyvale, California.

gave over 100 teenagers some hands-on experience with computers and a chance to learn about all types of business careers. Under a new program in the Palo Alto area, students will spend two hours a week at HP for three months — taking plant tours, playing computer games, working in the TV studio and learning about electronics in many other ways.

Teaching basic skills is also a matter of community involvement in many areas. The Avondale (Pennsylvania) Division

has trained instructors and donated equipment to help a nearby Opportunities Industrialization Center (OIC) teach electromechanical assembly to ghetto blacks.

Equal Opportunity is essentially a passive commitment to avoid discrimination in hiring and promoting. By contrast, Affirmative Action is an *active* program requiring the conscious efforts of supervisors, managers and people in supporting roles. But it must be an active *community* effort as well. □

You're in bad shape if you ever see these two fellows approach you in this manner. San Jose police sergeant Harold Lail at left is about to apply an X-ray cassette he developed for fingerprinting corpses and documents. At right is HP's Jerry Youker who assisted in developing the technique using an HP portable X-ray.



From McMinnville:

A powerful new x-ray technique for crimefig

□ As headlines screamed the grisly story of the kidnapping and murder of a little 5-year old girl, the San Jose Police Department was stymied by the shortage of clues. They knew for certain that there were at least two places where the murderer could have left fingerprints — on the victim's skin and clothing — but the question was how to retrieve them.

The police tried every technique they knew. But traditional fingerprint-lifting techniques were useless, infrared photography yielded nothing, and radiographs of iodine-impregnated areas turned up blank. Finally the entire attempt was abandoned. The certain clue to the murderer had to be passed by. Fingerprinting technology just had not yet reached that level of sophistication.

But Sergeant Harold Lail never forgot this failure, and began to study all he could find on x-rays and radiography.

Lail found that there were certain key problems in the use of x-rays. First, because of the shadows produced by inner organs, the rays could not pass through the body from the opposite side but had to be reflected off of the surface. Theoretically, reflection would not only take fingerprints off of skin, but would also revolutionize the tracing of fingerprints in documents, such as forged checks. It

would do this by avoiding the blurring so often created by conventional x-raying in picking up the prints usually found on the opposite side of the check.

However, to make x-ray prints by reflection, the film had to be extremely close to the radiated surface — requiring the x-rays to pass through it before reaching the skin. But the rays usually used for this purpose clouded the film and made it impossible to see the prints.

Second, there was the problem of portability. According to one British researcher's theories, the fingerprints, when dusted with a fine lead powder, would be readable because the particles would adhere to the higher quantities of amino acids in the prints compared to the surrounding skin. This meant that the x-rays had to be made within a certain time frame — about two hours — before the acid traces began to deteriorate. The fingerprint machine, then, would have to be portable enough to take prints at the scene of the crime as soon as the police arrived.

Third, there was the problem of surfaces. There are some clear limitations as to where prints can be retrieved. Cloth tends to absorb fingerprints. Body areas covered with hair, the friction skin on palms and soles and skin with oil glands like the face and neck, are not likely to

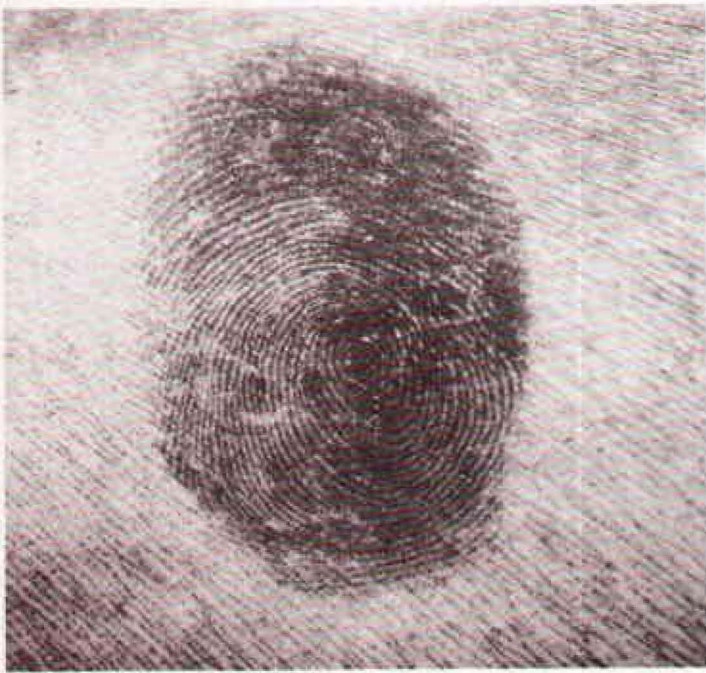
give readable prints. These limitations would severely restrict the area in which the new x-ray system could be used.

In search of a small, powerful x-ray machine, Sgt. Lail contacted Hewlett-Packard. His ideas so struck HP field engineer Jerry Youker, that he volunteered to act as a technical advisor. HP was impressed, too, and agreed to back the program.

According to past theories, the only way to overcome the difficulty with film clouding was to use "hard" (high energy) x-rays. This required a very powerful machine and some filters to block out any low energy rays that the machine would generate. The HP Model 43501A portable x-ray generator, a product of the McMinnville (Oregon) Division, was one of the few machines on the market capable of meeting these requirements and still remaining battery powered.

After much experimentation in his garage machine shop, Lail developed an effective filter with a combination of thin lucite, aluminum and copper sheets. Then, to simplify the print-taking process, Lail sandwiched the filters and film into a cassette-like box that could be pressed directly against the print being recovered.

It worked. Fingerprints on cadavers developed clearly. Prints of the face of a



In Sgt. Lail's technique, the fingerprints (left and below) are dusted with lead powder because lead's structure and high atomic weight makes it tend to release electrons when irradiated by x-rays. The heterogeneous mixture of "hard" and "soft" rays from the portable generator pass through filters, where the "soft" rays are blocked out. The "hard" rays then pass through the film and bombard the lead dust on the fingerprints. Under this bombardment, the lead atoms yield electrons that in turn strike and expose the film recreating the pattern of the fingerprint. The short flight path of these electrons explains why the film/filter cassette must be nearly flush with the surface.

ters

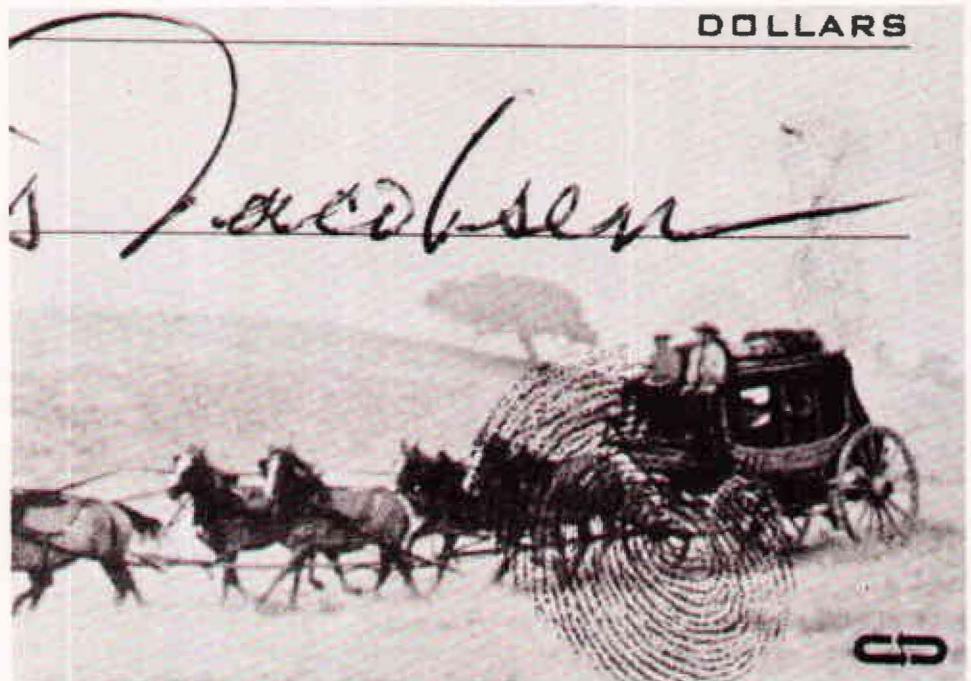
forged check were not superimposed by the print on the back. Nor, because of the use of electrons instead of light, were prints lost in the many colors of the paper.

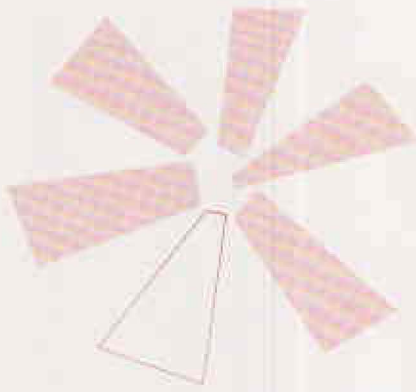
But, there was little time to celebrate. The first field test for Sgt. Lail's invention came as soon as the experiments were completed. Once again, the newspapers were filled with a gruesome story: In Los Angeles, the "slasher" had just killed his sixth victim, another resident of Skid Row.

At the request of L.A.P.D., Lail and his machine were flown to Southern California. Sadly, the test failed. The body was already four days old — the prints long deteriorated by that time. However, despite the failure, the director of the L.A. coroner's forensic science laboratory praised the technique and said it was "so logical that I wonder why someone hadn't thought of it before."

The Lail-Youker x-ray system has helped to convict a check-cashing felon in San Jose, and aided San Francisco police gather evidence in a pending homicide case. More tests will be coming soon. Because of a policeman's determination not to let a murderer go free, the crime prevention agencies of the world have a new weapon at their disposal to help bring murderers, rapists and forgers to justice.

□





HP is big in minis

*—a look at the new six-division lineup of
Computer Systems Group*



Lead Bernie Appleby (left) explains critical environmental test procedures in HP-21MX and HP-2100 manufacturing area at Cupertino. Minicomputers are put through extensive temperature and humidity tests before being shipped. Undergoing training (from second to left) are Jay Hendon, Steve Bissell and Dave Dillon.

□ How do you manage a business that is bigger than all of HP was just 11 years ago and now ranks as the second largest Group within the company?

To help meet this challenge of rapid expansion, the Computer Systems Group is forming two new divisions. Beginning this month, the company's computer operations are divided into six divisions, each with complete responsibility for a portion of the Group's product line.

The two newest organizations are being spun off from the Data Systems Division. They are the General Systems Division, responsible for the HP-3000 and HP-2000 systems, and the Data Terminals Division, charged with maintaining the momentum of the new CRT terminal product line.

"The advantage of the new structure is that it keeps the best and most experienced people in touch with the work of the organization, instead of four layers above it," said Dick Anderson, Data Systems Division manager. "The closer you get your best people to the action, the better the results."

General Systems, under manager Ed McCracken, already is moving into one of the two recently completed buildings on HP's Santa Clara site. Data Terminals, headed by Jim Arthur, continues to share space with Data Systems in the Group's Cupertino headquarters complex.

Even after spawning two substantial new businesses, Data Systems remains as the largest of the Computer Group's divisions. Under Anderson, it will concentrate on the 21MX and 2100 Series minicomputers, the 7900 disc line, and 9600 industrial computer systems. A major portion of the Group's R&D effort also will come under the Data Systems umbrella, with Dick Hackborn in charge.

"The Data Systems Division is concentrating mainly on machines that are small and relatively low in cost, both for OEM and end user applications," said Anderson. "We are working to improve our performance in real time measurement and control systems and to expand our very good OEM business."

In addition to providing closer management attention to individual product areas, the new organization also helps clarify the marketing objectives of the group.

"Our primary task is to expand the initial momentum of the 3000 in business applications," said General System's McCracken. "This is an area of rapid growth and great potential for HP."

"The 2000 Access system makes a powerful data entry tool in larger distributed networks. Both systems also are the basis for our very successful educational marketing effort."

Another relatively new market for HP is being pursued by the Data Terminals Division, with its 2640 CRT terminal and recently introduced 2644 CRT terminal with built-in tape cartridge. HP began marketing its first in-house CRT terminal in January and shipped its 2,000th unit in September.

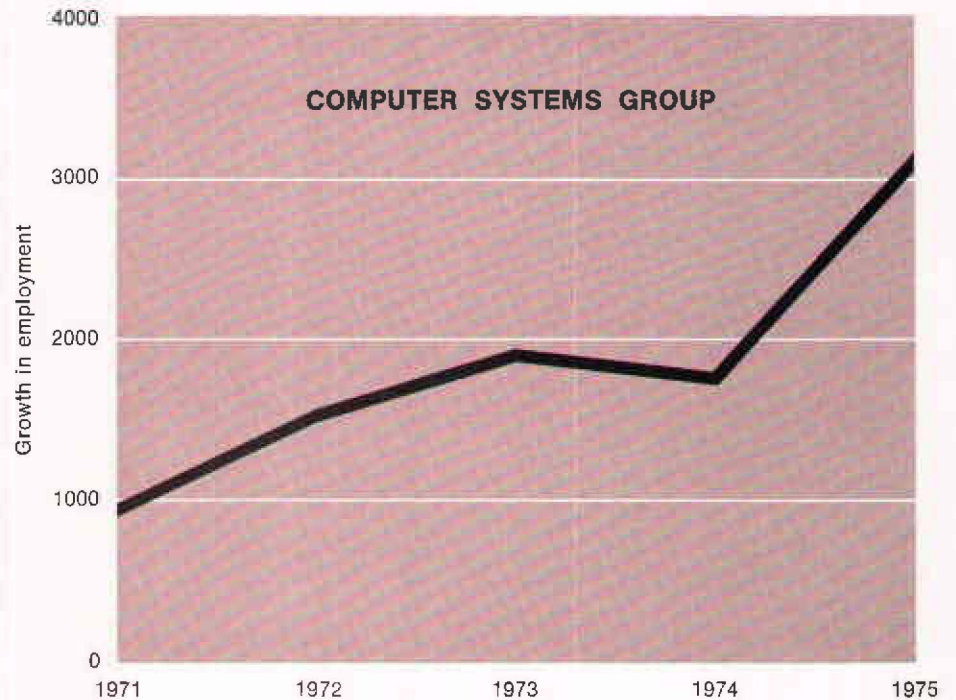
"HP has had a program of supplying terminals for use with our systems for a number of years," said Arthur, "but it has been only during the last year that we have gone into the marketplace with our own product."

"We have two primary goals. One is to enhance HP's computer capability with our terminals. The other is to develop data terminals that solve customer problems on a stand-alone basis."

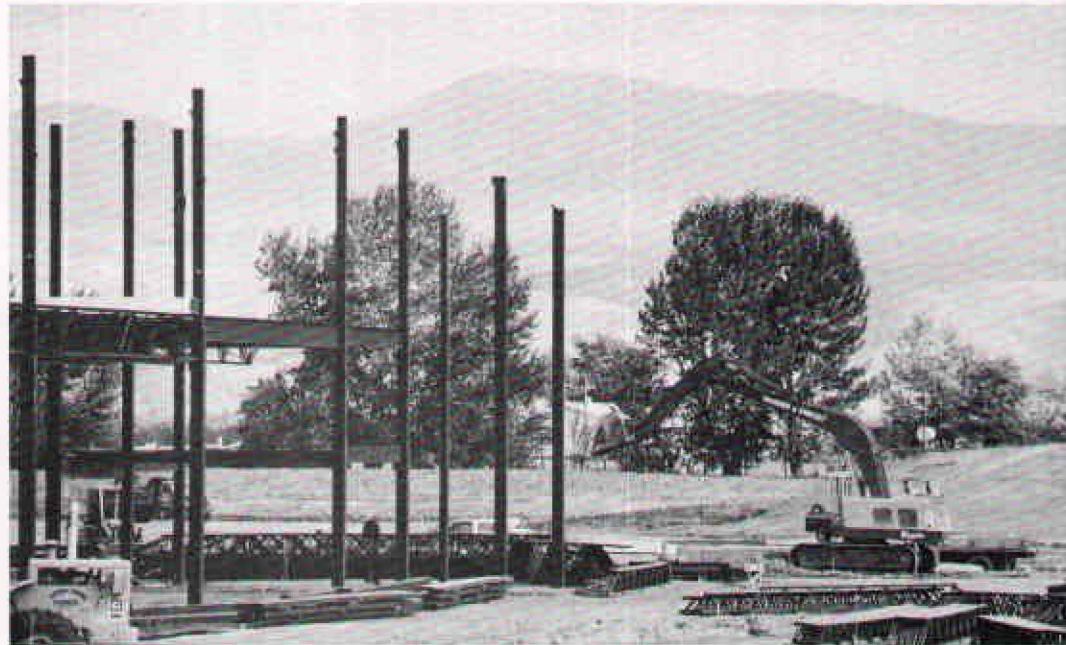
The rest of the Group is unchanged by the reorganization. The Automatic Measurement Division in Sunnyvale, under Al Seely, is responsible for 9500 and 8500 computer-based industrial measurement systems; the Boise (Idaho) Division, under Ray Smelek, handles the company's lines of printers and magnetic tape drives; and the Grenoble (France) Division under Karl Schwarz, is responsible for developing HP's data collection products and manufacturing for HPSA customers.

Each of the divisions has full R&D, manufacturing and marketing capability, along with responsibility for the ultimate profitability of its products.

"The new organization will better



Computer Group work force has risen sharply through new hires and HP reorganization.



Construction is well underway in Boise (Idaho) on a new 154,000 square foot plant to house HP's operations in printers and tape drives. Boise employees, presently occupying leased facilities, will move into the new building next summer. Work is to begin this month on a similar building in Cupertino.

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New Computer Divisions

spread the responsibility of our computer operations among a broader team of managers," said Paul Ely, Group manager. "Equally important, a significant number of HP people get new opportunities to contribute at a higher level."

The success of the Computer Group is based on the same solid foundation as other portions of HP: A steady flow of innovative products that solve customer problems.

"It is our objective to develop and manufacture all the key components and

peripherals that go into our computer systems," Ely said. "We've made good progress toward this goal, giving us a substantial edge on our competition.

"Because of this broad capability, our major strength is in the high performance, integrated systems portion of the market. We don't contest the highly competitive low-end segment. This has been a successful strategy that HP has followed from the beginning. The systems portion of the business is the fastest growing, while the lower end is getting a great deal of pressure from the new micro-computers."

The HP-3000 has emerged as an extremely strong product, perhaps the top technical achievement of the Computer Group to date.

"Our customers are finding that the

3000 provides a mix of capabilities not available elsewhere," McCracken said. "In terms of hardware and software development, it is a high performance system that serves our traditional scientific and educational customers and opens the door for HP's entry into the growing commercial market."

The new lineup is a further step in the evolutionary process that began with formation of the Group one year ago. At that time, in a general corporate reorganization, the Computer Group began to take its present form. And one of the key decisions was to combine the previously separate computer sales forces.

"That was the single most important result of the reorganization," Ely said, "to consolidate our field forces into one uni-

HP 3000: The right computer

One measure of the effectiveness of HP's computer products is their widespread use by one of the Group's most demanding customers: Hewlett-Packard.

There are 16 HP-3000 mini data centers being used within the corporation, 14 in business/commercial applications and two in scientific use. Four more are

scheduled to be installed early in the 1976 fiscal year. In addition, more than 120 HP-2100/21MX systems are in daily use throughout the company.

"Initially, selling the 3000 to corporate and other HP divisions was a very tough job," admits Nev Griffin, market development manager who heads intra-company sales of the 3000. "But the performance of the 3000 has convinced most of our HP customers that it is the right computer for certain jobs. Still, buying a 3000 has to be cost justified, just like any other purchase."

One of the most successful 3000 installations is at Intercon headquarters in Palo Alto. A general accounting system developed by EDP manager Sam Solt and his staff, in conjunction with corporate finance, is now being used on 3000s in Palo Alto, Toronto, Melbourne, Singapore and later this year in Sao Paulo. The program enables Intercon to process its accounting records in local and U.S. currency and generates necessary legal and management financial statements.

Other tasks being performed by the Intercon 3000 include monitoring order statistical performance and an inventory system which tracks domestically manufactured products through to customers in the Intercon region.

"Although we have only six months experience on the 3000, we have found it to be a cost effective computer for processing commercial data," Solt said.



Intercon EDP manager Sam Solt (standing) and program analyst Norman Tu discuss a new program developed for HP-3000 applications. A general accounting system developed by Intercon and corporate finance is being used on 3000s in Palo Alto, Toronto, Melbourne, Singapore and, later this year, in Sao Paulo.

fied organization to service, support and sell our computer products.

"It is important to increase our visibility in the marketplace," Ely said. "We would like to become as respected in the computer industry as we are in the instruments business.

"This will take time, and a major effort on our part. The potential for our products goes beyond the manufacturing, industrial and scientific customers traditionally served by HP. We have to convince customers in other types of markets of the capabilities of our computer products. This we hope to do by continuing to provide innovative, reliable products that earn customer recognition, backed up with a reputation for good service and customer support."

While raising HP's profile in computers, the Group is faced with the ongoing challenge of "keeping up with our rapidly changing business," Ely said.

The change is reflected in many ways. Departments change locations, then move again to accommodate the expanding CRT terminal manufacturing area or new product marketing team. New job opportunities are created as the result of sales growth and organizational start-ups. This month, construction will begin on a new 154,000 square-foot building in Cupertino, raising to 488,000 square-feet the amount of floor space at the company's computer headquarters. New technology results in ever improving and expanding product lines and lower prices.

"Since we entered the minicomputer field in 1967, there has been an average drop of 30 percent annually in the price of our computer memory products," Ely said. "Indications are that this price erosion will continue, largely because of the increased use of semiconductor devices in minicomputers."

To help meet this challenge, one of the major goals is to more broadly apply HP's substantial in-house technology into future product lines.

The computer business is a highly competitive one and survival is not assured for even the most prestigious companies.

"We have just completed a very successful year and are optimistic that HP's computer business will become increasingly successful," Ely said.

There's no doubt about it: HP is ready for the long haul in minicomputers. □



Lines of CRT terminals blink their way through self-testing as HP people touch-up PC boards in the terminal production area in Cupertino. HP has shipped more than 2,000 units since deliveries began early this year.



Rob Crumb checks out a 7905A disc drive in the initial diagnostic test area.

HP News

Ten percent rise expected in 1975 sales, orders

PALO ALTO — Hewlett-Packard's sales and incoming orders for the current fiscal year "are expected to be about 10 percent ahead of last year," Chairman Dave Packard told a meeting of security analysts on October 29. The company's fiscal year ends October 31.

Packard said it was difficult to predict an earnings figure for 1975 because of the various adjustments that occur at the end of each fiscal year. "We expect, however, that our earnings will be either a little above or a little below those of a year ago," he said.

In 1974, HP had net earnings of \$84,022,000, equal to \$3.08 a share, on sales of \$884,053,000. Its orders were \$893,202,000.

New digital signal analysis sales team

SANTA CLARA, Calif.— A new field sales organization has been established with responsibility for marketing the company's Fourier analyzer systems and laser measurement products. Bob Puette, manager of Digital Signal Analysis at Santa Clara Division, said "The new organization reflects HP's success in designing measurement tools for the mechanical engineer, and demonstrates a strong commitment by the company to the expanding vibration analysis and machine tool markets.

"A worldwide force of more than 40 sales and technical support engineers, each with a thorough knowledge of the applications in these fields, has been formed."

Previously, the two product lines were sold by field engineers in HP's Computer Systems Group.

More than 350 of HP's Fourier analyzer systems are now in use throughout the world, and the company's laser products are widely used for calibration of machine tools in dimensional metrology.

New voting system features HP computer products

CUPERTINO — Computer Election Systems (CES), of Berkeley, California, the largest U.S. manufacturer and marketer of computerized voting systems, has developed a new minicomputer system that will both maintain voter registration files and process ballots. The system is based upon a Hewlett-Packard Model 2125 DISComputer.

The new system is said to be CES's first venture into computerized voter registration data bases. Previously, the company has marketed three types of vote counting machines, in conjunction with its 'votomatic' vote recorder line, presently being used by 15 percent of the nation's voters.

The HP Model 2125 system will allow a county to have an in-house minicomputer for administrative tasks throughout the year, and then, on election day, to tabulate all the ballots, according to a CES spokesman.

"The system will save a county the costs of using an outside time-share service for vote counting or hiring a service bureau to keep the registration files.

"File updates can be made al-

most instantly on the DISComputer because of its on-line capabilities. This is quite an improvement over the week long turn-around times encountered with some service bureaus. In addition, on election eve, the system will be able to end confusion by quickly verifying the registration of a voter that for some reason is not carried on a precinct's rolls."

According to CES, the reasons for purchasing the Hewlett-Packard systems include product quality and service.

The basic system will be priced at under \$100,000. It includes the Model 2125 DISComputer with 32K core and 15 Mbyte disc memory, a ballot card reader, printer, and two HP model 2640 CRT terminals.

HP-21 price lowered to \$100 in U.S.

PALO ALTO — The U.S. price of the Hewlett-Packard HP-21 scientific pocket calculator was reduced from \$125 to \$100, effective November 1.

The six-ounce HP-21, introduced in February, is the lowest-priced pocket calculator in the HP line, and is designed primarily for scientists, engineers, educators and students.

The HP-21 was the first of Hewlett-Packard's second generation of pocket calculators that includes the HP-22 business management model (\$165 U.S.) and the HP-25 programmable scientific model (\$195 U.S.).

Standard employee discounts of 30% are available on a one-time-only basis per product.



From the president's desk

The president's letter — what is its purpose? Who really reads it? Is it serving its purpose? I know the answer to the first question. I don't know the answers to the other two.

The purpose of the letter is to provide a direct link between the office of the president and the rest of the company. To further this end, I have tried to paint a picture of the company as it is (sometimes light — more often than not, I'm afraid, heavy). The letter provides a chance to discuss such important items as earnings performance, management philosophy, affirmative action, how we finance the company, and so forth. It also provides an occasional chance to talk about some of the lighter incidents in the company's day-to-day life, like the letter from the customer whose HP-35 dropped out of his parka pocket and was run through his home snowblower (the only repair required was replacing the smashed case).

But writing the president's letter month after month is not an easy task. In some ways it's like standing on the edge of the Grand Canyon and shouting — nothing comes back. Are these letters read? Are they of interest? Are there subjects of importance to the company that are not being addressed? Do you feel that these letters give you a better insight into the company, how it works, and what factors are important to the health and prosperity of HP and HP people?

It isn't anything you need to do immediately, but some time when a thought occurs to you about the company, your job, or the president's letter, drop me an informal note. I don't guarantee that I will be able to personally reply to each one, but the comments I receive certainly will help me get first-hand knowledge of the interests and concerns of people throughout the organization. Only by feedback such as this can I do a better job of discussing the very complex structure of the company with those who really make it work — HP people.

Bill Hewlett

And then

there were 30,000

of us...

Acting a bit like the Dow-Jones averages of industrial stock prices, HP's total employment figure over the past year has tended to flatten, fall slightly and then gradually rise again. Twice it fluctuated through the 29,000-people mark. Finally, this past September, someone in California or Sweden or Massachusetts — or from any of the more than 30 other locations recording gains in employment — became the 30,000th employee. Then it kept right on going to 30,107 by the end of the month — not such a landmark figure, perhaps, but definitely pointing in the right direction.

Measure

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