

Microwire

Published for the Employees of the Fairchild Corporate Headquarters and Semiconductor Components Group — Mountain View/Palo Alto



IT'S GETTING TO BE A HABIT — A very pleasant one. For the second year in a row, Fairchild has been named an outstanding supplier by the Missile Systems Division of Raytheon. Last year's award was a world globe. This year it is a contemporary version of a grandfather clock. Both awards will be displayed in the lobby of Building 4 so that visitors can see this physical evidence of the Transistor Division's outstanding performance for Raytheon. Above, Bob Bylin, manager of the High Reliability Group of the Division, compliments the people he supervises at a coffee and cake celebration in the Bldg. 4 cafeteria. He stated the awards were earned through the unrelenting pursuit of quality by the three shifts of employees in Mountain View as well as the assembly performance of Fairchild operators in Hong Kong.



A PORTRAIT OF A PROUD MAN — Bruce Crockett is sporting a broad smile these days, a different demeanor than he boasted in November. In a friendly competition between the group he manages—Wafer Fabrication and Die for Optoelectronics Division—and Hank Mahler's Lamps and Digits Group, Bruce and his group ate beans while Hank and his feasted on steak when Hank's group outstripped Bruce's in consistent performance in November. The table was turned in December, when Bruce and his people claimed the honors in a second challenge to determine which group could perform over their forecast. Both groups delivered more product than they said they would in December; however, Bruce's exceeded Hank's when all numbers were tabulated.

Semiconductors Conserve Energy

The semiconductor should be claiming headline coverage in these days of acute energy consciousness through its major contribution to lessening demands on electrical energy. As semiconductor devices have replaced vacuum tubes in more and more products, they have lowered the energy demands of those appliances and systems.

According to Dr. James Early, Director of the Digital Group Research and Development Laboratory, energy savings of up to 90 percent have been realized through the displacement of vacuum tubes by semiconductor devices. "Semiconductors," Jim explains, "can operate at room temperature while tubes must reach temperatures of 700-800 degrees centigrade (1300-1400 degrees F.) before they begin emitting electrons. Part of the tube element must literally become red hot before it performs, soaking up considerable amounts of electrical power. In addition the vacuum tube requires higher operating voltages and currents than do semiconductors.

"In a radio," Dr. Early illustrates, "a vacuum tube model demands from 10 to 100 times as much electrical energy as its solid-state counterpart. Energy savings of from 50 to 90 percent are realized in television sets which employ semiconductor devices over the vacuum tube variety. The biggest energy savers are diodes, used to change AC to DC in various industrial applications. They probably save 1 or 2 percent of the nation's electrical bill. The increasing energy consciousness," Dr. Early believes, "will stimulate manufacturers to seek additional use of energy-saving semiconductors." He envisions semiconductor-operated control panels for lighting in stores, offices and plants. Such a control system would allow adjustability of lighting in every area of a building to the minimum necessary level. The Analog

Group has developed an electronic ignition system that keeps an automobile in tune up to four times as long as traditional ignition systems. It is a generally known fact that the efficiency of an engine deteriorates as the ignition system begins to lose its efficiency until it requires a tuneup — usually every 12,000 miles. With the electronic system, an automobile can operate efficiently for up to 50,000 miles without demanding a tuneup. That's four times the efficient operating life now possible with present ignition systems. Another application that will prove beneficial to gas economy is a computer operated by semiconductor devices which would adjust engine operation to obtain the maximum efficiency in any type of driving. For stop-and-go city travel, it would coordinate all engine parts to respond to the special demands of this environment. It would allow the engine to automatically adjust to provide maximum performance on the freeway. The semiconductor computer for automobiles could, therefore, enable the engine to obtain maximum mileage from every gallon of gasoline.

So, let's look at the semiconductor with renewed respect. It has been fighting the energy battle quietly and effectively for two decades.

Salesman of the Month

Don Trzyskowski of the Wellesley Sales Office has been named Fairchild Salesman of the Month for November.

Don earned this signal honor through an outstanding sales performance in the Boston area since joining Fairchild in October, 1972. In making the announcement, John Luke stated, "Don has been a consistent monthly high performer and recently capped 1973 with a multi-million-dollar month."

Profit Sharing develops new attitude toward profits-productivity

There was an evident change in the view of work and productivity at Fairchild on January 2. Many employees confessed that they had begun looking at cost savings and productivity on a much more personal level than ever before. It was on this day that Fairchild began its fiscal year 1974, the first year in which company earnings will count toward profit-sharing contributions for employees. In informal interviews throughout the Mountain View complex, MICROWIRE found that virtually everyone is seeing a closer relationship between their own performance and profits.

"I'm not using as much paper as I used to," Debbie Seiter reveals as a result of her personal program to contribute to profits and, therefore, profit sharing.

"It's going to be a great help to retirement," Bobbi Underwood of Bi-Polar Memory, believes. "This is the kind of program that can really grow. It's much more beneficial in the long run than a program that has a yearly cash payout. I prefer this sort of program where your money is reinvested and held until retirement. It gives you something to work for."

Avis Cherry, who was a member of a profit-sharing program with a previous employer, looks upon the profit-sharing concept as a bonus that requires little additional effort on her part.

Polly Green, who is still recovering from the shock of a stock investment that didn't work out the way she had hoped, has already selected her investment plan for any profit-sharing contributions she receives—"It will definitely be the most conservative investment plan available."

Peter Smith sees profit sharing as a method through which employees can get direct financial feedback as a result of their efforts. "It's going to make people think twice before they leave the company." Asked if he believes that profit sharing will have a direct effect on productivity, Peter stated, "I think it will, if it can. I can't believe that it will influence the pace in Bi-Polar Memory, however. We're already going full throttle now."

Jim Holt, like every other member of the profit-sharing plan, is curious about what his initial profit-sharing contribution will mean in terms of dollars and cents. "Naturally," he adds, "it's a welcome program. I feel that the level of excitement about it will grow as the time for the first profit-sharing contribution is nearer. Once employees have some money in their accounts, the plan will be more of a reality. I believe," he adds, "that it will provide incentive for people who have been here a while to remain with the company."

Bob Young, a Fairchild employee for almost two years, views the Fairchild profit-sharing plan as "one of the best programs of its kind I've ever heard of." For Bob, who has worked with several other Northern California electronics firms, this will be the first time he has had the opportunity to participate in a profit-sharing program.

Pat Lilly sees profit sharing an ideal method for building a long-term relationship between the company and its employees. "It's the kind of a plan that will pay off for employees who plan to make their career with Fairchild. It will become more and more interesting as the years go by and the individual's profit-sharing account grows."



Field Sales Secretaries To be Honored

In a new program designed to recognize the special role of the field sales secretary in Fairchild's marketing efforts, each month, beginning with February, 1974, one secretary among the field staff of more than 75 will be named Secretary of the Month.

The honor will be earned as the result of nominations submitted by salesmen to Regional Managers describing the performance of their nominee. In turn, the Regional Manager will forward one nominee's name to the Area Manager for consideration for the award. Each month, every area manager, OEM and distributor will be encouraged to submit one secretary's name to the headquarters office in care of Bev Freitas. After the review of all nominees by the evaluation committee, one secretary will be honored for the month. The announcements of Secretaries-of-the-Month will be made by the middle of each month.

The honored secretary will receive a plaque and dinner for two at a local restaurant. In addition, she will enter an annual competition which will name the Fairchild field Secretary-of-the-Year. Secretaries receiving the annual honor will receive a trip to the Fairchild headquarters in Mountain View. If married, the secretary's spouse will be included in the invitation.

The new field sales secretaries recognition program was created to honor the, until now, unsung heroines of the field offices.

Nominees for the awards will be evaluated on the basis of outstanding contribution to the marketing effort at Fairchild. The evaluations will be conducted by a committee made up of John Luke, Bob Skinner, Tom Donovan, Bev Freitas and Bill Schwerm.



Peter Smith



Jim Holt



Bob Young



Pat Lilly

Hope Workers Visit Disneyland As a Result of IR Christmas Gift

Employees of the Industrial Relations Department chose to express the spirit of the holiday season in a special way, according to Mary Williamson, Director of Hope Workshops. Fairchild's Industrial Relations employees donated 15 expense-paid trips to Disneyland for workers at the Hope Workshop in San Jose. With the help of Air California and the Dale Johnson Travel Agency, the Hope men and women had their day at Disneyland on December 28.

Hope Workshops employ some 350 handicapped or retarded men and women to work on subcontracts awarded by local industry. Fifteen workers were selected to make the trip on the basis of seniority.

One worker who went is Kathy S., a 41-year-old woman with Downs Syndrome who has been with the workshop for 16 years. "Kathy is a reliable and able worker and has performed just about every task handled by our shops," Mrs. Williamson stated. "She handles many of the Fairchild jobs, such as transistor lead-straightening loading, sorting for salvage, as well as jobs for other companies, making die-cut name plates and collating."

These handicapped men and women have been Hope's sheltered employees for years. Mrs. Williamson said, "They represent Hope's belief that each person should have a place where he or she can be a contributing member of society and earn wages for his or her part of the world to work. Through Warren Bowles, Fairchild Vice President-Industrial Relations, and the men and women of the Industrial Relations Department, it is possible for Hope to acknowledge its awareness of the value of these loyal Hope workers."



(Foreground, left) Roger Barney and Karen Regnier of the Industrial Relations Department visited the San Jose Airport on December 28 to send off the 15 Hope Workshop workers who were headed for a day in Disneyland as the result of the generosity of the department's employees.

Our agency is a private, non-profit organization and, as such, couldn't offer this gift. The generosity of the men and women of the Fairchild Industrial Relations Department has made it possible."

Warren Bowles stated that the men and women in his department were delighted to offer this holiday to the Hope workers. He said, "The day at Disneyland is our way of expressing the meaning of giving. These Hope workers are great people to know and to work with. We've experienced this both in performance of subcontract work and through temporary employment with us."

LTD Open Enrollment Enables All to Sign Up For Income Protection

An extended illness. Five years' loss of income. A terrible thought—but it could happen. Insurance statistics tell us that after a disability has lasted six months, the *average* claim continues for five years.

How can you protect yourself and your family from lengthy income loss? Enroll for *full* benefits in the Fairchild Long Term Disability Plan, available to all employees who have completed 12 months of service with the company. The LTD Plan pays up to 60 percent of your earnings as long as you are disabled up to age 65. Benefits start after your disability has lasted six months.

Fairchild automatically provides you with LTD coverage for the first \$400 (a maximum benefit of \$240 per month while disabled) of your monthly income at the time you achieve a year of service. You may enroll for additional coverage for eligible monthly earnings above \$400 at a cost of .7 percent of the next \$1,600 of your monthly income.

Most employees already participate in the contributory portion of the Plan. But for those who didn't enroll when first eligible, the month of January is an open enrollment period. During this month only, no physical examination is required of employees who did not enroll for the coverage on their first anniversary with the company. Coverage for January enrollees begins February 1. Visit the Personnel Services office during January to sign up for full coverage.

Beginning January 1, 1974, the New York Life Insurance Company became the insurer of the Fairchild Long Term Disability Plan.

Easy on the Eyes

The difference between comfort and eye strain for employees who use a microscope regularly in their work is frequently a few simple adjustments on the scope.

Learning to live in comfort with a microscope is the instruction contained in a new booklet, "More Than Meets the Eye," which has been published by the Corporate Medical De-

partment. Copies of the booklet, which outlines step-by-step procedures for adjusting and caring for microscopes, will be distributed by all production supervisors to employees who use scopes in their work.

Extra copies of the booklet can be obtained from the Corporate Medical Office in Building 7.





(Left to right) Rex Atcheson, Sharon Dalton, John Pizzuti, Rose Brown, Norma McCarn with San Jose Children's Shelter director deliver some of the presents purchased with contributions from LIC employees.

LIC Makes Christmas Merry For Children at Shelter

First came the decision that sending holiday cards to fellow employees whom they see every day was unnecessary for members of the LIC operations. Next came the suggestion that instead of purchasing cards for fellow employees, that the money be directed to some worthwhile community effort. Everyone agreed.

Then came the collection which resulted in more than \$300.

Then came the problem, how to get the most Christmas joy from \$300. Rex Atcheson was assigned the task of finding a community agency which serves children in Santa Clara County that would truly benefit from the generous contributions of LIC employees. In her search, Rex found that the youngsters at the Children's Shelter in San Jose were faced with a rather bleak Christmas because very few gifts had been received by the Shelter and there were no budget provisions for the purchase of presents.

This set Rex and John Pizzuti on a whirlwind and exhausting shopping spree as they searched for the right toy or other gift for each resident of the Shelter. "I didn't know it would be so difficult to spend \$300," Rex revealed after the start of the shopping spree. Rex had to make a return trip to a local toy emporium in order to

spend every cent of LIC Christmas funds.

On Thursday, December 20, Rex, John, Sharon Dalton, Rose Brown and Norma McCarn, pulled a modern-day Santa stint. They arrived at the Children's Center in automobiles which bore a striking resemblance to the traditional Santa's sleigh in that they were laden with toys and games for children of all ages. The gifts were gratefully received by members of the Shelter staff, knowing that they would make the holiday much more festive for the youngsters in their care.

The San Jose Children's Shelter provides temporary housing for children whose parents are unable to care for them. Ranging in age from infants to 17 years, the children are either awaiting placement in a permanent foster home or their return to their own home. There were more than 30 children at the Shelter over the Christmas holiday. At times, the Shelter has provided a temporary home for up to 125 youngsters.

Buoyed by the warm feeling that spread through LIC when the gift deliverers returned from the Shelter, planning got underway for an even more impressive Christmas effort for Santa Clara County's underprivileged children for 1974.

Below, Rex and John on their shopping spree.



January Referral Awards went to:

CENTRAL OPERATIONS DIVISION

Bob Smith
Tom Baker
Ron Gallardo
Madeline Lent
Linda Bohn
Tom Mitchell
Donald T. Oaks
Bob Wood
Nancy Walb
Gini Thomas

ANALOG PRODUCTS DIVISION

Janet Money
Cliff Reich
Alma Moraida
Hester St. Clair
John MacDugall
Judy McDonald
Loma McDaniels
James Petterson
Ronald Smith

CORPORATE HEADQUARTERS

Judy Blades
Frank Eged
Bob Reid

MARKETING

Barbara J. Bizieff
Charmain Woody
John Katsaros
Harry Dexter

COMPONENTS GROUP

Edith Kendell

DISCRETE PRODUCTS DIVISION

Thomas O. Moore
Richard Harris
Betty Cameron
Dr. Gailon Brehm (MOD)
Nicholas Gray
Amelia Hammon
Bob Bogowitz
Pat Kenyon
Elaine Gose
B. J. DeMellopine
Nina Banks (MOD)

DIGITAL PRODUCTS DIVISION

Rosemary Sierras
Judith Aquino (R&D)
Peter Rippert
Debbie Griffin (2) (MOS)
Alan McDulin (MOS)
Robert Glass
A. D. Brown (MOS)
Marlys Fleming
E. Daniel Pericles (MOS)

What the meter reader reads When the meter reader reads your meter

The energy shortage has nurtured some new and interesting pastimes. Among them, attempting to discover what the meter reader reads when he meter reader reads your meter. The supposition is that if you could break this code, you might also have greater opportunity to chart your energy usage at home in the hopes of reducing it.

Gil Gilbert, Energy Conservation Manager, offers the following tips to lead you to your gas and electric meters and to decipher the information they display.

"Before you can read the meter," he begins, "you have to find it. Right? Usually they are located on the side or rear of your house. Another clue: they're usually grey in color. Oh, you live in an apartment? Well, everyone has a meter though it may be more difficult to find in an apartment building. When you do find them, there are probably many in the group. Apartment dwellers can expedite their search by asking the apartment manager to lead them to their meter.

"Now, friends, comes the rub. The electric meter measures the number of kilowatt hours. Yeah, I know I said the same thing. A kilowatt hour is a 1,000-watt energy unit. Imagine, if you will, a 100-watt light bulb burning for 10 hours.

"Gas meters measure therms. That's 100 cubic feet of gas. But, more on that later.

"Both utility meters are tightly enclosed in glass cases. No, you can't alter the dial. First, it upsets PG&E, and second, you could go to jail for tampering with the meters. Let's examine the electric meter. Inside that glass bubble are four dials with numbers from 0 through 9. The first dial on the left and the third run counter-clockwise. The second and fourth run clockwise. Ready? Get out your pencil and paper. Look at the dial on the right. Note where the needle is. If it is directly on a number write down that number. But, if it is between numbers, say 7 and 6, write down the smaller

number. Do this for the remaining dials.

"This represents the number of kilowatt hours that have been logged by the meter since it was installed. To determine how many kilowatt hours you have used since the last meter reading, take your last utility bill (that's the piece of cardboard you get in the mail once a month that makes the family bill payer scream and pound the table). Take the number under the heading 'present reading' and subtract it from the reading you just took. That's how many kilowatt hours you have used. Weekly readings of the meter will provide a measurement of the effectiveness of your energy saving efforts and may stimulate you on to greater economies.

"Gas meters are basically the same as the electric variety with the exception that some have only three dials. They're read in the same way. As I've said, a therm is 100 cubic feet of gas. However, the amount you read on the meter will differ from the amount for which you are billed. Why? Well, gases differ in their heating capacities depending upon where they are obtained. PG&E multiplies the therms used times a heating factor. This appears at the bottom of your bill preceded by an asterisk (usually *1.044).

"The average home uses 700-800 kilowatts of electric power each month and about 200 therms of gas a month during the winter. Gas consumption falls to about 50 therms during the summer. A kilowatt costs about 2 cents and a therm about nine cents. A color television uses 500 kilowatts each year, a dryer 1,400; an oven 2,146; a dish washer 360; air conditioning 2,400 and an electric toothbrush, 5 kilowatts a year.

"I'm sorry, but there is absolutely no way to change those dials. Change has to result from your alterations in energy use habits. In the meanwhile, happy reading!"

Gil Gilbert

A personal energy saver that offers side benefits

As a result of all the publicity relative to the energy emergency, my family has decided to implement a plan at home which, among other things, results in a reduction of our consumption of electrical energy.

Aside from following the previously published suggestions for conserving energy (lowering the thermostat, eating two cold dinners per week, etc.), we've decided to set aside one evening each week for Family Night. To us, this means gathering together in a room for purposes of talking and/or playing a game of some kind. We don't watch T.V. on Family Night. We have only one light burning during this period. My wife and I allow the youngsters to stay up a little later than usual, and this gives them a real feeling of participation which makes it easier for them to forget about the "boob tube" for the evening.

In addition to doing our small part toward energy conservation, our arrangement has the added personal benefit of reducing our electric bill somewhat, but what's *more important*, it has the effect of (as corny as it may sound) letting us get to know each other better. Besides, it's fun.

I can't help but wonder what the overall result would be if families everywhere put this idea to work. It would seem to me that the benefits (both individual and collective) would have to be increased immeasurably.

Pete McErlean

Credit Department

TRY CAR POOLING IT'S A GAS!

Fairchild Camera and Instrument Corporation



Memories of Christmas Past

Chuck Smith (left, above) and Don Brettner (right) are not usually very interested in chicken and mashed potatoes at 3 a.m. However, in the spirit of the Christmas season, chicken and mashed potatoes claimed their total attention in the small hours of the morning on December 19.

In the middle of their normal night, they served lunch to third shift employees in Building 20. At the same time, lunches were being served in the Building 1 cafeteria.

Similar scenes were repeated for first and second shift employees later that day as managers donned chef's hats and aprons in the Fairchild Christmas luncheon tradition.



3 a.m., Building 1 cafeteria, December 19.

Four Golfers Needed for PIGA Play

The Fairchild team needs three more golfers. Fairchild has entered in the Peninsula Industrial Golf Association league. Tuesday night team competition begins the first week in May and continues through August. Four members of the ten-man team compete each week against teams from other firms on the Peninsula. The league is run on a handicap basis and the lineup is rotated to give every member an equal opportunity to play.

In addition to weekly team play,

monthly weekend tournaments are run at various courses in the area. Trophies and other prizes are awarded on both gross and net individual scores. The first monthly tournament will be held at Palo Alto Golf Course in mid-April.

If you are interested in joining the team or would like to compete in the monthly tournaments only, contact Rick Schaffzin, Ext. 3504, as soon as possible. Three "attested" score cards will be necessary to establish a handicap.

Service Awards January 1974

Listed below are the names of Components Group personnel due to receive service awards in January:

TEN YEARS

Dorothy Bertram
Lenora Chatman
Margaret Llamas

FIVE YEARS

Charlotte Ellis	Samir Yacoub
Mary K. Duffek	Alice L. Pasek
Charles E. Beaman	L. V. Barb
Pete M. Rehm	Enid Moody
R. J. Lewis	William Perales
Dorothy Oehlschlager	Edith Karush
G. W. Andrews	Gladys Stokes
William Dematteis	B. J. Chapman
Lillian Guinn	Sarah Dedge
Hiroshi Miyako	Leslie Folsom
John Osterloh	Gerald Tammi
Walt Rau	Thomas Donovan
Joe A. Bailey	Roger Badertscher
William Morton	Henrietta Lavella
Alicia Ramos	Maria Duarte
Helen Garcia	Lynda Clingsmith
Jeny W. Lombard	Hugh Arno
Isabel Hyland	W. W. Horming
M. Moreno	Sara Galvan
W. H. Edlund	Aurora Garcia
Algis Normantas	Dorothy Sloan
Sandra Truax	B. Carbine
Brenda E. Beatty	Jack Livezey (R&D)
Robert T. Haraga	G. Lee (R&D)
Veroniz Sisneros	Marlys Fleming
Chuck Erickson	

JOS

Promotes

Kelsey Maez from Assembler B to R & QA Inspector Specialist
Julie Cabanero from Hi Rel Processor A to R & QA Inspector
Tomasa Skyum from Assembler A to Assembler B
Alice Wagner from Hi Rel Processor to Assembler Work Leader
Wilhelmina V. Ayson from Hi Rel Processor Specialist to Engineering Operator
Janet R. Ramey from Hi Rel Processor to Assembly Work Leader
Bertha Lewis from R & QA Inspector Specialist to Mask Making Spec. B
Joyce Martin from P & D Specialist to Assembly Work Leader
Pauline Burton from Assembler A to P & D Specialist
M. Barashas from Assembler B to Failure Analysis Technician
William Bruce Fasbinder from Senior Elect. Technician to Assistant Engineer
Anthony Price from P & D Specialist to Assistant Lab Technician
Jim Simmons from Senior Technician to Assistant Engineer

Fairchild Semiconductors Help Bring You TV's Instant Replay

One of television's most popular features (at least among football fans) is "instant replay." Indeed, many an armchair quarterback has found live games disappointing without the opportunity to see plays over again from several angles.

Since its introduction some seasons ago, "instant replay" has become part of the language. Books, records, children's games, even soft drinks have appeared bearing the name.

Though most people know what it is, not many could tell you how it is done. Here, courtesy of Ampex Corporation, which invented video recording and the specialized instant replay machines, are the facts.

In the early 1960, instant replays were attempted with videotape recorders, which record television programs on large reels of magnetic tape for immediate or later broadcasting. (Most of the shows we see on television are aired from such recorders.) But there were two problems: tape takes time to rewind and locate the start of a play, more time than is available between plays and commercials. In addition, studio videotape recorders are not capable of slow motion or stop-action playback.

To solve these problems, Ampex in 1967 developed a special video recorder that uses two shiny aluminum disks (coated with various alloys of tin, nickel, cobalt and rhodium) instead of reels of tape.

The disk recorders can record only 30 seconds of television action at a time, compared with an hour for a reel of tape. But they can locate the start of a play in less than four seconds and provide immediate playback in normal or slow motion or freeze the action at any point. Since no football play lasts longer than 30 seconds, the 16-inch disks work out fine.

Each instant replay machine costs \$100,000, and more than 100 have been bought by networks and television stations, almost exclusively for sports instant replay.

In an important game, as many as three instant replay machines are used. Each is capable of recording the action from one of up to eight cameras located in different parts of the stadium. The cameras beam live pictures into a bank of television monitors in a van parked outside the stadium. From these eight sources, a director in the van chooses what goes on the air. He can talk by telephone with the cameramen, the instant replay recorder operators and the technical director, who pushes the buttons that select which camera view is aired.

With a word from the director, the instant replay operator can re-show a long run, touchdown pass or close-up line action at normal speed, slow motion or stop action. He can, however, record from only one pre-selected camera at a time.

So, if the cameras feeding two instant replay recorders are close up on the flanker and the fullback, and the play is a short pass to the tight end, you may not see a close-up instant replay.

Like the defensive captain, the television director tries to anticipate what kind of play is coming up. Experienced directors, with several disk recorders at their disposal, have high instant replay completion percentages. But they sometimes guess wrong. A quarterback who can't fool a TV director now and then isn't going to be on television very often anyway.

Numerous Fairchild semiconductor devices are used in the instant replay system manufactured by Ampex Corporation.

Career Center Opens with Formal Ceremony

"The philosophy behind the creation of this facility demonstrates the commitment of our company not only to technical and business progress, but to being an organization of innovation and leadership in its relationships with people. Since Fairchild is a people-oriented company, the manner in which our employees' careers are developed is of paramount and continuous concern." This is the way in which Dr. C. Lester Hogan, Fairchild President, opened the dedication ceremonies at the new Career and Management Development Center in Mountain View on January 8.

The opening ceremonies were attended by members of the academic community, representatives of local



Dr. Hogan addresses the Fairchild, community and university representatives who gather for the opening of the Career and Management Development Center in Building 13.

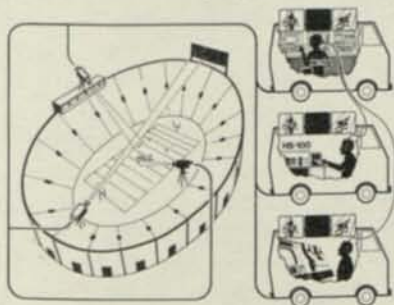
and national government, and members of Fairchild management.

Visitors were encouraged to tour the meeting and classrooms contained in the new Center which occupies the front section of Building 13. The staff of the center has begun development programs aimed at supervisors, managers and employees generally.

The foundation of the Career Development program will be a system of career assessment and counselling which will lead to a program of courses aimed directly at the specific needs of Fairchild employees.

A full outline of plans for the Center is contained in a brochure which will be mailed to employees' homes.

Diagram shows the Instant Replay camera/system hook-up.





Ray Quibelan with Kung Fu student.

Fairchild's Kung Fu Expert says the art is more than a method of self defense

An engineer in Bi-Polar memory has the ability to kill or seriously injure another person with a single touch. Soft-spoken, calm Ray Quibelan is a Kung Fu master. Fortunately, an integral teaching in Kung Fu is peace and harmony which tempers the lethal possibility of this—the oldest martial art in the world.

Ray has been a student and teacher of Kung Fu for more than 19 years. His study of the full dimensions of the art have taken him into China, Japan and the Philippines.

Ray, like so many of the people who have been attracted to Kung Fu, originally began his study to develop a method of self defense. Raised in an area of San Jose in which youth gang fights were frequent, and Ray and his companions were usually badly beaten, he sought some way of developing his defensive skills. A relative of a Chinese friend, an older man, skilled in the art of Kung Fu offered to take Ray and three of his friends as students. "This old man demonstrated how easily he could defend himself against us—four healthy teenage boys. His abilities and the promise that he could train us made us willing students. Our first lessons," Ray remembers, "centered totally around self-discipline. We were expected to stand in a single spot unmoving for a half hour or more. We were taught to control our breathing and develop full discipline over our bodies. At the same time," Ray continues, "we were being carefully steeped in the philosophy of Kung Fu—the teaching of total self and the love of peace and harmony. By the time we had become somewhat proficient in the art," Ray reports, "we had lost all interest in fighting. We had become confident of ourselves and

our ability to defend ourselves; we no longer felt threatened. Kung Fu and its further study took the place of whatever outlet we found in street corner fighting."

Ray originally moved from student to teacher in 1966, when he volunteered as an unpaid Kung Fu instructor for the San Jose department of parks and recreation. He found that free lessons did not give students the incentive to show up for every class, so he began charging a fee for his classes. Today, he operates three studios in the San Jose-Cupertino area with increasing student enrollment stimulated since the airing of *Kung Fu* on television. "We have students from four years of age to over sixty interested in learning Kung Fu. It's strange," he reveals, "many of the young people between the ages of 11 and 19 are drawn to the art because of its philosophical overtones; older people are usually seeking self-defense methods.

"Kung Fu," Ray reports, "was begun many centuries ago as a method for developing and maintaining physical fitness among Chinese monks who had dedicated themselves to a life of meditation to develop their inner spirit. As their minds developed, their bodies deteriorated. So they sought a method of exercise that would complement their intellectual ambitions. Over the centuries, Kung Fu was increasingly refined by the monks and passed on to their families until it reached today's level of the most lethal martial art known to man.

"Families developed their own styles of Kung Fu with variations on the basic theme developed by the monks. Over the years, the art has been continuously refined, expanding from a philosophical base into a method of self

Moving Up

DISCRETE

Curtis Blackmon from Senior Industrial Engineer to Industrial Engineering Manager

Joe Carroll from General Supervisor to Product Manager

Doug Doty from Product Controller to Product Specialist

Fred Faber from Product Specialist to Product Control Supervisor

John Leith from Senior R & QA Engineer to R & QA Supervising Engineer

CENTRAL OPERATIONS

James Diakos from Shipping Clerk to Rate Analyst

Harold Edelstein from Senior Facilities Engineer to Project Manager

Floyd Adams from Assistant Engineer to Equipment Engineer B

Marge Killian from Senior Clerk to Buyer

Barbara O'Brien from Communications Supervisor to General Supervisor-Office Services

Ken Nakahara from Assistant Accountant to Accountant A

Ron Maynard from Reproduction Services Supervisor to Office Services Supervisor

Norman Wardman from Equipment Utilization Specialist to Manager of Equipment Planning

DIGITAL

Bill Harris from Associate Engineer to Process Engineer B

Andy Anderson from R & QA Engineer B to R & QA General Supervisor

Judith Signorino from Senior Accountant to Production Line Accountant

R & D

Bob Lencioni from Electronic Technician to Senior Electronic Technician

defense and, finally, into a healing art. Acupuncture is a direct outgrowth of Kung Fu and many other healing methods practiced by the Chinese trace their origins to Kung Fu."

The many styles and influences of Kung Fu prompted Ray to visit China in 1959 early in his study of the art; again in 1971; and to visit the Philippines in 1972, to study different styles of Kung Fu and learn more about its healing possibilities.

Ray is sharing the knowledge he has accumulated over the last 19 years with budding students of Kung Fu at three studios he operates evenings and weekends in the Santa Clara Valley.

Microwire

Published for the Employees of the Fairchild Corporate Headquarters and Semiconductor Components Group — Mountain View/Palo Alto



YIELDS HAVE BEEN IMPROVING EVER SINCE Don Ashton (left) and Bill Baker hung a sand painting which was received as a Christmas gift in Baker's office. The painting, created by a member of the Shiprock plant, and presented by all Shiprock employees to the Bi-Polar Memory SBU, shows the Bi-Polar identification patch in a Navajo sand painting. Traditional sand paintings created by members of the Navajo tribe usually depict ceremonies which are aimed at resolving a specific problem—curing an illness, encouraging the crops to grow . . . Though the painting presented to the Bi-Polar SBU is not claimed to have any spiritual significance, Bill Baker can't help but draw the connection . . . The Bi-Polar SBU and the Shiprock plant work closely on many of the Unit's assembly projects.

The new Career Center, which is located in the front of Building 13, will hold an informal Open House on February 18 and 19, from 7 a.m. to 6 p.m. All employees are encouraged to drop by for a visit and a self-guided tour of the new facility which contains classrooms and conference halls in which training programs will be conducted for employees.

Brazil Plant to Begin Operation 2nd Qtr.

Fairchild is establishing a semiconductor plant in Brazil, the company's first manufacturing facility on the South American continent, it was announced in mid-January.

Ernst Hoyer has been named plant manager of the Brazilian operation. Hoyer joined Fairchild in 1969 and has served in engineering management positions, most recently as manufacturing engineering manager in the Transistor Division.

The new plant will be located in leased facilities in Campinas, about 75 miles northwest of Sao Paulo. Operations are scheduled to begin in the second quarter of 1974 in 13,000 square feet of space for assembling, testing and warehousing of a variety of semiconductor components, provided the necessary government approvals are received.

New Semiconductor Organization Designed For Growth

Wilf Corrigan, Executive Vice President, on January 23, announced an organization realignment designed to respond to growth.

In the new organization plan, key changes are:

Semiconductor Components now consists of two groups: Discrete Products reporting to Greg Reyes and Integrated Circuits Group reporting to Tom Longo;

—the creation of a Consumer End Products Program with Chuck Smith, General Manager;

—the creation of an office of corporate marketing with John Duffy as Vice President-General Manager.

—and the establishment of an International Division with Dave Mariott as General Manager.

Combined in the Discrete Products Group are the Diode, Transistor and Opto-electronics Divisions, and manu-

How We Did

Amounts in thousands of dollars

Year

1973 1972

Net Sales	351,171	223,896
Royalties and Other Income	10,397	6,329
	<u>361,568</u>	<u>230,225</u>
Cost of Sales	245,450	165,794
Administrative and Selling Interest	61,975	47,888
	<u>3,661</u>	<u>3,737</u>
	<u>311,086</u>	<u>217,419</u>
Income before Taxes and Extraordinary Credit	50,482	12,806
Provision for Income Taxes	23,733	5,080
Income before Extraordinary Credit	26,749	7,726
Extraordinary Credit—Income Tax Reduction from Carryforward of Prior Years' Operating Losses	14,410	3,300
Net Income	41,159	11,026

facturing operations in Korea, Hong Kong, Mexico and the planned plant in Brazil.

Within the Integrated Circuit Products Group are the Analog Products Division, the Digital Products Division and the MOS Products Division, Bi-polar Memory Strategic Business Unit, Research and Development and Special Products. Assembly operations in this organization are plants in South Portland, Singapore, Shiprock, Wappingers Falls in addition to Digital and Analog assembly in Mountain View.

In addition to managing the new Consumer End Products Program, Chuck Smith will retain responsibility for Purchasing, Facilities and Materials including the Healdsburg plant and start-up operations in Jakarta, Indonesia. Also he resumes responsibility for Inland Manufacturing in the City of Commerce, California.

Some of the light is leaving our lives

He's taking some of the light out of our lives and he's being roundly encouraged to continue.

That's Gil Gilbert, Energy Conservation Manager, who is the electrical meter watcher at Fairchild facilities in Mountain View. In December, Gil and his energy conservation committee set a goal to retire 5,000 fluorescent tubes from fixtures in the Mountain View plants. By the end of January, that goal has been almost achieved, with virtually no complaints from employees.

Not satisfied with retiring lights alone, the conservation committee has carefully catalogued needed hours of lighting for each of the Mountain View buildings. When it's time for an area to be clear of people, the lights go off. For most offices that means lights out at 7 p.m. on workdays, all day Saturday and Sunday. In production areas, the lights go off after the final em-

ployee is expected to leave. Only in three-shift operations do lights remain on around-the-clock. Arrangements can be made for lighting outside of the normal hours for vital overtime work in production and office areas by contacting the energy conservation committee member responsible for the building or area. Energy watchers serving each Mountain View area are:

Jack Chyle—COD
Richard Valente—Silicon Materials
Virginia Margetts—Accounting
J. L. Mays—Machine Shop
G. L. Adams—Bipolar Building 19
J. D. Higbee—Bipolar Building 19
Roger Royster—Shipping/Receiving
R. C. Smith—Stores/Purchasing 19-60
Curt Blackmon—Discrete
W. S. Mack—Marketing
Norm Zalfa—Security/IR
B. Strickland—I.R.
W. Hott—Purchasing
T. Ricketts—Chem Mix

R. Snider—Analog Application Engineering
Art Horton—DIC
Ron Grable—Automotive
Jerry Ziegenfuss—Computer Center
Bev Pruitt—Corporate
Hank Slagter—Camera
Roger Barney—All I.R.
W. Breecher—MOS
G. Haller—Plating
E. Tortorici—Management Development

Gil and his committee have expressed satisfaction with the reduction in energy usage that employees have helped Fairchild to realize in the first two months of the energy conservation program. There are still some corners that can be cut, however. And the energy conservation committee with the aid of all employees will continue its search to uncover and eliminate all unnecessary use of electricity and heat in Fairchild plants.

New building to be 'landscaped'

Open office landscaping is what is happening in the newly leased Fairchild building on National Avenue. Tagged Building 22, the new facility is located across the street from the Building 7 personnel facility.

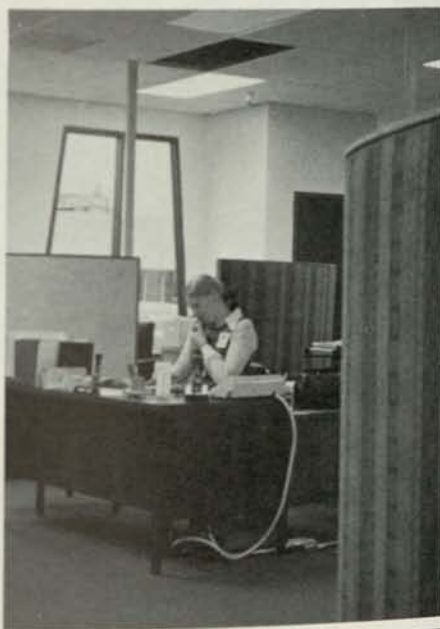
Using only dividers and plants, the 35,000-square-foot building which contains mostly open space is being transformed into office areas for professional employment, distribution marketing, marketing business development, marketing administrative services and the central data systems administration. The computers, presently housed in Building 20, will be moved into the new facility to occupy an environment-controlled closed area necessary for their efficient operation. Apparently man can live and function well in open offices while machines cannot.

The professional employment department was the first to occupy the new facility. The members of this group settled in a front section of the building surrounded by a sea of carpeted open space. In another area of the building, a veritable forest of indoor trees, six and more feet in height, awaited placement to act as aisle and office delineators. For those who had formerly occupied private offices, a little adjustment was required to the new open office arrangement. Sur-

prisingly, conversations and ringing phones are successfully muted by the divider panels.

Office landscaping is a relatively new and effective method for interior office layout. The absence of permanent walls allows for easy rearrangement of space as needs of the occupants change.

Several Bay Area companies which have moved into new facilities in the past two years have settled on office landscaping to allow for future flexibility in the use of space. All report that after the initial adjustment to the new interior office design, everyone agrees that the advantages of open office space outweigh any disadvantages.





Harry Handly

More than 125 awards of from \$25 to \$250 went to employees who submitted ideas in 1973 to the Suggestion Program. Many employees claimed two or more awards during the year. The employees who turn their ideas into U.S. Savings Bonds are not much different than those who don't.

Talking with Harry Handly who claimed three, MICROWIRE attempted to discover what separates the idea-people from the thousands of eligible employees who were not heard from in the Suggestion Program in 1973.

"You've got to be a bit lazy," Harry Handly laughs, "to be constantly thinking of ways to make a job easier. In my job as a Mechanic Specialist in Plating, I am on call to repair machines that are malfunctioning. When the calls for a single machine become too frequent, I know that there has to be something that will encourage the machine to behave better. Frequently, it is a minor modification that resolves the problem. You just have to think it through."

Harry carries his self-professed "laziness" into his home life, where he constantly attempts to develop ways in which to make home chores easier. "As soon as I develop a better method to accomplish a job at home, I teach it to my wife and children and let them carry it out in the future," Harry smugly reveals.

Chuck Fowler, Specialist Mechanic and Leadman in Preventive Maintenance in the Materials Division, states he's always questioning the way in which things are done. "Coming up with cost-saving ideas is simply con-

The Thinkers and how they do it

ditioning yourself to look for ways in which to improve the efficiencies of operations. Harry and I," he adds, "are in ideal jobs to come up with suggestions. We're constantly involved in finding methods to reduce equipment down-time. However," he adds, "every job offers suggestion possibilities. Any part of your job that creates a continuous irritant is probably the place to start. Usually, you can find an easier and more pleasant way to do almost anything—usually it will be a less costly way."

Harry and Chuck, both five-year employees, have been idea people long before the Suggestion Program was created. In fact, they were implementing cost-savings ideas after the program started without getting credit for their efforts. "It wasn't until one of the men I work with received a Savings Bond for one of his ideas that I began to write out my suggestions," states Harry.

In 1973, Harry batted 1,000; he submitted four suggestions and was paid for four. Chuck has another three suggestions pending evaluation. Chuck, too, often dismissed his ideas as not being substantial enough for Suggestion Program consideration. Today, he spends the 15 minutes or so it takes to outline his idea on a Suggestion Program form. "You don't lose anything by trying," he states, "and you stand to win a Savings Bond."

Other 1973 Idea People are:

Joe Aboussleman	Donna Bailey
Shirley Adamik	Joyce Baker
Pat Alfred (2)	Vic Baus
Alice Amaro	Joe Beranek (2)
Nick Atchison	Fred Bloom



Chuck Fowler

Joan Boardman	Patricia Nickell
Mary Branco	John Noreiga
David Bremer	Gerald Norviel (2)
Dave Bunch (2)	Gerald Obserzol (2)
Kathy Burkett	Wilburn Peevyhouse
Joseph Cardinale	L. L. Perkins
Eleanor Carungcong	Joyce Pink
Kathleen Clifford	Donald Plander
David B. Coutts	Robert Pursel
John Denman	Carol Ramos
Patricia DeYoung (3)	Irene Reynolds
Deborah Evans (3)	Harold Richardson
Carl Flarity (2)	Ruby Rivera
Phyllis Fullan	Louis Robinson
Curtis Garcia (2)	Russell Roering (2)
Kenneth Geddes	Phyllis Scheu
Caries Golden	Edith Scott
James Greer	Scott Seaver
Thomas Gunsaulis	Sharon Shay
Barbara Gussman	Helen Silva
Edna Hinton (2)	Frank Smith
Virginia Holsopple	Henry Smith
David Huffton (2)	Ruby Smith
Barbara Hutchins	Peter Solly
Irene Jones (2)	Janet Stace (3)
Susanne Kinney	Kenneth Stewart
Margaret LaPlaca	Jeanne Stone
Tim Leeson	Robert Storer
Lois Logan	Leo Torjian
Ray Lomker (3)	Imelda Trevino
Catherine Lowney	Lewis Trusty
Charlene McDonald	Russell Vreeken
Byron Martens	Judy Wagner
Douglas Mattern	Antoinette Warden
Sal Mendiola	Arlene Weiland
Helen Miles	Robert Welch (2)
Virginia Miller (2)	Hazel White
Judy Miraglio	Marilyn Wilds
Jack Mitchell	John C. Williams (2)
Mila Navalta	Ron Williams (3)
Lupe Navarro	Thelma Wilson
Roberta Newhard	

Questions on the Suggestion Program should be directed to Terri Muesig, Suggestion Program Coordinator, Ext. 5136.

You, too, can be a Wry Toastperson

In your fantasies, do you imagine yourself as a wry toastperson who can butter-up even the coolest audience with your crumbs of humor? But, when it comes to reality does the mere thought of standing up to speak in front of a group of more than two give you indigestion?

Well, you're not alone. An international organization has been formed and operating for almost 50 years that is aimed solely at helping people overcome that podium panic. Toastmasters International is a fraternity of more than 60,000 businessmen and women who have found confidence and skills by banding together to help each other develop as public speakers.

And Toastmasters (or Toastpersons as it will be known) is coming to Fairchild in February. Monthly luncheon meetings of a group of potential public speakers will be held in the Career Center in Building 13 beginning February 19.

Norm Zalfa, long-term member of the Mountain View Toastmasters, is organizing the new Fairchild club. Initiation fees and dues will be paid by members. The content of the meetings will be sandwiches and speeches. It's a "learn by doing" program that encourages members to develop their communications abilities with the support of others who have the same objective.

Do you believe that increased communication abilities can help you in your career and personal life? Send your name, mail stop number and extension number to Norm Zalfa, mail stop 19-250.

TOASTMASTERS

the ACTION PEOPLE



Jim Perry, Korean plants manager, towers over the plants' new "foster children."

Employees become 'parents' to 120 youngsters

Fairchild employees at the Korean plants are foster parents to more than 120 children at the Shin Myung Orphanage near the company's plants in that country. This special relationship developed when employees heard of the plight of the youngsters early last fall. Support of the orphanage came from a variety of sources, but was always inadequate to ensure proper nutrition, health care and clothing. Fairchild employees quickly responded with a drive for food, clothing and money to help pay for school fees. A delegation from the plants arrived at the orphanage burdened with packages for the youngsters within a week after the drive was begun. "It has been a meaningful experience for all of us meeting and getting to know these

wonderful youngsters," says Jim Perry, Korean Plants Manager. "The orphanage is quite close to us so we visit frequently. It has been like a continuous Christmas for the children and employees since we initiated our foster parents program four months ago.

Most of the residents of the orphanage, aged five to 16 years old, have been abandoned and are brought to Shin Myung by the local police. At the time Fairchild employees became interested in their welfare, the children had been without medical attention for some time. Now, the Fairchild doctor makes regular visits to Shin Myung and prescription eye glasses were among the many gifts delivered by employees to the youngsters before Christmas.

Pain-Saving Program

Let's cut down on our consumption of bandages, ointments, eye drops, and first-aid creams. This isn't a cost-saving drive, it is a pain-saving campaign. These are among the most frequently used medical supplies at Fairchild. For every bandage, every drop of eye wash, every spread of ointment that is used, there is pain. Most accidents that encourage employees to visit the dispensary are not major in nature—a cut finger, a minor burn, a foreign object in the eye—but they can be painful. Let's eliminate pain at Fairchild.

Most injuries, whether minor or major, can be traced to careless work habits or lack of knowledge in the handling of hand tools, chemicals and lifting. All are solvable problems. Before beginning work with a new hand tool, chemicals or attempting to lift something that may be beyond your capacity, ask your supervisor to instruct you in the safest way to approach the new project. Respect the dangers that are inherent in handling tools and chemicals and in lifting. There's a right way to do the job—a painless way. Learn it.

Dial 2000 for help with personal problems

No life would be complete without a few problems. Most can, however, cope with the usual upheavals life brings. It is the unexpected and monumental pressures that do most of us in—family difficulties, money trouble or legal conflicts that seem insurmountable.

You can't concentrate on your job, your anxieties become overwhelming because your marriage is shaky, your children are ill, your debts have grown beyond hope of repayment, a child is in trouble . . . you need help. But, there's no where to turn.

Oh, there is. You're not the first person to experience problems whether they be overwhelming debt, a member of the family who is an alcoholic, a child who is not adjusting to school

or society. Chances are there is someone to help you through this trouble in your life. Knowing where to turn is half the battle.

Directing employees to community service agencies which can assist them with the solution of personal problems is the purpose of HOTLINE, a confidential service launched by the Medical Department. By dialing Ext. 2000 (962-2000 from telephones outside the company), employees can receive counsel on where to turn for help with any personal problem. Callers can remain anonymous. They can describe their problem and call back to obtain advice on what community agency is best equipped to respond to their needs. Others can leave their name with Sherry Burge, a person with

special community services training and the voice on the other end of HOTLINE, and she'll call back with a referral as soon as she researches all possible sources of help.

In preparation for the inauguration of HOTLINE, Sherry has investigated virtually all the resources in the community which could provide aid to employees. In addition, Sherry has been counselling employees referred by their supervisors in where to turn for help in resolving emotional, medical or other problems they have encountered. Sherry adds that she has also established a reference file on centers and licensed private homes in the community for mothers who are seeking child care services. Sherry can also help you in your search for a personal physician or a dentist.

Ext. 2000, HOTLINE, the number to call when you need help with personal problems or referrals. The HOTLINE operates between 9 a.m. and noon workdays.

At the Credit Union, you're not just a saver, you're an owner

As soon as the Christmas crush for cash is over comes the resolution, whether it be written or mental, to be more financially prudent. It's a pledge that appears each year as January rolls in and, for some, it is one that is never totally fulfilled.

For Fairchild employees who find it difficult to set aside a few dollars each pay day toward the bigger expenses of life, the Fairchild Employees' Federal Credit Union may provide just the moral support you need. Deposits in your Credit Union account may be made by direct deposits or automatically by payroll deductions. If you do choose the payroll deduction method, you never have the money you tag for savings in your hands, so the temptation to spend is lessened.

As a member of the Fairchild Credit Union you join a cooperative organization owned and operated by members. Each \$5 you deposit in your Credit Union account is used to purchase a share in the Union. Though many members view their relationship with the Credit Union much like doing business with any bank, which in a real sense it is, still, there are differences—positive differences. The Credit Union offers all the services of most savings associations, but there's a significant plus in Credit Union membership and that plus is you are an

actual owner and participate in the profits in an equitable and fair manner. Each quarter, depending on the financial performance of the Union, profits (dividends) are credited to each member's account. Historically, the Credit Union has paid higher returns on savings and charged lower rates on loans than most any type of financial institution. During the fourth quarter (October through December) of 1973, the dividend paid with 5½% plus ½% bonus which equaled 6%. The Credit Union plans to continue the bonus through 1974 as long as profits allow. Members would be hard-pressed to obtain similar returns on savings accounts which have the same flexibility of deposits as the Fairchild Employees' Federal Credit Union.

This is only one of the advantages of the often-overlooked relationship with the Credit Union and its members—you're an owner, not simply a depositor. When the Credit Union has a particularly successful quarter, it is reflected in your dividend payment. A non-profit organization, the Credit Union returns all earnings to its members.

The unique relationship between the Credit Union and Fairchild employees also offers the lowest possible interest on loans for any worthwhile purpose—to purchase a car, stock, furniture, for

home improvements, or to meet any financial emergency.

Joining the Credit Union takes a few minutes and \$1. Visit the Credit Union office at 640 National Avenue in Mountain View, 10 a.m. to 4 p.m., weekdays. Employees at the R&D-Optoelectronics facility, Systems Tech and San Rafael, can sign up for Credit Union membership by visiting the Credit Union office located in their facility.

Even better than car pooling. . .

Doug Farrar of MOS Memory Design Engineering, recently proposed that the Security Department place additional bike racks in spots visible from guard stations to encourage the use of bicycles for commuting for those employees who live relatively close to the Mountain View facilities. Doug, who lives three miles away, would like to use a bicycle as his main commute vehicle but is hesitant because of the lack of adequate bike racks.

For Doug and others like him who wish to substitute pedal power for gas consumption, bike racks will be installed near the entrances to most Mountain View buildings within view of guard stations, according to Norm Zalfa of the Security Section.

Hope workers find a place at Fairchild

Fairchild has had a long-term relationship with the Hope Workshop in San Jose. Many of the Workshop's clients, who are physically handicapped or mentally retarded men and women, have found the opportunity to become financially self-sufficient as the result of the work provided by Fairchild and performed at the Workshop. More important, however, is the opportunity the company has given Workshop clients to try their wings at a competitive job in industry; a job in which their performance will be judged on their ability to produce to company standards for quality and quantity.

Last April, some 15 Hope workers began reporting daily to the Test and Finish area of the TO-92 line in the Transistor Division. Here, as temporary workers they were assigned lead straightening, lead bending, device sorting, and work on some of the machines used in the area. Now, nine months later, the success of the program is evident. Hope workers continue to handle these assignments in Test and Finish. Not the same workers, however. There are a few major success stories among the Hope workers who have been assigned to Fairchild jobs. Seven have gone on to accept permanent assignments with the company reaching the point that they no longer require the shelter of Hope in adjusting to a role in the work world. Others have remained on the Test and Finish line carrying their full responsibilities as production workers; a few have decided to return to assignments at the San Jose Workshop and have been replaced by other Hope workers. One was relieved of his assignment because of excessive absenteeism. But the sum total of the project in terms of people retained and promoted is comparable to any other activity within manufacturing.

"There is no special consideration given the Hope clients," states Bob Smith, who supervises the Test and Finish area in which the Hope clients work. "They are expected to achieve the same quality and quantity standards demanded of any other employee assigned to this job. Our experience," he adds, "has been excellent, plus our relationship with the Workshop gives us the added benefit of being able to call in additional temporary workers whenever the workload demands." The Hope clients continue to

be paid by the Workshop with funds provided by Fairchild.

In addition to the workers, Hope provides a supervisor to Fairchild who is skilled in counselling as well as work direction. Marlene Hartnett, the Hope supervisor assigned to the Test and Finish activity which the Hope workers staff, is a former school teacher who specialized in instructing children with special educational problems. Marlene reveals that many of the Hope clients must leave their homes at 5 a.m. in order to arrive at Fairchild at the usual starting time. "Many take a public bus to the Workshop in downtown San Jose and then board a mini-bus, operated by the Workshop which goes directly to Fairchild. This trip is reversed at quitting time, creating a 12-hour day for most of the Fairchild workers. It would be far simpler for them to remain working at the Hope headquarters; however, the Fairchild workers have demonstrated that they are willing to overcome inconveniences and obstacles which would discourage many, in order to hold a job in outside industry."

Other supervisors who have a need for temporary workers which they believe could be fulfilled by Hope clients, should contact Nancy Saunders in the Personnel Services office, Ext. 2808.



Bob Smith and Marlene Hartnett examine the performance charts of Hope workers assigned to the Test and Finish line.

Commendations from a customer

It takes something special to encourage a customer to write a letter commending the way in which a supplier conducts its business. David DuBois, Field Applications Engineer in the Stamford office, is providing that extra measure of service which prompted Theodore Levy, Manager of the Stand-By Secretary Division of Drew Scott, Inc., to send the following letter to the Applications Engineering Department:

Gentlemen:

"I am ever so pleased to tell you that compared with any and all of the help that we have had from various sources in understanding the application and working of various integrated circuits, the help that we have had

from your Mr. David DuBois of the Wayne, New Jersey, office has been outstanding.

"Mr. DuBois has the knack of being able to explain the heart of the matter to us in such simple, clear form that the entire problem becomes solved in short order and understandable fashion.

"You ought to be complimented on the personnel selection of so fine a man; we have spoken with him only on the telephone and I am looking forward to the pleasure of meeting him personally to pick some more of his brain.

"Many thanks for all the help of your department."

Daylight Savings: a boom or a bust?

Lowered thermostats, reduced lighting, lowered speed limits, car pooling and volunteer rationing of gasoline—just a few of the sacrifices being requested of the American people in view of the current energy crisis. And now the latest in a series of moves affecting the life style of each individual—a recent change from Standard Time to Daylight Savings. Some like the new time schedule, others do not; but in true form, people are meeting the challenge and making the adjustment. Here's what a few Fairchilders have to say about the new Daylight Savings schedule and how it's personally affecting their lives:



Susan Brandt

"I can't really see any true energy savings anywhere. Whenever it's too dark to see easily people will use lights. They're using lights in the morning now instead of the evening. I can't see what is being saved."



Gunther Haller

"I believe that people use more lights at night than they do in the morning. At night, people really use their homes and lights go on in every room. In the morning, they use just the lights necessary to get dressed and off to school or work. I believe that switching to Daylight Savings will have the two percent energy savings the experts predicted."



Cody Dudney

"I don't like Daylight Savings Time in the winter, and I don't see what savings it makes in energy. Daylight Savings hasn't made much change in my life—I've had no problem getting up for work even though the hour is earlier. I guess if you have small children, it is difficult to get them out of bed these dark mornings."



Chuck McIntosh

"I really like the light in the evenings. It makes them seem longer."



Bill Rutledge

"I like Daylight Savings and believe it should be kept year-round to save energy. Also, I seem to do more in the evening since Daylight Savings than previously."



Gail Ahern

"I miss the sunrise. Earlier this winter when I came to work I'd watch the magnificent sunrise. Now, it's totally dark when I get to the plant. The people who work 8-4:30 now get to see the sunrise."



Robyn Olt

"I like to go motorcycle riding before it gets dark so I really appreciate Daylight Savings. The extra light in the evening also gives me the chance to do outdoor chores and shopping. Somehow the evening seems longer now."

Referral Awards Expand To Cover Permanent, Part-Time Positions

As the result of a recent revision to the Referral Award Program, persons referred to Fairchild by employees for permanent part-time positions which require previous experience make the employee eligible for a referral award. Naturally, all full-time positions above the entry level also continue to be covered in the program.

Other changes in the program include:

Retired as well as active employees may participate in the program by referring friends and relatives to Fairchild for employment;

the referring employee will receive an award check shortly after the new employee completes the 60-day probationary period;

temporary employees are not eligible to participate in the program;

awards will not be made for persons referred for temporary positions;

an award will be made for referral and rehire of former Fairchild employees provided a period of time of more than one year has elapsed since last employment with the company; and

the referred applicant must include the referring employee's name on the initial application form in order to assure eligibility for an award.

Bond Bonus

Series E U.S. Savings Bonds, purchased on or after December 1, 1973, earn six percent interest, compounded semiannually, when held to maturity of five years.

This increase in interest also applies to Series E Bonds now held by individuals. The interest earnings has been raised by 1/2 of one percent for the remaining life to maturity, effective with the first semiannual interest period, beginning on or after December 1, 1973.

Series E U.S. Savings Bonds can be purchased by payroll deduction by contacting the Payroll Department, 4-0224, for a sign-up card.

MICROWIRE I—February, 1974

EDITOR: Veronica Kane

REPORTERS: Geri Hadley, Marge Killian, Millie Dawson, Clint Haines, Margaret Elliott, Pat Alfred, Lorette Hayes, Bev Delos Santos, Judy Wagner, Marlene Herman, Edie Beem and Sharon Ricks.

Printed on recycled paper

JOS Promotes

Georgia Haugen from Assembler A to Prod. Maint. Clerk

Judith Mullahy from Inventory Control Clerk to Data Reconciling Clerk

Gerald Oberzol from Sr. Electronic Tech to Assistant Engineer

Lois Marrazzo from Assembler B to Failure Analysis Spec.

Jesusa Madarang from Assembler B to Failure Analysis Spec.

Arthur Rosdahl from Mechanic Spec. to Assistant Engineer

Isaac Cosse from Assembler A to Production Maint. Clerk

David Underwood from P & D Pilot Line to Assistant Lab Tech

Josephine Branco from Assembler B to Failure Analysis Spec.

Robert Lewis from Mechanic Spec. to Optics Tech.

Margie L. Mutia from R & QA Insp. Spec. to R & QA Work Leader

Carl Moore from Assembler A to Production Maint. Clerk

Denise Williams from Assembler B to P & D Spec.

Milton Pereira from Assist. Lab Tech. to Mechanic B

Lorraine Zucatto from Material Handler to Intermediate Clerk

Pauline Lampkin from Assembler B to P & D Spec.

Maria Pereira from Assembler A to P & D Spec.

Estella Rojas from Assembler A to Assembler B

Ligia Moniz from Assembler B to P & D Spec.

Maria Thornton from Assembler B to P & D Spec.

Barbara Peters from Assembler B to P & D Spec.

Jan Follis from Assembler B to P & D Spec.

Helen Mortera from Assembler A to Assembler B

Andera Martinez from Assembler A to Assembler B

Analia Vieira from Assembler B to P & D Spec.

Carol Dance from P & D Spec. to Tech. Data Analyst

Gloria Dominguez from P & D Spec. to Engineering Operator

Maria Armstrong from Assembler B to P & D Spec.

Linda K. Lee from Assembler B to P & D Spec.

Raul Bonbardely from Assembler B to Failure Analysis Spec.

Linda Nickals from Inventory Control Clerk to Data Reconciliation Clerk

Margaret La Placa from P & D Spec. to STS Instructor

Rosen S. Sorilla from Security Guard to Storekeeper

Herminia Saturino from Assembler A to R & QA Inspector Spec.

Shirley Moore from P & D Spec. to Work Leader

Cecelia Shull from P & D Spec. to Work Leader

James Lee from Assembler B to Accounting Clerk II

Joyce McGarry from P & D Spec. to Lab Technician

Kaye Hauckes from P & D Spec. to Technical Data Analyst

Steven Moore from Chem Mixer to Mechanic B

James Lauderau from Assembler B to STS Instructor

Shryll Barlow from Assembler B to P & D Spec.

Terry Meketa from Assembler B to P & D Spec.

Katherine Harrison from Assembler B to Hi Rel Processor Spec.

Mildred Rodriguez from Assembler A to Assembler B

Jess Reeves from Assembler B to Assistant Lab Tech

Pamela Flores from Assembler A to R & QA Inspector B

Ruby June Maykel from Assembler A to Assembler B

Curtis Garcia from Lab Tech to Assistant Engineer

Loretta Webb from R & QA Inspec. to Assembly Work Leader

Ski Club Joins Bay Area Council

The Fairchild Snow Ski Club has joined the Bay Area Ski Council (BAC) which gives Club members the opportunity to participate in many events sponsored by the Council.

BAC is a fraternity of 40 ski clubs similar to the Fairchild association. Some of the BAC activities include intramural racing, cross country ski instruction, a dryland ski school and many social events.

Rich McCoy, Fairchild club president, Ext. 2287, has a full schedule of BAC events planned for the present season. Interested skiers can meet Rich and other Club members at one of the organization's regular meetings which are held the second and fourth Tuesday of each month, 7 p.m., at the Old Plantation Restaurant, El Camino and Bernardo, Sunnyvale. Membership in the Club and details on cabin reservations can be obtained at the regular meetings.

Microwire

Published for the Employees of the Fairchild Corporate Headquarters and Semiconductor Components Group — Mountain View/Palo Alto

Transportation Alternatives

If you've tried our in-plant car pool clinic and were one of the few employees who were not matched with another potential car pooler, or you're one of the many employees who would like to connect with public transportation, perhaps the new transit program sponsored by the Santa Clara Chamber of Commerce is the answer to your quest.

The Chamber of Commerce is conducting a survey throughout Santa Clara County aimed at providing the information which will establish bus transportation in all cities in which there are enough commuters heading in the same direction to warrant operation of a bus, or to match individuals in car pools.

The Transit Questionnaires have been distributed to all cafeterias within the Mountain View and Palo Alto plants. Complete one of the forms if the programs described answer your needs, and send the form to the Employee Communications office, mail stop 20-2284, Mountain View.

Blood Bank Contribution Could Benefit Your Family

If you can't spare 15 minutes on April 16, take a minute right now to think about it again. The Mobile Blood Bank will be set up in the large Conference Room, Bldg. 7 on that day to handle blood donors from 7:30 a.m.-5 p.m. This partially overlaps third and swing shifts to give as many as possible the chance to help the community and, perhaps at some time in the future, to help your own family.

Blood Bank Committee members will arrange appointments.

Customer Base for Semiconductors Broadens; International Consumption Up

In addressing a meeting of security analysts on March 1, Dr. C. Lester Hogan covered many of the accomplishments of the past year and outlined some of the corporation's plans for the future. He stated that bookings exceeded billings every month in 1973 and the company's year-end backlog more than doubled the level of the previous year.

"A noteworthy characteristic of our company's backlog," he continued, "is the continuing shift from a narrow to an extremely broad customer base.

"In the past two years the pervasive spread of semiconductors into areas previously controlled by electromechanical or other technologies has accelerated. Many new consumer fields as home entertainment, appliances, automobiles and other areas are opening up. Industrial applications continue to proliferate as well, and the computer marketplace, particularly the emerging memory segment, is maintaining consistent growth trends.

"All of these factors combined during 1973 to make the semiconductor portion of Fairchild's business our single fastest-growing segment."

Dr. Hogan cited major technological advances in the recent past as "A joint development program involving our Digital Products Group's Research and Development laboratory and the Space and Defense Systems Division resulted in the introduction by Fairchild of the first commercially available charge-coupled devices.

"I'm proud to say," he continued, "that we are one of the, if not the, acknowledged leaders in this important CCD area.

"Another technical highlight of the past year was the development of an advanced version of our Isoplanar process. The new Isoplanar techniques not only allow us to reduce circuit size and improve performances achieved under the former manufacturing process, but we also introduced our first Isoplanar MOS Products during the year.

"As you know, international activities have continued to grow in importance for electronics as well as other product areas. Fairchild therefore has placed strong emphasis on expansion abroad. Our foreign sales last year accounted for \$88 million or 25 percent of total shipments. This compares to \$43 million or 19 percent of our business in 1972."

Following Dr. Hogan's address, Wilf Corrigan, Executive Vice President-Semiconductor Components and Commercial Systems operations, covered detailed projections in the growth of worldwide semiconductor industry. International consumption of semiconductor devices, he explained, is projected to outpace U.S. consumption in percentage growth. Using charts, he described the 1974 worldwide distribution of semiconductor products as 46 percent going to U.S. markets; 25 percent being used in Japanese markets; 24 percent in Western Europe and five percent in the rest of the world. By 1980, he predicted, those figures will change to 42 percent consumption in the U.S., 26 percent Western Europe; 26 percent Japan and six percent in the rest of the world. At the same time, the total semiconductor market is expected to grow from \$5.5 billion in 1974 to \$11.3 billion in 1980.

That's not spending, that's saving

A brief talk with Connie Pasqua, Purchasing Manager, quickly shatters all the illusions about the full-time fun of being a Fairchild buyer. From a distance, this appears to be one of the most desirable jobs at Fairchild—who wouldn't want to spend their entire day spending money.

It doesn't take long before you discover that those 25 buyers in Mountain View's Building 4 are not spending money—they're saving money, and between the two definitions of a buyer's job lie the difference between a spree and some very conscientious shopping.

Every woman who has ever fantasized about life as a shopper would soon have her romantic dreams smashed if she eavesdropped on conversations that go on between buyer and seller in the purchasing office. "Women do make good buyers," Connie assures, "but this is not the kind of shopping you might do at Macy's or Saks." The five women buyers in the department, like their male counterparts, pursue the best value and delivery on a wide variety of supplies needed in Fairchild's operations—from production equipment to silicon material.

"Never before in my 18 years in Purchasing," states Connie, "have I faced the set of circumstances that exists in today's markets. Shortages in some of our basic materials have sent us shop-

ping worldwide and looking for commitments from suppliers for two and more years out. We were fortunate to have spotted potential shortages well before others began to understand what was happening in worldwide markets for chemicals and silicon and were able," he reports, "to contract with vendors for sufficient materials, coupled with our recycling program, to keep production running without a pause. Others in our industry were not so foresighted and fortunate and have experienced shutdowns or slow-downs in production due to lack of basic supplies."

Maintaining this admirable flow of materials for production keeps the Purchasing staff hopping. Orders for worldwide operations are placed from the central purchasing office for all Semiconductor operations. Connie explains that the centralized approach to buying proves beneficial because large consolidated orders for equipment and materials give Semiconductor Operations a buying efficiency that would be impossible for a single division or location to duplicate. This reflects itself in delivery and performance priority as well as the more obvious pricing advantage.

When any member of the Purchasing staff goes shopping—whether it be by telephone, mail or in person—they're looking for several things from the seller. "Price is always paramount,"

Connie explains, "but price has to be supported by several other factors. The most inexpensive product is of no value to us if we can't get it delivered when we need it, or if it arrives in a condition that does not meet our quality standards. So price becomes modified by other considerations. We have to be assured of on-time delivery and quality before we place an order for supplies vital to our production operation. As a rule of thumb, Purchasing attempts to buy all support materials such as stationery, office and laboratory supplies, in the community in which the plant which requires the material is located. When it comes to direct materials—those that will be used in the product and equipment—today's market conditions and economics make it sensible to shop worldwide."

Because of the large number of diversified materials required in Fairchild operations and the shopping load of the Purchasing Department, Connie has structured his operation to create specialist shoppers in several major areas. There are full-time buyers concentrating on ferreting out the best source for direct materials, equipment, indirect materials, and facilities construction services.

"One of the prime qualities that make a buyer," Connie reports, "is curiosity. Someone who doesn't accept things at face value, who is anxious



Direct Purchasing and Contract Administration, Bldg. 4.



Indirect Purchasing, second floor, Bldg. 4.

Below, Mary Tobin (standing) and Adrienne Hernandez respond to a materials request from a Fairchild Far East plant.

Below, Doug Strabel (left) meets with a vendor, Ted Kume, in one of the Purchasing conference rooms.

Below, Tom Martin (left), Supervisor of Material Control and Bob Smith, Manager of Indirect Stores/Purchasing in the Bldg. 6, Stores area.



to look at a potential purchase from all points of view, has the characteristics we look for in buyers. You have to like to shop," he adds, "and be able to get along with people in addition to having a good basic business sense. There is no school that turns out buyers," he reveals. "We have found that education in virtually any field from electrical engineering to business administration is helpful. Buyers find themselves in many decision-making situations where they'll call upon experience or education obtained in many fields.

"A buyer's professional shopping instincts," Connie believes, "will carry over into their personal lives. They won't be committed to any single store or service organizations. They'll shop around to make a purchase only when they feel they have the best deal available."

Connie claims that his purchasing experience permeates his personal life—at times with drawbacks. Never satisfied with the first deal or the closest place to buy, Connie shops around for virtually everything—including gasoline. This has left him somewhat chagrined with the current gas crush. He's not "known" at any single gas station, a familiarity that might have earned him some special consideration.

But, overall, he claims, comparison shopping for business and for personal goods and services has paid off for Fairchild and for the Pasqua family budget.



Connie Pasqua

There's a Torture Chamber In the Basement of Building 20

"Baked to order" might be the shingle hung out in front of the Linear High Reliability operation in the basement of Building 20. But then, this department also freezes to order, rattles to order, soaks to order, vibrates to order . . . in fact, it performs any stress test on linear products that a customer requests.

Using test programs that might have been written by Dracula, members of High Reliability expose semiconductor devices to a series of tortures that stretch the limits of human imagination. At the same time, Department Manager Bob Muller and his staff of expert torturers continue with delight to search for new and novel ways in which they can attempt to destroy these products that were assembled with such care and delicacy.

Though this smacks of ghoulishness, Bob is quick to redeem the actions of the High Reliability Department explaining that their barbaric practices are all in the spirit of delivering to customers products that will not fail under most imaginable circumstances. After up to six weeks of this savage treatment, it appears to the uninitiated that what High Reliability has is a great number of badly abused devices. "No," says Bob Muller, "what these baked, cooled, shook, steamed, shocked products represent are devices that have demonstrated that they will operate in the most trying of environments with complete reliability. The small percentage of products that is drummed out during the torture testing (and the percentage is small which is a credit to Linear assembly operations) has to be found before the lot goes to the customer. The reason for this concern that all weak products be culled before the device is mounted in the end product becomes self-evident when you realize that many of the devices leaving High Reliability are headed for use in brake systems, satellites, missile guidance systems—all applications where unforeseen product failure cannot be tolerated.

Using a sophisticated system of statistics, Bob and his staff predict that perhaps 10 of a batch of 1,000 devices have some structural or electrical weakness which would cause them to fail before the normal life ex-

pectancy for that type of device. It seems that no punishment is too great to find those statistically predicted 10 weak devices. It's almost with a sigh of resignation that the High Rel department admits that it could only find five or six of a lot of 1,000 units that could not survive its carefully constructed torturous tactics.

To give some insight into the minds of the High Rel testers, here are some of the highlights of trials to which they'll expose some tiny linear integrated circuits.

With complete heartlessness, they will place trays of any devices that are to receive the High Rel stamp of approval into ovens which will bake them at temperatures of up to 200°C for as long as a week. Satisfied that the device can withstand this extreme heat, they start an alternating thermal shock cycle. The devices are baked at the top temperatures that they are specified to withstand, then quickly cooled down to -65° Centigrade. Up and down the temperatures go for at least 10 trips. After this torrid/frigid exercise, the devices are checked to determine if the shrinking and expanding which occurred in the temperature testing displaced even the most microscopic part of the device.

Survival of the temperature test, instead of earning a medal, makes the devices eligible for a lengthy ride on a



Bob Muller watches as a test system prints out a product's performance while undergoing a series of electrical tests.

Torture Chamber (continued)

centrifuge. Here, they are spun around and round until they are subject to a pressure equal to 30,000 times the force of the earth's gravity—a pressure unknown in our environment. (As an example, a space craft leaving the earth may experience at launch a pressure equal to 10 times the force of gravity.) Again, survival of this test moves the devices to still another trial—hermeticity. During this test, the device is placed in hot liquid to determine if the centrifuge was able to damage the package seal in any way. There, the still unsatisfied torturers watch for any indication of bubbles that would be evidence of an air leak. If it passes that one, the device is placed in a container into which tracer gas is forced. You guessed it—no traces of a leak and the device graduates to the next test. It's mounted into a system similar to its ultimate operating environment and bombarded with a series of electrical tests that stretch its specified performance to and beyond the extremes. Pass that one and the device returns to a temperature chamber where it is baked again for a week—this time while fully operating! It is tested before and after these trials and should its performance waver, it's bounced into the reject heap.

Even then, the unrelenting High Rel types are not satisfied. What if the entire lot of products emerges from these savage ordeals unscathed? It brings a tear to the eye. The brutal Hi Rel engineers then grab a sample of the devices to expose them to horrors that might be too heavy for these pages

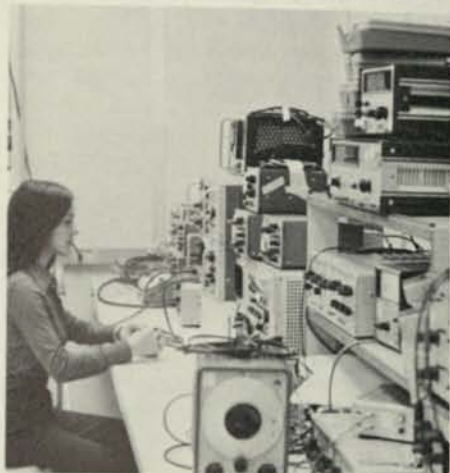
of MICROWIRE. Using specially constructed machines of torture they hammer them, drop them, vibrate them, throw them into thermal baths, steam them in moisture chambers, spray them with salt water, hang weights on their leads and twist them to determine how much they can withstand, and then—and then, horror of horrors, they rip them open to see if their barbaric tactics have had an affect. They poke and they prod at the exposed die to find the tiniest detail that might be out of kilter.

Throughout this arduous exercise, they have been carefully documenting each step in their fiendish program. At the conclusion of a normal High Rel test cycle, there will be a ream of paper detailing every punishment and the device's reaction. This tale of torture will be proudly turned over to the customer and will elicit nods of approval as it is read. But there's no satisfaction for the members of High Rel. Driven by the demand for products, there's no basking in the warmth of today's torturous tactics. No, they're off prescribing an entirely new battery of punishment for the next lot of products that fall into their hands.

But, meanwhile, back to those 990 devices that survived High Rel's torments and are still operating to every specification the company has set. Their leads will be straightened, they'll be carefully packaged for shipment, and the customer will receive a product that is guaranteed to withstand any stress that it will ever face in any application for which it is to be used.

The trials and tortures that go on in

the basement of Building 20, MICROWIRE is told, are carried out with the complete blessing of the company. In fact, word is out that there are similar torture chambers maintained in the Discrete Products Group, the South Portland plant, the San Rafael plant, and, heaven only knows, where else.



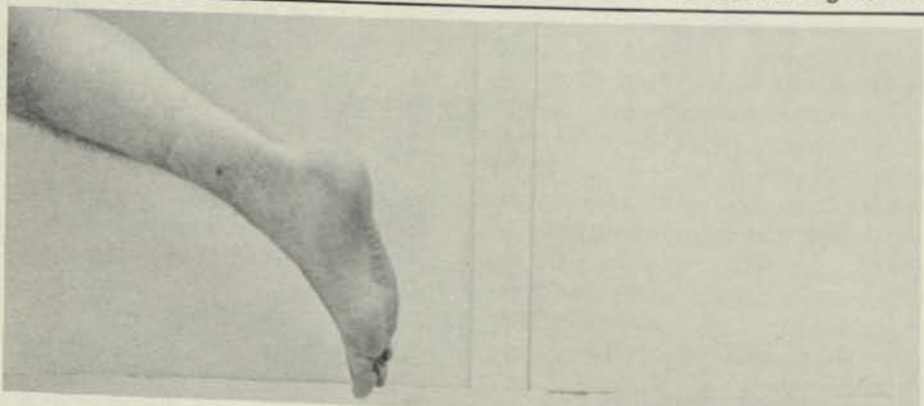
Products are subjected to a battery of tortures in High Rel including electrical . . .



. . . temperature . . .



. . . and stress.



LYING PATIENTLY IN WAIT ROUND-THE-CLOCK FOR THREE CONSECUTIVE DAYS, the MICROWIRE photographer succeeded in capturing a photograph that should go down in company history—Fairchild's first documented streaker. The fact that the streaker was a little too fast for the camera should not alter this document's historical value in any way.

Behind every successful woman there is a supportive and encouraging man . . .

It seems that the traditional role of the woman behind the man, though not switched, has become reciprocal, as more and more women are reaching out and moving into jobs that don't fit easily into yesterday's "traditionally female" stereotype. Two such Fairchild women are Lorraine Mazza and Bea Carvalho, who were recently promoted to Production Supervisors-Group Leaders in the Bi-Polar Strategic Business Unit. Both women are experienced supervisors but, in February of this year, when operations on three shifts in masking were added to their former responsibility as supervisors, they moved into jobs which demanded that they be much more flexible in time schedules and attitudes. Gone was the relatively defined eight-hour day they had known as supervisors in the operation. In its place came erratic and many times lengthy work hours to respond to the many demands that production responsibility for a round-the-clock operation brings.

Lorraine's day may stretch from 4 a.m. to 4 p.m. as she arrives at work to check on progress and problems on the graveyard shift, remains through the day shift, and stays on to see the swing shift start. This would be an impossible schedule for Lorraine, a wife and mother of four children to maintain, if she was also expected to fully assume the traditional housewife's duties at home. There's where the man comes in. "My husband," Lorraine reveals, "realizes how deeply involved I am with my job and has encouraged me to go to school and to put forth the extra effort necessary to prepare for advancement." That encouragement has paid off. Lorraine joined Fairchild in January, 1967 as an Assembler after eight years as a housewife. Her previous work experience before marriage had been in clerical work. Fairchild interviewers encouraged her to apply for a clerical assignment, but Lorraine was firm that she wanted to work in manufacturing. A very good decision, it turns out. After 4½ years on the line, she was promoted to Training Technician, an assignment in which she remained until



Lorraine Mazza

Bea Carvalho



July, 1973 when she became a supervisor in Bi-Polar Masking. Again, this promotion was accomplished with a little help from a man—this time not her husband. "Paul Harrison demonstrated that he had confidence in my abilities by offering me that first supervisor's job," she explains.

Lorraine also had another secret weapon in her battle to maintain the roles of wife-mother-career woman. Her four children, she reveals, who are aged 11 to 15 years, share all household responsibilities with their parents. The two eldest girls handle most of the weekday cooking. Everyone pitches in

for clean-up chores and, therefore, no one has a burden that is too great.

Bea Carvalho can laugh when she thinks of the day she came to apply at Fairchild eight years ago. "I was scared silly," she remembers. "I knew nothing about electronics and had not worked in 10 years. Really, I had no desire to go to work during those years because I was totally occupied with home and family." When the time came to venture forth into the job market, naturally she was a little hesitant. She joined Fairchild as an Assembler in Materials, where she remained for six months. She was then transferred to the Bi-Polar activity as an etcher and has remained within that organization since, as a material handler, leaderperson, supervisor, and now, General Supervisor-Group Leader.

Though there's no evidence of women's lib philosophy in Bea's statements, she, like Lorraine, attributes her ability to being able to handle a very demanding job to her husband's understanding and helpful nature. "He is not hesitant to operate the vacuum cleaner, if that is what needs to be done at home," she states. Bea traces her success at Fairchild to liking her work and letting her supervisors know that she was interested in taking on greater and greater responsibility. "I've always asked that I be allowed to do what I'm capable of doing," she states. "Both Fairchild and my husband have encouraged me to grow to my full capabilities."

Registration Deadlines

The Spring Quarter courses offered at Fairchild by Foothill College began March 27 at the Management and Career Development Center, Bldg. 13, 441 Whisman Road. Employees may register at the first session of any course.

The Career Center is also taking applications from candidates for the MSEE program offered in cooperation with Santa Clara University. Deadline for applications for enrollment in the Summer Quarter is April 5. Information on application can be obtained from the Career Center Registrar, mail stop 13-117, Ext. 3975.

The greening of Fairchild

by Gloria Actor

"PLANT n (ME plante, fr. OE, fr. L planta)—any of a kingdom (Plantae) of living beings typically lacking locomotive movement or obvious nervous or sensory organs and possessing cellulose cell walls"—or so that's how the dictionary describes the word "plant." But you would be hard-pressed to find a plant-loving Fairchilder who would agree with that definition. On the contrary, to describe any of their plants as lacking "obvious nervous or sensory organs" would be fighting words to some sensitive plant-lovers.

It's only been in the past few years that the raising of house plants (or office plants, as the case may be) has become a national pastime. Walking into the house of a true plant-lover can be compared to a walk through a botanical garden. Some Fairchilders have gone so far as to set up "intensive-care units" in their office areas where their sick and ailing plants can recuperate with the benefit of controlled temperatures provided by air-conditioning and where they can reap the benefit of fluorescent lighting.



Brian Hood

Brian Hood, who is nursing a rather spindly plant with a burgundy-colored leaf (genus unknown), acknowledges that ailing plants have a habit of finding their way to his desk in Building 8. There, with love, water and empathy he can frequently return them to a robust state of health. He's had a great deal of practice in encouraging house plants to perform to their proudest. More than fertilizer and water, he believes that the vibrations a person emits have as much to do with a plant's state of health as any physical care it

receives. "Plants react to your state of mind," he states. He cites his experience with periods when things were not going smoothly in his life. In spite of consistent care and attention, he reports, his house plants droop and begin to turn brown. When everything's upbeat, the plants mirror that state of mind.

On a much more basic level, he follows a care schedule that includes watering as needed (too much watering can turn the leaves brown). He pointed to a plant in a neighboring office that was showing the influence of an overly damp soil. He showers his plants regularly by taking them outside if they are large, placing them in the bathroom shower if they are medium-sized, and "mists" them with an atomizer if they are small. He fertilizes with fish emulsion and constantly checks for insects. "But, it is the good vibes that have the greatest positive affect on the plants," he believes.

Sandy Terry, who displays two healthy plants on her desk, states that her office plants are pale in comparison to her home jungle. She attributes her success with greenery to watering only with rain water. "My garage is full of milk cartons of rain water that I collect and use throughout the year." Sandy believes that plants have become popular because of their use in decorating and the frequency with which they appear in magazine and television advertisements. "It seems

The words "peat moss, root fungus, fish emulsion, and mealy bugs" have become almost as common around some offices in Fairchild as "transistor, diode, computer run, and lead-straightening." A "wandering Jew" is not a person of Jewish descent taking a leisurely Sunday afternoon stroll, but a type of plant known by its botanical name of *Zebrina tradescanta*; a "creeping Charlie" is not an infant who hasn't yet learned to walk, but a plant that graces many a hanging planter; a "bird's nest fern" is not a place where Mr. and Mrs. Blue Jay have set up housekeeping, but a beautiful plant with brilliant green fronds that have a light ripple effect; and "asparagus fern" is not a nutritional vegetable that can enhance your dinner-time meal, but a . . . well, you probably have the idea.

Could it be that the plant has replaced the dog as man's (or woman's) best friend? In search of an answer to that question, MICROWIRE decided to make a tour of Fairchild offices to talk to some Fairchilders about their plants:



Sandy Terry

advertisers can't tell the merits of their toothpaste anymore without a fern in the background of the picture." Sandy pointed to a nearby Boston fern owned and cared for by an office neighbor. "That," she stated, "is one of the most difficult plants to grow at home, yet it performs beautifully in the office. I can only believe that the fluorescent lights have something to do with its health." For home, Sandy advises asparagus fern. She has an asparagus that has outgrown the expanse of a four-foot table and sends its fronds trailing to the floor.

First Sales Trainees Enter the Outside World

Wil Fellner landed at JFK Airport in New York City at 6 a.m. on Thursday, March 7, sped along the highways between the city and Stamford, Connecticut, dropped his bags in his new residence in that city, and was entering the Fairchild office in Stamford at 9 a.m. to begin his first day's work as a Field Sales Representative. Now that's eagerness.

Wil is one of the first two graduates of the Semiconductor Components first Sales Training Program. At the same time, Michael O'Shaunessey was packing his bags in California to head for Dallas to begin his job as a Sales Representative in that city. Both men are early graduates of the Program which was designed to run 11 months, but takes into consideration an individual's progress and previous experience.

Wil admits to being a little surprised when the Stamford job opening was first discussed with him. "I was surprised at the rapidity with which a job

offer came," he reveals. But by the time both he and the Dallas Regional Manager decided that he was right for the job, the move did not seem premature.

Wil entered the Sales Training program after a five-year stint in the U.S. Navy as a helicopter pilot. Faced with the decision of becoming a career officer or looking elsewhere for opportunity that more closely matched his ambitions, he chose to begin looking within industry. He had one firm objective in searching for a company to join. He wanted an atmosphere in which initiative and energy would be rewarded . . . "where the time you spend with the company isn't the major factor in promotion. The things I'd hoped to find seem to be here at Fairchild. From what I've seen, performers get promoted. In fact, the job opening I filled was created as a result of Shawn Fogarty's promotion to Regional Distributor Manager for Northern New Jersey. Shawn's is a hard act

to follow, but I have the benefit of his presence to help me through the first weeks on the job." Wil takes over a lengthy list of customers including such firms as CBS Labs, Dictaphone, General Electric and Otis Elevator in the Stamford office.

Michael was unable to report to work on the first day he arrived in Dallas. It was a Saturday. But, his eagerness to plunge into his new assignment was no less than Wil's. Michael knew what he wanted when he came to Fairchild for an employment interview little more than eight months ago. He had just completed a year as a business forms salesman; his first job after graduating from college. He liked sales, but believed the most attractive opportunities lay in electronic components, not business forms. So he began a series of systematic interviews with electronic components firms in the Santa Clara Valley. No company, with the exception of Fairchild, offered a sales trainee

(Continued on page 8)

Lady Luck Lightens Life—fact or fantasy?

This issue of MICROWIRE comes to you between two notable calendar days—St. Patrick's, a rollicking day for those who are Irish and those who wish they were so they could claim some of the well-touted "luck of the Irish," and April Fool's,

which requires a good deal of luck and caution to survive unscathed. Is this a bunk or is there some fact in the belief that there is such a thing as luck and, on the other hand, things that keep one from being lucky? Here's what we found:



Paula Wisdom

Paula Wisdom

"Luck definitely plays a role in life, especially at the Tahoe gambling tables. You know when luck is occurring because you feel it. I believe that all the good feelings you give out, you get back in the form of luck."

Rose Brown

"Yes, luck exists, but usually bad luck comes first. It will eventually be fol-



Rose Brown

lowed by good luck, but you have to survive the bad before you get to the good."

Bob Ginsburgh

"I guess that luck has influenced my life, but I believe that it is more being in the right place at the right time than some supernatural thing. I don't believe that anything is lucky or unlucky. I have no superstitions about the stand-



Bob Ginsburgh



Paolo Garzini

ard things: Friday the 13th, black cats, walking under ladders . . ."

Paolo Garzini

"There's no such thing as luck, we're all subject to the same random probabilities that good or bad things will happen to us. Friday the 13th has no meaning to me and I like cats, even black ones."

A Practical Way To Get Involved In Tennis

If you want to get in on today's fastest growing sport—tennis—in the most painless and practical way possible, join the Fairchild Tennis Club. The Club, which is organizing its annual tournament schedule, offers action for novices and experts. Organized into two classes of play, last year Bert Iwanaka, Steve Sciallaba and Hassan Raza took the "A" Division title; Chuck Vinn and Bob West claimed the "B" Division trophy.

Club organizers are attempting to arrange for the necessary courts to begin tennis lessons, so even if you've never been behind a racket before, you're welcome to join the Club. Novice and advanced players who wish to enter the Club's tournament schedule should contact Hassan Raza, Ext. 3870 by April 7.



Bert Iwanaka (left) and Hassan Raza in the semi-final Class A play-off during the 1973-74 season's play.

Microwire I — April, 1974

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COMING FROM BEHIND AT THE START OF THE SEASON, Chem Mix snatched the Fairchild World Series title from the Discrete baseball team with a 9-8 victory. Taking the first two games of a possible three-game series, the Chem Mix players toyed with fate down to the last inning of the second game. Entering the ninth one run behind, Steven Pasqua got on base and was followed to bat by Matt Corr who drove him in with a triple. Sal Mendiola followed with a single that brought Matt in for the winning run. Team captain and shortstop Matt Corr attributes the unexpected victory to the undying spirit shared by team members: Pat Streight, catcher; Pete Napoli, center field; Nick Casillas, right field; Albert Abina, left field; Sal Mendiola, short center; Steve Masters, first base; Jim Townsend, second base; Steve Pasqua, short center; David Ponce, third base; and George Mann, the team's star pitcher.



More than 50 employees and their guests rode in air-conditioned comfort through a Sierra snowstorm to the Sahara Hotel in South Lake Tahoe on March 2 on a weekend excursion arranged by members of the Analog Products Division. Trip organizer, Carmen Martinez, reports that the return bus on March 3 carried a group of exhausted, but fully entertained, gamblers and skiers. There were few cash winners, but everyone reported that the trip provided a winning weekend.

Sales Trainees (continued)

ing program that would culminate after 11 months in a field assignment. "The usual procedure for getting into outside sales with an electronics company is to complete a lengthy period in an inside marketing assignment or some other related job, with no guarantee that you'll see the outside in less than five years. My timing was perfect with Fairchild," he believes. "Marketing was just putting together the Sales Training Program as I was interviewing with the company." Michael, like Wil, over the eight months he was involved in the program, spent a month or more in each of the semiconductor product marketing group, inside sales, customer services, and the distribution operation; gaining a full view of the processing of an order from the inside. This exposure, both men believe, is the ideal training for a field assignment.

Meanwhile, back at headquarters marketing, there are some 20 additional sales trainees on the final leg of their developmental programs as Fairchild grows its own field salespeople.

Microwire

Published for the Employees of the Fairchild Corporate Headquarters and Semiconductor Components Group — Mountain View/Palo Alto

Proper Technical Introduction Builds Better Relationships

Getting to know us properly builds longer-term relationships. This is the conclusion of a study recently completed by the Skills Training Department which proved that employees who were introduced to production processes and procedures in a systematic and thorough manner remain with the company in greater numbers than those who are not. "Turnover was significantly reduced for newly hired production employees," states Henry Watts, Corporate Manager of Skills Training, "who participated in a week-long wafer fab training course offered in Mountain View."

The class material was designed through a cooperative effort of skills training and line production personnel. Classes began in March, 1973, instructed by Georgia Washington, Skills Training Administrator and are designed to:

A. Orient the class to Fairchild product uses and basic processing with a specific emphasis on wafer fabrication.

B. Teach discrete, standard integrated circuit and MOS mask sequence and the processes required for each mask.

C. Teach and test the fundamentals of develop inspection and final inspection.

D. Teach basic safety requirements for wafer fabrication.

E. Teach fundamental skills for proper operating procedures for high-power microscopes.

The course is *not* designed to produce qualified exposers, etchers, and diffusion operators and does not teach the details of machine operation. That, according to Hank Watts, is best accomplished by intensive on-line training. Rather, the goal is to give incoming operators a thorough foundation in

(Continued on page 8)

Mobile Applications Lab On the Road in New England

Customers and potential customers in the New England area will soon be introduced to Fairchild's mobile Applications Lab, an impressive 28-foot by 8-foot van, which has been constructed to provide facilities for technical seminars, hands-on lab work and the demonstration of products at the customer's site. The first of the new Applications Labs has gone into service out of Wellesley, Mass., office with Al Tashian, Regional Manager-New England Developmental Accounts, supervising the lab program. On board the Applications Lab as it wends its way through an extensive series of visits to small- and medium-sized customers in the area, will be Leo Topjian, Account Executive, who will schedule and coordinate the Lab's activities, and Bob Ravenstein, Applications Engineer, who will assist potential customers with their product questions.

The Applications Lab to be used by the Wellesley sales office is the first of four new mobile demonstration units that will be put into service throughout the United States. The labs were stimulated by a highly successful pilot mobile demonstration program, conceived and carried out by Bill Bennett and Jerry Lawson of the Los Altos office. In fact, the four labs being outfitted for tours of duty are improved versions of the original van which has

been visiting customers in California for more than a year.

Each lab contains dynamic product displays of all of the Semiconductor Operations product lines. In addition, audio/visual and various test equipment in the lab allows for planned and spontaneous technical presentations and technical assistance to the customer when required.

"The mobile Applications Lab," Al Tashian explains, "allows the New England Region to take the full Fairchild Semiconductor product line to the customer. At the customer's site, we can assemble engineers, buyers and technicians—everyone who would influence an order. We're free from the disruption of phones that might occur in an office and, in a brief visit, the customer is able not only to see the product in which he or she is interested, but the entire Fairchild line. I believe that the lab will be instrumental in moving us toward the major objectives of our company . . . to improve numerically our position in the New England marketplace, to broaden our customer base and to enhance the company image."

In addition to Fairchild personnel, a representative from one of Fairchild's three distributors in New England will

(Continued on page 8)

Pictured below are new demonstration vans as they leave Mountain View for service in the field.



ACS-Fairchild Clinic Concentrates on Cancer Testing

Cancer . . . suffering . . . death . . . one inevitably follows the other. True?

The word "cancer" carries with it horror and frequently unfounded fears; fears that sometimes discourage a person from doing just the things they should to prevent or to cure this dreaded disease. Cure? But you've heard there is no cure for cancer. You're right. There is no single pill you can take that will eliminate a cancerous growth, but, if caught in time and treated with therapy or surgery or a combination of both, many cancers can be arrested and eliminated.

You've heard these warnings so many times that you no longer allow them to register in your mind. Perhaps you're one of more than half of the adult American population who allows each year to slip by without the most basic physical examination that could uncover the earliest stages of cancer when it is treatable with little or no disability. Women particularly have available to them an examination—called a Pap test—which takes just a few moments and can successfully detect the earliest stages of cervical cancer, one of the greatest killers of women if allowed to go untreated. Women can also be taught, in a few minutes, the correct method of breast examination which allows them to detect the be-

ginings of tumors which might lead to cancer in this body site. These two examinations—Pap tests and self-administered breast examinations—will be the focal point of a Health Screening Clinic to be held at the Medical Center in Building 7, May 5-22. All women in the Mountain View complex will receive the opportunity to make appointments to visit the Medical Center during the clinic. There, in private examining rooms, nurses from the American Cancer Society will perform the painless Pap test and teach the employee how to search for signs of breast tumors. In all, the individual examinations will require 15 minutes. Because the medical staff was unable to schedule a visit by the ACS staff to the R&D-Opto facility in Palo Alto during May, women employees at that plant will be informed of local community sites where similar free testing is conducted.

Appointments for the Health Screening Clinic will be made through area coordinators who will be named to represent each major department within the Mountain View facilities. The Clinic will be scheduled to cover all work shifts. Results of the tests will be mailed to employees' homes by the American Cancer Society and will be completely confidential.

Girls' Basketball Team Believes Some Work is Needed

"We've got to work on our shooting. We've also got to work on our guarding. Our passing could use improvement, too." That was the opinion of one member of Fairchild's first all-female basketball team to enter the formerly all-male, intra-company league.

In the first game in competition with an IMS men's team, the women decided that further practice was definitely needed if they were to hold their own on the courts. The final score in that first game was a very discouraging 45-4. Although they didn't claim many points in play, they scored high in sportsmanship. Most had never played according to men's rules before and found the switch to the free-moving male pattern of play confusing and exhausting.

Made up of representatives from the Personnel operations, the women's team is playing under the name, Bar-

ney's Girls, in honor of Roger Barney, Manager of Personnel Administration. The one bright note that the women have been able to find in their involvement in the basketball league is the arrival of their red and white uniforms which they guarantee will dazzle all future opponents. (The uniforms were not ready for the opening of the season. Perhaps that was part of the reason for the women's poor performance in their opening game.)

Barney's Girls is one of more than a dozen teams formed by members of Mountain View operations to take part in the intra-plant tournament. Almost every hour on the hour from six to nine p.m. on Monday and Wednesday evenings, two Fairchild teams can be found on the courts at Awalt High School competing in what could turn out to be one of the most fevered athletic tournaments in Fairchild's history.

A Big Name At Fairchild



Fred Bierbrauer plays a significant role in each of our lives. Is the name familiar? You know you've seen it somewhere before? Here's a clue: His name has a direct influence on your ability to pay for the groceries, the mortgage or rent, the car payment . . . Does that help? Still haven't placed where you've seen the name before? You see his signature on a very significant piece of paper you receive two or more times each month.

Fred signs checks with a value of many millions of dollars each month.

"Most people just look at the figures," says the man to whom the name Fred Bierbrauer belongs, "they really rarely read my signature." Fred doesn't seem disappointed that few people recognize his name immediately, even though it is his signature that appears on their paycheck.

As Manager of Treasury Operations, Fred's name appears on more than 30,000 checks each month which represents payment of wages and salaries for employees and payment to vendors for materials and services. So great is the demand for his signature, that he has a machine that stamps out a facsimile at the rate of 3,600 per hour. This leaves him free of check signing chores to handle other vital treasury functions such as helping to oversee the management of Fairchild's cash flow as millions of dollars move to employees and suppliers, from bank to bank, and into short-term investments.

Though thousands of employees and suppliers are paid as a result of his signature, Fred doesn't seem too impressed with the power of his name. He, like everyone else, is usually asked for identification when he attempts to cash the one or two personal checks he writes each month. He leaves the bulk of family check writing to his wife who handles the household budget.

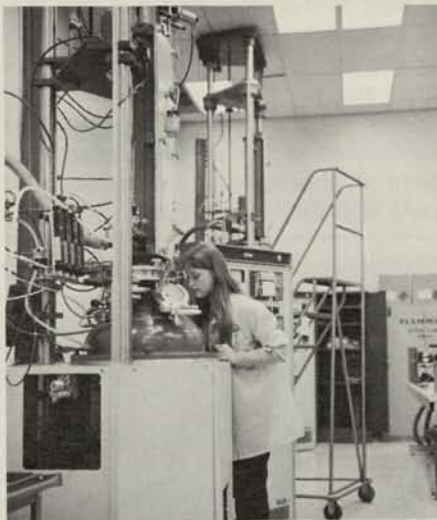
Crystal Growing Scores Advances in Productivity

Crystal growing bears some strong resemblances to garden variety growing. In growing silicon crystals, results are measured in yields per grower, while farmers measure their results in yield per acre. Size is important in tomatoes, as it is in crystals. Not satisfied with the original varieties, farmers worked to develop hybrid corn and tomato plants that produce more vegetables per stalk than their ancestors. The same holds true in crystal growing. Engineers develop crystal formulas to respond to new performance needs for semiconductor devices and to get more usable wafer material from a single silicon ingot.

A major difference between the two types of growing is the farmer displays his successes at the annual county fair, while the Crystal Growing section has no such showcase.

The history of crystal growing can be seen at a glance in a display in the office of Rich Valente, Production Manager, Silicon Materials. There, atop a cabinet, is an eight-year-old crystal, considered the state-of-the-art in its time. It is flanked by a series of ever-larger crystals which demonstrate each major step in crystal growing technology over the eight years. That 1966 model ingot is little more than an inch in diameter, four inches in height. The 1974 model is more than three inches in diameter and the sample displayed is simply a 10-inch cut from a very lengthy ingot. Each fraction of an inch added to the diameter of the crystal represents countless hours of product development in the crystal growing labs. Each foot added to the length of an ingot increases the flow of wafers into fabrication and ultimately lowers the cost of semiconductor devices.

In spite of its historic achievements, crystal growing continues to push at the boundaries of its present capabilities making minor as well as momentous advances in production and yield. "It isn't only advances in technology and equipment that allow us to score successes in advancing crystal growing," Rich states. "The people involved in crystal growing—their attitudes and commitment to their work account for a good portion of the advances we realized in the first quarter of the year. Our weekly output," he



Crystal Growing furnaces (above and below)



Below, the quality control section of crystal growing where crystals are prepared for delivery to slicing.



continues, "has increased significantly over the first three months of 1974. We attribute part of the gain to new equipment, but much of the credit for this success must go to our employees. I believe that we are working more efficiently than ever before. Most of the employees in Crystal Growing have been with us for some time. They have learned the subtleties of their jobs and their confidence in what they're doing reflects itself in steadily improving performance."

Rich also gives credit for Crystal Growing's exemplary performance to supervisors in the area, particularly to Matt Custer, general foreman of the growing operation. Matt explains why crystal growing carries with it all the difficulties of attempting to grow pineapples at the North Pole. "You must have a perfect blend of conditions to achieve a silicon ingot with all of the characteristics Fairchild demands in its products," Matt explains. "It's a lengthy, multi-step process with numerous pitfalls along the way. A silicon ingot is 'grown' from crystal seeds—three-inch-long pieces of crystal. Ultra-pure polycrystalline silicon is melted in a crucible and mixed with dopants (finely ground antimony, boron or phosphorus). Depending on the type of dopant added, the final silicon ingot will be a positive or a negative type. The melted silicon goes into a furnace where it is heated to a temperature of 2300°F. Then the seed is dipped into the molten silicon and slowly withdrawn bringing with it hardening silicon. The process requires from eight to 18 hours depending on the product for which the silicon is intended. Once grown, the silicon ingot is trimmed, one side is ground flat, and it is sliced into wafers."

In today's electronics industry, which is hungering for increasing numbers of semiconductor devices, Fairchild's ability to increase its production is largely determined by the performance of the Crystal Growing operations in Mountain View and Healdsburg. Impressive gain in productivity like those realized by Crystal Growing in Building 3 over the past three months, help assure that there will be more satisfied Fairchild customers in 1974.

JOS Program Revisions to Improve Effectiveness

The Job Opportunity System, now two years old, has been effective in stimulating the promotion of several thousand employees in hourly and salaried non-exempt jobs. It, like any other new program, came into existence with a few kinks that its originators could not have anticipated. Over the two years its rough edges have been polished until, today, it more closely meets the original objective of offering promotional opportunities to all qualified employees in an organized and equitable fashion. The most recent revisions to the JOS policy reflect some alterations to the program.

The most significant revisions are:

—The time in which employees in hourly and salaried non-exempt grades five and above must be in their present job before bidding for a promotion has been extended from six to nine months. In jobs at this level it has been found that the training curve is frequently as long as six months which, in many cases, found employees just trained in one job at the time they were again eligible for promotion. This will allow a department at least three months of an individual's fully developed skills before the person moves on to another promotion.

—Adding more flexibility to JOS is a new feature which allows employees who have been in their present classification for two years to bid for lateral or downgrade jobs simultaneously with employees for which the job would represent a promotion.

—Hourly production employees are now eligible to bid on salaried non-exempt grade three clerical positions even though the position may represent no increase in pay, but may, however, present a new career path to the employee.

—Permanent, part-time employees may bid on JOS jobs after all eligible, full-time employees have been considered for the positions.

—Recognizing the extended training required to fully perform jobs in grades five and above, the probationary period for these hourly assignments has been extended from 30 to 60 days.

—Employees who fail to meet the performance level of a new position during the applicable probationary period can bid on JOS positions again after they have returned to their former

level for 90 days.

—Employees who request a return to their former department during the probationary period in a new job will be eligible to bid through JOS again after six (grades one-four) or nine months (grades five and above).

—Service in a department prior to a leave of absence will be credited toward JOS bidding eligibility.

In addition to these changes which have been designed to make the Job Opportunity System more effective, the JOS application has been redesigned to enable it to contain the information needed as a result of the recent revisions in the System.

JOS applications can be obtained from racks located next to JOS Bulletin Boards in each building.



On March 8, several operators (above and below) in the LIC Masking area received Certification Awards that demonstrate that each has passed tests on their proficiency in all areas of their job. The operators were tested on safety, direct job-related knowledge, correct methods for accomplishing their jobs, efficiency and quality of work. Claiming the awards which represent outstanding effort and achievement are:

ALIGN OPERATIONS

Alberta Wergin
Debbie Cunningham
Barbara Beeman
Jill Sinnet
Ligia Amaral
Jarmin Galanopalulos
Olivette Melo
Martha Perez
Annie Martinez
Debbie Gibson
Frances Quintana
Kay Clarin

Patty Reynoso
Ligia Moniz
Colista Meigh
Glenda Tamimi
Darlene Morgan

Linda Aragon
Ana Andrea

METAL ETCH

Linda Davis
Barbara Brown
Rosemary Ackerman
Roxanne Sanfilippo

DEVELOP CHECK OPERATION

Marie Kelly
Divina Carino
Cely Salom
Greta McGowan
Phyllis Jones
Benet Jeffords
Melba Chadwick
Nancy Montgomery
OXIDE ETCH
Norma Gabhart
Molly Garnica
Diana Fong
Helen Sierra



"Pick up your things. Don't bang into the walls. Don't drop things on the floor. Wipe up the bathroom after you're through using it." These commands have echoed through every household that contains children. The person who cares for a house knows that without the cooperation of every member of the family, housekeeping is a hopeless task. Even at best, it seems that you just complete the final chore in the average three-bedroom home, and it's time to start all over again at the beginning. Keeping that 1,500 square feet of living space polished and neat demands more time and effort than anyone really wants to devote to it. But that's the plight of the poor housewife or househusband, whichever the case may be.

Imagine that problem compounded 20 times. Imagine if yours was an active family round-the-clock creating the debris and disorder that is associated with living. It creates a problem too great for the mind or body to address. Yet, this is the task that every member of the Fairchild-Mt. View janitorial staff faces. The 39 people who are responsible for keeping up appearances within the Mountain View complex are each responsible for maintaining an area equal to that found in 20 average homes. And, unlike most homes, there is no respite in activity in most of the plant's areas. Production operations go on round-the-clock multiplying the housekeeping needs and successfully eliminating any time when cleaning chores can be accomplished without the traffic of hundreds of people. Again, imagine the frustration of children trooping across a newly scrubbed but not-quite-dry floor. That's a frustration that Fairchild's janitorial staff faces daily. For many areas within the production operations, simply sweeping and dusting is not enough to satisfy the cleanliness standards. "Cleaning a fabrication area," Ken Hill, Manager of Janitorial Services explains, "requires a full third more time than an office area. To keep the airborne dust down we must use special dusting and sweeping tools and generally be more thorough than in other areas. The needs of some of the 'ultra-clean' areas recently established in Mountain View demand even greater attention than regular fab operations."

The frustration of just completing a clean-up to look over your shoulder to

Keeping Up Appearances

find your efforts were in vain (an experience that every housewife with young children has known) is felt regularly by the members of the janitorial crew. "Common areas," Ken explains, "are the most difficult to keep looking neat. Cafeterias, lounges, rest rooms and corridors attract the greatest amount of debris and most readily become eyesores. We're doubling our collection schedule in order to relieve the back-up of trash in these areas, but, just like at home, we require the cooperation of everyone in maintaining facilities that we never have to be ashamed of." Both for the sake of safety and appearance, storage or dumping of materials in the hallways has been eliminated in the past few weeks. Any materials found in hallways that are evidently not intended for the trash bin will be removed to a central holding area where the owner can claim them when he or she develops a satisfactory storage arrangement. Everyone is aware that the squeeze for space in many of the Mountain View buildings has forced employees to resort to unorthodox storage methods, but both the Safety and Janitorial sections have made it very clear that everyone will have to be a little more imaginative in devising compacting programs as the corridors are now out-of-bounds for boxes, pallets and drums of material. In addition to assisting with storage problems, all employees are asked to lend their support to housekeeping efforts by clearing their table in the cafeteria after lunch, assuring that the paper towels are deposited in the receptacles in the rest rooms, not on the floor, returning dishes and silverware to the cafeteria if you had lunch at your desk that day . . .

The general request that goes out from the janitorial staff is, "Treat Fairchild facilities with the same respect you give your own home."



Gladys Gray

If Gladys Gray, Janitress on the third shift, had her way, every square foot of Fairchild's facility would be polished and neat all of the time. As it is, on an eight-hour shift, Gladys covers a great deal of ground with her scrubbing and polishing equipment. Responsible for the general cleaning of 21 rest rooms in Buildings 1, 2, 3 and 4, Gladys must time herself to assure that she completes her work during the time allotted. She's usually accompanied on her nightly rounds by a novice janitor who is learning the ropes under her tutelage.

Gladys relies on the best cleaning products available and some self-devised shortcuts to accomplish the chores that await her each night when she reports to work. However, even in her haste, she won't leave an area until very bit of chrome is shining and every mirror polished. "Every rest room in the four buildings must be cleaned every night," Gladys explains. "With hundreds of people using the facilities around the clock, we run out of supplies several times a day, and a single towel dropped on the floor seems to be the signal to begin tossing all towels on the floor, creating disorder that is almost unbelievable." Yet, she arrives at work each night at 11 p.m. ready to attack the same job

(Continued next page)

Appearances

(Continued from page 5)

she did yesterday with renewed energy.

The graveyard shift hours are ideal for Gladys, who is a widow with three school-age children at home. "I'm home in time to see them off to school in the morning," she explains, "and sleep while they are at school." The family spends the evenings together and the children are settled in bed for the night when she leaves for work. Gladys originally joined Fairchild in 1968 as an employee of a company which contracted to handle maintenance for the Mountain View buildings. She left the company in November, 1970 and returned in April, 1973.

Gladys explains that much of the general cleaning is accomplished on the graveyard shift because it is the only time in which the janitors can find a little elbow room to accomplish the major chores such as floor scrubbing. "Even on graveyard," she adds, "it is difficult to discourage employees from walking across a wet floor. Even with a sign posted that an area is being cleaned, many people will attempt to enter, making our job even more difficult."

GIVE YOUR DISCARDS HOPE FOR A NEW AND USEFUL LIFE by donating them to the Hope Workshop for resale to someone who can use them. Hope trucks travel through the Santa Clara County picking up used and useable items to be sold in the organization's salvage sales to raise money for programs for disabled and retarded children and adults. A phone call to 275-6960 will bring the Hope truck to your home. Items accepted in the salvage sale program are all kinds of clothing including shoes; household goods, miscellaneous items including toys, dishes, pots, pans, small appliances (working or not). The Hope Salvage Department also wants furniture, but upholstered chairs and couches must be hole-free, and large appliances must work.

You will receive a receipt for your salvage donations which can be used for income tax purposes.



BEHIND THE SMOOTH AND APPEARINGLY EFFORTLESS BLOOD DRIVE ON APRIL 16, ARE THE EFFORTS OF BLOOD DRIVE COMMITTEE MEMBERS (left to right): Marilyn Nodden, Helen Yanis, Helen Suan, Janet Ingram, Barbara Neff, Elaine Garrett, Janie Irby, Marlene Nicklin, Robert Barker, Margaret Saunders, Jack Jones and Helen Hutson, R.N., who coordinated the drive. The committee members conducted an intensive person-to-person recruiting campaign to sign up donors for the Fairchild Blood Bank. Donations credited to the Fairchild account are available for use by employees and their immediate families at a savings of \$43.00 per unit. At top, Janie Irby, who acted as Blood Drive representative for Bldg. 19, gets some advice from Margaret Saunders who covered Bldg. 20 this year. For the past three years, Margaret has recruited from Bldg. 19 the highest number of donors of any committee representative.

Service Awards - April 1974

FIFTEEN YEARS

Betty VanDeErve (R&D)
Doris Hall (R&D)
Harry Sello
Ida Price
Ronald Ivancich

TEN YEARS

Bernice Mendonca
Thomas Murph

FIVE YEARS

Alfred Silva	Maria L. Melo
Raul Robles	Jackie Cassetta
Richard	Helen Varvitsiotes
VanLeeuwen	Cathryn Sylvia
Lorella Boxley	Jack Abbott
Helen Clemons	M. Dick Janjigian
Dorothy Bottley	Dan Bongatti

Ola Heminger	Denise Herndon
Paul Mendez	(R&D)
Fred Stillger	Rodolfo Sanchez
James Carlson, Jr.	(R&D)
Joan Boardman	Cynthia Burnham
Kay Denise	Paul Reagan
Diandrea	Victoria Ochoa
Lillie King	Jary H. Stahl
Jimi Tindeau	Maria Jussen
Elaine Poon	Redessie Sims
David Whetstone	Deanna Zendejas
David Murray, Jr.	Doris Head
Dora Baumgartner	Petra Martinez
Maria R. Ramos	Gloria Ringor
Dell Maria Abbott	Nellie Velazquez
Maxine Herman	Liz Ann Stephenson
Laura Alhona	Roberta Sherrill
Margarita Charles	Patricia Vigil
Amelia Garnica	Teresa Guzman

Lighting Up Our Lives

Digital displays in kitchen appliances, in automobiles, in clocks and watches . . .

Numeric displays that will tell you the temperature of your oven, the speed of your automobile, the time . . . Predictions are that we'll soon grow accustomed to the easily readable numbers and letters created by light emitting diodes in many of the measurement devices we've grown to know . . . but never really loved.

Imagine how much more confident you'll be when a number shows the temperature at which your cake bakes, rather than turning that dial to the temperature you hope for and crossing your fingers. When the speed of your travels on the freeway flashes before you not tempered by the whim of an erratic dial, you may find that you can live within the confines of the local speed limits. But one of the negative aspects of digital displays is their applications in clocks. No matter how much you squint (a tactic effective in diminishing the impact of traditional clocks), that numeric display is going to say—and say absolutely—"It's time to put your feet on the floor and start walking into another day."

But, whether you approve of all the applications or not, automotive and appliance manufacturers are turning to digital displays. They're turning to light emitting diodes to make the displays possible. And as they make this move, they'll turn, quite possibly, to Fairchild.

The Optoelectronics Division is confident that LEDs are going to play an increasing role in our lives in the years to come. Today, LEDs are most familiar in the readout displays of calcu-

lators. In fact, it was the hand-held calculator that greatly stimulated the manufacture of light emitting diodes. Most of the major calculator companies presently manufacture their own LEDs for their own consumption, buying few diodes from outside sources. "This," Ralph Miller, Optoelectronics Marketing Manager, states, "is called vertical manufacture. The hand-held calculator is dependent on a semiconductor chip. The same people who make semiconductor chips, make light emitting diodes. The major future markets for LEDs, however, will be created around non-electronic industries such as appliance and automotive manufacturing. These are the markets," Ralph continued, "in which huge quantities of LEDs will be required. They are also the markets which will be willing to pay the prices that will assure that LEDs will be a profitable product. They are the markets which Fairchild will actively pursue. And," Ralph adds, "we have the patience to wait out the current price cutting that has occurred among the LED manufacturers, knowing that a future, stable market exists for our product."

Ralph is not talking about the long-term future. At this time, many kitchen range manufacturers are designing digital displays into their new models. The automotive industry is investigating the applications of LED readouts for use in the instrument panels of fu-

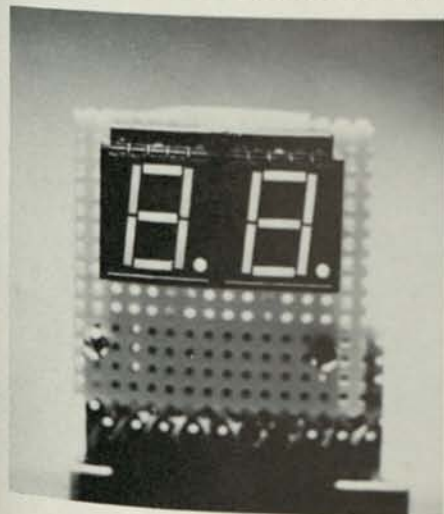
ture automobiles. One of the newest colors in LEDs, green, for the first time made possible the consideration of LEDs for automotive displays. The original LED color, which was red, was impossible for automotive designers to accept as this hue is only used as a trouble warning signal and could not be used in routine display functions.

"The LED chips which emit light when energized, can be combined," Ralph explains, "to produce numerals or alphabetic characters. They can easily replace any sort of measurement dial we presently use, from thermostat to control the temperature of your house to the cycle display on a washing machine."

Digital displays are coming and Optoelectronics Division is prepared for their advent. In the meanwhile, however, the Division has a very strong line of not so visible, literally and figuratively, products that have found an established and secure market. A full half of the Division's attention is concentrated on the development, manufacture and marketing of photo transistors and photo arrays for use in computer card readers and control devices. The industrial and computer markets, the prime users of the Opto's transistors and arrays, are receiving increased marketing concentration, Ralph reveals, and are responding to the new sales emphasis with increasing orders for the Fairchild devices. At the same time, LED development efforts have not been relaxed, in anticipation of the inevitable time when digital displays will make major inroads into the consumer marketplace.



Fairchild's recently introduced FND 500, 1/2-inch display digit (right) and two common products using light emitting diodes.



Take Your Pick of FAA Trips

If the bright lights of Reno appeal to you, sign up before May 4 for an F.E.A.A.-subsidized bus trip that will allow you to spend nine hours—and whatever else you can afford—in this fun city.

Two buses with a total capacity of 76 persons will leave from the parking lot of Building 20 (464 Ellis St.) outside the 24-hour guard station at 11 a.m. promptly on Saturday, May 18.

You will have about nine hours in Reno before the buses begin the return trip at 1 a.m. and arrive at Building 20 parking lot at approximately 6 a.m. Sunday.

The trip will cost \$13 per person. Upon arrival in Reno, each passenger will receive vouchers from Reno clubs for \$4 cash and two playing chips.

Employees will be signed up on a first-come, first-served basis. To make reservations, call Jean McNeal, Opto-electronics, Ext. (17) 2511; payment must be received by May 4.

Fairchilders, their families and friends are invited to a special showing of THE THREE MUSKETEERS on Sunday, April 28 at 6:15 p.m. at the Century 23B in San Jose. The PG rated film stars Charlton Heston, Faye Dunaway, Oliver Reed, Richard Chamberlain, Frank Finlay and Raquel Welch. To order tickets priced at \$2.50 (regularly \$3.50) complete the order form shown below and mail it to the theater at least seven days before the performance.

THE THREE MUSKETEERS

Fairchild Camera and Instrument Corp.

Please send me _____ tickets at \$2.50 each for the April 28, 6:15 p.m. performance.

My check for _____ is enclosed.

Name _____

Address _____ Ph. _____

City _____ Zip _____

Please enclose remittance with a stamped, self-addressed envelope. Mail your order to Century Theatres, Group Sales, 3164 Olsen Drive, San Jose, California 95117.

Microwire II — April, 1974

EDITOR: Veronica Kane

REPORTERS: Geri Hadley, Marge Killian, Millie Dawson, Clint Haines, Margaret Elliott, Pat Alfred, Lorette Hayes, Bev Delos Santos, Judy Wagner, Marlene Herman, Edie Beem and Sharon Ricks.

Printed on recycled paper

The annual caravan of four buses to the Giants' baseball games will take employees to the evening game against the Dodgers at Candlestick Park on May 24. The reserved stadium seats are in the lower stand, first-base side.

The F.E.A.A. will sponsor approximately four other trips to home games during the '74 season.

Again this year the tickets are offered to Fairchild employees and their families for the low price of \$2.50 each. This price includes round-trip bus transportation to the games from Building 20 parking lot.

Departure time will be 6:15 p.m.

For tickets contact: **Dee King**, Bldg. 13, Ext. 3930; **Donna Hughes**, Bldg. 19, Ext. 3461; **Lydia Lopez**, Bldg. 1-2, Ext. 2015; **Jean McNeal**, R&D/Opto, Ext. 2511; **Linda Partridge**, Bldg. 20, Ext. 2774.

The Snow Ski Club is not living up to its name. Now in the final month of a fantastic season of fun in the snow, the Club can't give up the comraderie it developed until the next snowfall. So, the Ski Club is arranging a Canoe Trip on the Russian River for May 18. The all-day excursion includes bus transportation from Fairchild, the use of a canoe plus a steak dinner following the rollicking ride down the river. Price for the day is \$15.25 per person for non-members; \$12.50 for Club members. (If you plan to bring your own lunch, deduct \$2.25 from those prices for the steak dinner.)

Reservations for the Trip can be made by contacting Rich McCoy, Ext. 5224, Ext. 2287 or sending your check payable to Ski Club Canoe Trip to P.O. Box 1174, Sunnyvale 94086. Deadline for reservations is May 10.

MOBILE LAB

(Continued from page 1)

be on board the lab to assist with demonstrations and product presentations. Al hopes to average two to three customer visits a day, three to four days each week when the scheduling for the lab is fully underway. Even with this heavy schedule, he believes that to cover key customers in the New England area the lab will be in operation in that area through the end of the year.

The other three labs, which will go into operation in the next two months, are headed for use out of the Philadelphia, Chicago and Los Altos sales offices.



The newest citizen in CMOS, John Sih, was honored at a cake and coffee party on March 25, the day he received U.S. citizenship. The cake served to well-wishers carried a draft notice in icing, reminding John that with the joys of citizenship come the responsibilities.



APRIL FOOL. Some people will go to great lengths for a joke. Pat Alfred carefully frosted a plastic container to look like a cake, then placed it in the cafeteria on April 1 inviting anyone who wished to attempt to cut it. The reactions were all similar to that expressed above.

TECHNICAL INTRODUCTION

(Continued from page 1)

Fairchild technology and processing.

These basic understandings of the process and specifications and the basic manual skills that are developed provide new hires with the ability to learn their assigned jobs more quickly. The Skills Training Department believes that the sense of competence and "being at home" in their new jobs has reduced the difficulties and frustrations that lead to new hire turnover.

The Mountain View class is presently being taught by Gerry Fisher, a 14-year Fairchild employee. Similar course are taught in Wappingers Falls by Betty Jo McCourt and in South Portland under the direction of Dan Blanchard.

Microwire

Published for the Employees of the Fairchild Corporate Headquarters and Semiconductor Components Group — Mountain View/Palo Alto



DR. C. LESTER HOGAN (center with shovel) made the earth move on April 16 as he turned the symbolic first spadeful of earth on the site of the new warehouse to serve the Semiconductor operations. On hand for the traditional ground-breaking ritual were (left to right) Chuck Smith, General Manager, Consumer End Products Program; Claire Enstad, from the contracting firm, Inland-Ryerson Company, which will construct the facility; Bill Evans, Facility and Equipment Engineering Manager; and Orville McKinney, Manager of Marketing Device and Processing. The new 85,000-square-foot facility will be complete in early August and will house Indirect Stores, Direct Stores, the Standards warehouse, Marketing Distribution, Shipping and Receiving. The existing warehouse area in Mountain View will be converted for the customer service function. Automated storage racks and conveyor systems and computerized inventory and material control records will make the warehouse among the most modern in the semiconductor industry.

Memorial Established for Robert Seeds

"One of the most unique individuals I have ever known."

"One of the most intelligent men with whom I've ever worked."

"Totally his own person; never compromised what he knew to be right."

"A terrible, terrible loss to his family, his friends and to the entire semiconductor industry."

These and many more were the words of eulogy that echoed through Fairchild as Bob Seeds' friends and co-workers attempted to comprehend the tragedy of his death on April 26 in an automobile accident.

Robert Seeds left a rich legacy to the semiconductor industry; more than 12 years of inspired and creative work

at Fairchild where he managed and supported product and process development efforts in virtually every product area. His most recent assignment was as R&D and Product & Processing Engineering Manager for the MOS Products Division. Phil Thomas, Division Manager, described Bob as, "A unique talent within the industry, with the technical breadth unparalleled in my personal experience in the semiconductor industry. Bob was my technical right arm and within the MOS Division provided focus and leadership across the entire spectrum of the technical problems we faced. The areas for which he has been responsible in

(Continued on page 2)

Four Scholarly Sons Make Fathers Proud

There were four very proud and pleased fathers in the Semiconductor Operations in April when the results of the second annual evaluation for the Sherman M. Fairchild Scholarship Awards were announced. The sons of Mickey Kashima, Packaging Engineer; John MacDougall, Manager of Advanced Development; Robert Pursel, Investigations Supervisor; and Robert Hoffman, Regional Sales Manager, Los Angeles; received full scholarships to the schools of their choice beginning with the 1974-75 academic year. The grants cover tuition and room and board for up to four years of undergraduate study.

Mickey's son, Kennon will enter his

The four young men were among ten Sherman M. Fairchild scholars to receive awards as a result of the 1974 evaluation by the Educational Testing Service of Princeton, New Jersey. The scholarships, made possible by a legacy of Sherman Mills Fairchild, founder of Fairchild Camera and Instrument Corporation, are awarded through the Fairchild Foundation. They are granted to the sons and daughters of employees on the basis of academic and extra-curricular performance on Scholastic Aptitude Tests.

Qualifications for entry into the annual scholarship evaluations are: the parent-employee must have two or more years of service with the company by September of the year in which the scholarships are awarded; and the student must be a senior in high school or an undergraduate student in college at the time the application for the Fairchild grant is made.

Applications for 1975 awards will open in the fall. Application forms will be available from all Industrial Relations offices at that time.

Scholarly Sons (continued)

freshman year at Stanford University to work toward a degree in Electrical Engineering or Psychology. John's son, William, will begin his sophomore year at the University of California or Stanford to study toward degrees in Economics and Law. Bob's son, Robert, Jr., plans a course of study at the University of California-Berkeley that will lead toward a degree in business or social science; and Robert's son, Ray, plans a career in veterinary medicine and will enter his second year of study at University of California at Davis.

MICROWIRE talked with the parents of these outstanding scholars to determine if there is a formula for encouraging children to become outstanding achievers.

Each of the fathers stated that they applied no parental pressure to encourage their sons toward outstanding performance in academics, athletics and community involvement. Instead, they all repeated, they maintained a concerned and sincere interest in all of their sons' activities, attempting to guide them when they faced major decisions, but never insisting that the young men follow their advice.

The fathers reveal that none of the scholarship winners have ever had to be encouraged to do their homework. "I often awaken at two or three in the morning," John MacDougall states, "to find the light in Bill's room still burning. He's never behind in his school work because he enjoys studying and always does more than is required of him." John admits, however, that his three younger children sometimes require a little encouragement to crack the books. In the Kashima household, all three of Mickey's children are self-motivated, enjoy school and actually appear to relish homework. "They

don't spend all of their time with books and class projects," Mickey explains, "but in the hours they devote to studies each day, their school work gets their total attention."

Bob Pursel describes his son as a very well-organized person. "He plans his day well in advance and appears to accomplish everything that is expected of him, plus a little more, with no apparent effort."

Bob Hoffman states that his children are all achievers in their own right. The eldest, Ray, is the scholar, the others direct their energies toward other pursuits and accomplish them equally well.

Each of the fathers claim that they can pinpoint no single parental action that would provide the stimulation to encourage their children to excel. "Perhaps the reason my children are good students," Mickey suggests, "is we expect them to be. There's no real pressure, but my father always hoped to see Kennon go to Stanford. On my wife's side of the family there are a number of Stanford graduates. Kennon has always known that his grandfather would be very pleased if he could be accepted at Stanford. Unfortunately, my father died last year, so he will never know that his dream will be realized."

John feels that his example as a professional student may have encouraged his son a bit. John, who states he collects academic degrees, was attending classes at Stanford until his son was in high school. John's collection of degrees include a bachelor's in Physiology; a master's in Physiology; a bachelor's in electrical engineering and MSEE. Bob Pursel believes that his son's extensive travels with his parents to Europe and the Far

East where Bob was stationed in the service while Robert, Jr., was in grade and high school, may have been very beneficial in his son's development. "Bob, Jr., attended 12 schools from grade through high school, many in foreign countries. This could have proven detrimental to sustained interest in academics, but, instead, it encouraged him to adjust and mature."

Roy, the first-born of the Hoffman children, may have received a little more attention than the others, Bob Hoffman explains. "Perhaps that contributed to his excellent performance in school, but, honestly, I don't believe that I can take any of the credit."

Self-motivation, the fathers agree, appears to be the key element in outstanding achievement. Unfortunately, they can offer no magic formula of success to other Fairchild parents who would like to nurture outstanding scholars in their households.

Robert Seeds (continued)

the past year showed dramatic improvement under his management. Respect for Bob among his fellow managers was extremely high and he is considered by all of us as virtually irreplaceable."

It is apparent that as his friends attempted to adjust to the thought of his death, words were ineffective in describing the depth of their respect and admiration for Bob Seeds, a friend and fellow worker.

Dr. Seeds joined Fairchild in 1962 as manager of digital integrated circuit applications engineering. He subsequently served in the research organization as a manager of technology and advanced product development for digital integrated circuits and as director of digital integrated circuit development. His work included development of technologies such as DTL, CTL, Cul, computer-aided design programs, silicon gate MOS devices, bipolar memory products and the Iso-planar and CMOS technologies.

The Seeds family has requested that memorial gifts be used to purchase trees for Big Basin Redwood State Park in Santa Cruz County. Memorial donations should be made out to the Sempervirens Fund, and sent to P.O. Box 1141, Los Altos, 94022, indicating that they are to be used toward the Robert B. Seeds Memorial reforestation project.

PROUD PAPAS (left to right) Mickey Kashima, John MacDougall and Robert Pursel. Robert Hoffman was on his way to the Hawaii sales conference at the time this issue went to press so was unavailable for a photo.



JOS Promotes

Joanne Curl from Key Punch Operator to Tape Librarian
Thomas Curfman from Electronic Tech. to Sr. Electronic Tech.

Barbara Harper from Data Reconciliation Clerk to Document Control Coordinator

James Krider from Sr. Electronic Tech. to Assistant Engineer

Irene Torres from Assembler B to Assembly Work Leader

Kirk Mitchell from Assembler B to P & D Spec.

Zane Pekota from P & D Spec. to Asst. Lab Tech.

Lynda Miranda from Lab Tech. to Sr. Lab Tech.

Marie Kelly from P & D Spec. to Mask Making Spec. B

Maria Gassaway from Assembler B to Probe Repair Spec.

Boyd A. Raley from Security Guard to Guard Lieutenant—Shift Supervisor

Gloria Maciel from P & D Spec. to Engineering Operator

Jennifer Green from Assembler A to Assembler B

Yoshiko Green from Assembler A to Assembler B

Barbara Malin from Intermediate Clerk to Production Planner

Betty Mendez from Hi Rel. Processor A to Hi Rel Processor B

Yolanda Castillo from P & D Spec. to Engineering Operator

Bruce Chase from Hi Rel Assembler A to Hi Rel Processor B

Annette Steel from Senior Clerk to Personnel Assistant

Manuel Vaz from Assembler A to Assistant Lab Tech.

Kenneth Caldwell from Inventory Control Clerk to Shipper/Receiver

Donald Miller from Mechanic Spec. to Sr. Elec. Tech.

Rodolfo Adan from Janitor A to Electro Plater A

Carmencita Adriatico from Assembler B to P & D Spec.

Marcelino Adres from Janitor A to Plating

Edilbert Arucan from Mask Making Spec. A to Asst. Lab Tech.

Dorotia Atayan from Assembler A to Assembler B

Daniel Babb from Electro Plater A to Shipper/Receiver

Miguel Badia from Assembler A to Assembler B

Gwen Banks from Assembler B to Probe Repair Spec.

Mary V. Banks from Assembler B to Jr. Test Spec.

Martinez Basilio from Mechanic B to Mechanic C

Paula Batchelor from Assembler B to P & D Spec.

Urszula Bierie from Assembler B to P & D Spec.

Les Blackmore from Assembler B to P & D Spec.

Marsha L. Lacoy from Assembler A to Assembler B

Tamera La Foya from Assembler A to Assembler B

Linda Boyes from Assembler B to Accounting Clerk I

Marie Lattman from Assembly Work Leader to Production Planner

Kamalyn Lawson from Assembler B to P & D Spec.

Becky Leach from P & D Spec. to Engineering Operator

Irene Leal from P & D Spec. to STS Instructor

Nick Bricker from Assembler A to Mechanic A

Jean Peterson from Executive Secretary to Vice Pres. Secretary

Rachel Ledesma from Inventory Control Clerk to P & D Spec.

Jennie Lee from Senior Clerk to Expeditor

Edith Lloyd from Inventory Control Clerk to R & QA Inspect. Spec.

Collette Lopez from Assembler A to P & D Spec.

James Lyles from Assembler A to P & D Spec.

Petra Martinez from Assist Lab. Tech. to Lab. Tech.

Rachel Martinez from R & QA Inspector Spec. to Failure Analysis Spec.

Mary McCullagh from P & D Spec. to Engineering Operator

Maria Melo from Assembly A to Assembler B

David Mendez from Assembler B to Chemical Mixer

Michael Mendonca from Assembler A to Mechanic B

John Merchant from Elect. Tech. to Sr. Elect. Tech.

Retha Merlo from Assembly Work Leader to Production Planner

Louise Miller from Senior Clerk to Assist. Accountant

Lucita Mina from Assembler A to Assembler B

Mary Jane Mixon from Assembler A to P & D Spec.

Terrie Mollett from Assembler A to P & D Spec.

Mary Mooney from Assembler A to Hi Rel Proc. B

Alice Morris from P & D Spec. to Work Leader

Louis Mow from P & D Spec. to Assembly Work Leader

Clement Munoz from Assembler A to Security Guard Trainee

Roberta McCormick from Assembler B to Test Program Clerk

Terri Nelson from Assembler B to P & D Spec.

Rosita Nicolas from Assembler B to P & D Spec.

Stephanie Nishimoto from Senior Clerk to Employee Relations

Ramona Nugales from Assist. Elect. Tech to Sr. Lab Tech.

Jerry Norviel from Security Guard to Mechanic B

Shirley A. Novak from Key punch Oper. (Sr.) to Key punch Coor.

Teresa Oliveira from Assembler B to P & D Spec.

Pacita Orillaneda from Assembler B to Assist. Lab. Tech.

Lola Ortiz from Assembler B to P & D Spec.

Robin Osborne from Chemical Mixer to Assist. Lab. Tech.

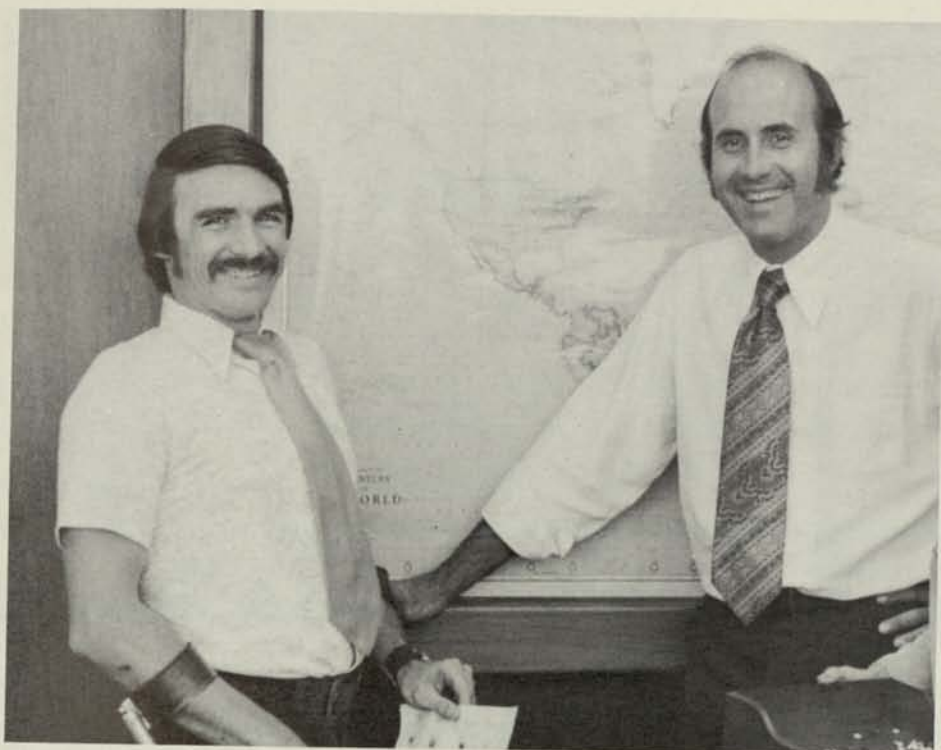
Ken Pacheto from Assembler B to Mechanic A

Mollie Perry from P & D Spec. to Assist. Lab. Tech.

Gaby Perez from Assembler B to P & D Spec.

Ronald Phelps from Assembler A to Assembler B
Juanita Powley from Work Leader to Assist. Elect. Tech.
Minnie Puckett from Assembler A to Assembler B
Helen Rabb from Senior Clerk to Employee Relations Assist.
Amelia Raguini from P & D Spec. to Engineering Operator
David Reel from Security Guard to Mechanic B
Balbir Rehal from Assembler B to P & D Spec.
Diane Rippey from Int. Clerk to Senior Clerk
Carlos Jay Robledo from Assembler B to P & D Spec.
Phyllis Rodriguez from Assembler A to Inventory Control Clerk
Gloria Rose from Work Leader to STS Training Instructor
Betty Roybal from Assembler A to P & D Spec.
Bette Rush from Senior Typist to Secretary
Barbara Salas from Assembler A to Assembler B
Lourdes Salgado from Assembler A to Assembler B
Linda Ann Scott from Assembler B to P & D Spec.
Willetta Sleeper from Assembler B to Prod. Maint. Clerk
Delores Serna from Janitor A to P & D Spec.
Kuldeep Kaur Sidhu from Assembler A to Assembler B
Jeff Skalisky from Gardener/Planner to Fac. Spec. Painter
Pat Smith from Assembler B to P & D Spec.
Sally Soriano from Assembly B to R & QA Insp. Spec.
Lydia Sparks from P & D Spec. to Shipper/Receiver
Randy Stanley from Assembler A to Assembler B
Gloria Stiner from R & QA Insp. Spec. to Engineering Operator
Roberta Stone from Hi Rel Proc. A to Hi Rel Proc. B
Thomas Stuart from Chem. Mixer to Storekeeper
Recoisa Tabotal from Assembler A to Assembler B
Marjorie Taylor from Hi Rel Proc. B to Tech. Data Analyst
Minnette Tejero from Assembler B to P & D Spec.
Jayette Ann Thatcher from Assembler B to Distribution Clerk
Josephine Thrash from R & QA Insp. Spec. to Jr. Spec. Designer
Rose Valdez from Assembler B to P & D Spec.
Yvonne Vaughn from Assembler B to P & D Spec.
Rudolph Vitug from Assembler A to Electro Plater A
Florence Wallace from Assembler B to P & D Spec.
Kathleen Wasilewski from Senior Clerk to Assistant Buyer
Delaino Wilhelm from Inter. Clerk to Edit. Terminal Operator
Catherine Williams from Assembler Worker A to Assembler B
Dianne V. Kashka from Assembler A to Prod. Maint. Clerk
Hiawatha Kendall from P & D Spec. to Work Leader
Kenneth C. Holman from P & D Spec. to Mechanic A
Sandra Keyashian from R & QA Insp. B to Intermediate Clerk

Jung Ae Kim from Assembler B to P & D Spec.
Diane Kimball from Secretary to Employment Assist.
Susanne Kinney from Probe Repair Spec. to Assist. Elect. Tech.
Kathy Klein from Assembler B to P & D Spec.
Mary Knox from P & D Spec. to Engineering Operator
Larry Gallegos from Assembler B to Mechanic B
Carol Godwin from Assembler B to P & D Spec.
Caries Golden from Assembler B to P & D Spec.
Rebecca R. Gonzales from Assembler A to P & D Spec.
Randy Griffin from Assembler B to Electro Plater A
Philip Gross from Assembler A to Mechanic B
Lynn M. Hayes from Lab. Tech. to Research Tech.
Benilde Hernandez from Janitor A to P & D Spec.
Preciosa Hernandez from Assembler A to Assembler B
Rachel Hernandez from Assembler B to R & QA Insp.
Ronnie Hightower from Elect. Plater A to Accounting Clerk II
Arthur E. Hill from Elect. Tech. to Sr. Elect. Tech.
Adi Hillbun from Assembler B to P & D Spec.
Delfina Hodges from Assembler B to P & D Spec.
Stella Huerta from P & D Spec. to Assist. Lab. Tech.
Jessie Ilagan from Assembler B to R & QA Insp.
Cynthia Isaacs from Int. Clerk to Senior Clerk
Irene Jacobson from Hi Rel Proc. B to Hi Rel Proc. Spec.
Kathleen Johnson from P & D Spec. to Assist. Lab. Tech.
Corazon Cabrera from P & D Spec. to STS Inst.
Benilda Calaor from Assembler B to P & D Spec.
Virginia Carey from Assembler A to Assembler B
Manuel Carreira from Assembler B to Chemical Mixer
Sharon Casey from Senior Clerk to Customer Sat. Coor.
Roberta Caspary from Assembler A to P & D Spec.
Guadalupe Castillo from Assembler B to P & D Spec.
Betty Cobanoglu from Senior Clerk to Cust. Sat. Coor.
Barbara Collins from Clerk to Intermediate Clerk
Maria Contreras from Assembler B to P & D Spec.
Betty Cummings from Assembler A to Inventory Control Clerk
Suzanne Cyphers from Mask Making Spec. to Mask Making Spec. B
Sharon Dalton from P & D Spec. to Senior Clerk
Mike De Guzman from P & D Spec. to Chemical Mixer
Alicia deLeon from Assembler A to Assembler B
Maria D. DeMelo from P & D Spec. to STS Instructor
Chris Desrochers from Intermediate Clerk to Secretary
Susan Duc from P & D Spec. to Mask Making Spec. B
Tosiko Dunn from Assembler B to P & D Spec.
Maria Dutra from Assembler A to P & D Spec.
Chris Espinoza from Assembler B to R & QA Insp. Spec.
Frank Esquerra from Assembler B to P & D Spec.
Lenora Esteban from Assembler B to P & D Spec.
Kathy Faria from P & D Spec. to Assist. Lab. Tech.
Maria Faria from P & D Spec. to Eng. Operator
JoAnn Fuerguson from Assembler B to Probe Repair Spec.



A LITTLE BIT OF LUCK AND A WHOLE LOT OF EFFORT: Selected as the Discrete marketing representative to attend the sales convention in Hawaii, Mike McAbee (left) had luck and a lot of colored beans going for him. In a contest held in March and April, all Discrete Marketing representatives were awarded a single colored bean for each \$25,000 worth of orders they logged. A \$500,000 order for LEDs provided Mike with a whole handful of light green beans (his color in the contest). After the close of the competition, all of the marketing representatives dumped their beans into a hat, and Greg Reyes randomly selected a single bean—the color of which would determine the marketing member who would head for Hawaii. It was one of Mike's green beans that came out of the hat between Greg's fingers. After the selection, Greg pointed out, "Mike deserves it. There are many more light green beans in the hat than any other single color."

Suggestion Program Discontinued

It was a great idea—that just didn't work. That was the opinion of Industrial Relations evaluators after they completed a study of the Suggestion Program. An objective review of the program was stimulated by the continuous barrage of employee complaints on the awards schedule, the pace with which evaluations were made, and the validity of the evaluations themselves. Without constant prodding and publicity, few suggestions were submitted to the program. In fact, recently in an attempt to measure employee interest, all suggestion forms were removed from the Program boxes, and few calls were received in the Suggestion Program office. The conclusion drawn was that the Program is not of vital interest to employees and, at times, can be more negative than positive.

Talking with supervisors, evaluators,

and suggestors, it became apparent that the only way in which the Program could be made the positive employee benefit it was intended to be would be to greatly expand the staff of the Program adding engineers who could handle evaluation, and support personnel to handle administration. The cost of financing such an "ideal" suggestion program, it was agreed, was not warranted by demonstrated employee interest. Instead, it was decided that it would be more beneficial, in the long run, to take the budget now allocated for the Suggestion Program and use it to enhance the employee recreation program.

So, as a result of the evaluation, the Suggestion Program will fade into Fairchild history as a good idea that didn't work. As of May 15, no further suggestions will be accepted in the Pro-



BI-POLAR MEMORY STRATEGIC BUSINESS UNIT BECOMES DIVISION. Bill Baker, now Bi-Polar Memory Division Manager, was surprised as everyone else, when Dr. Tom Longo, Vice President-General Manager of the Integrated Circuits Group, announced at the conference in Hawaii that Bi-Polar had been elevated from SBU to divisional status. The announcement was made by Dr. Longo via a trophy which lauded Bi-Polar's outstanding performance and noted it is the first Fairchild strategic business unit to achieve divisional stature. "We knew that we were consistently meeting the objectives set for us as an SBU," Bill reports, "but I had no idea that our organization was to be established as a separate division this soon. As a division, Bi-Polar Memory will contain its own marketing and financial management departments allowing it to give concentrated attention to the specialized needs of the growing markets for bi-polar products."

gram. All ideas that are presently under evaluation will continue to be reviewed and, if warranted, the suggestors will receive appropriate awards. Also, ideas evaluated that did not earn awards which are subsequently implemented in the coming year (until May, 1975) will entitle suggestors to receive awards.

Naturally, cost-saving ideas from employees will continue to be implemented with recognition for suggestions made on a departmental basis.

The newly installed Profit Sharing Program which gives employees direct financial participation in the success of the company, should encourage everyone to look for cost-saving, profit-enhancing ways in which to work.



Members of the security and safety sections who took the day shift First Aid class are congratulated by Betty Landis, R.N. (left), instructor for the class and Dr. O. Bruce Dickerson, Medical Director. The graduates are Theresa Lyerla, Alfred Stuck, Jeanie Stewart, Henry Bizozzero, Paulean Brooks and Charles Quandt.



First Aiders are "pinned" after graduation from the swing shift class in first aid. At the graduation ceremony were (seated, left to right) Captain Holland (guest of honor), Jerry Froehlick, Al Willis, Rose Aguilar, Maria Fe Brown, Sue Pease, Betty Cummings, Polly Howe, Karen Dibish, and Sue Rice. Standing, left to right: Jerry Swanson, Roger Barney (guest), Steve Rinks, Lt. Jess Reeves, Jerald Miller, George Beuge, Dr. O. Bruce Dickerson (guest), Andy Musaelian, Lt. Herman Ball and Ann Bowman, R.N. who instructed the class.



New First Aiders (left to right) Barbara Matejicich, Pat Rawlinson, Maxine Otrogge and Mary Mooney surround Dr. Dickerson and Betty Landis at their graduation ceremony.

IT MAKES YOU FEEL A LITTLE MORE SECURE: Almost two dozen employees received certificates as qualified Fairchild First Aiders in graduation ceremonies held during April. The completion of the 18-hour course in general and Fairchild emergency care qualified the First Aiders to provide emergency care for virtually any injury that occurs within the plant. In the training program, which was instructed by Betty Landis, for first shift; Ann Bowman for second shift; and

Jackie Anderson for third shift, the students learned how to treat burns, heart attacks, fractures, electrical shock, poisoning, and were instructed in the correct method for transporting injured persons and applying artificial respiration. Over the course, which included films, textbook readings, and practice sessions, the new First Aiders received complete instruction in caring for accident victims until professional medical help arrives.

Project Safeguard Underway

The American Cancer Society nurses and women doctors will conduct a clinic, called Project Safeguard, in the Mountain View Medical Center every work day May 6 through May 24. The lengthy clinic schedule has been established to enable all Fairchild women to take advantage of the health screening offered by ACS.

Less than a half-hour off the job will be required to attend the clinic as the examination which includes a Pap test requires less than 15 minutes, and buses will make a continuous tour of the outlying buildings throughout the clinic hours to pick-up and return employees. Bus service on swing shift and third shift will be available from

all buildings in which employees are working.

CLINIC SCHEDULE

May 6-10—7:30 a.m. to 4 p.m.

May 13-16—6 p.m. to 3 a.m.

May 17—3:30 p.m. to 12 midnight

May 20—Midnight to 7:30 a.m.

May 20-24—7:30 a.m. to 4 p.m.

The ACS representatives will visit the Systems Technology Division in June to conduct a similar clinic. Scheduling problems have made it impossible to set a firm date for a visit to the Opto-R&D facility in Palo Alto. However, women employees at that facility will be given information on where similar, free clinics are conducted in the community.



And more congratulations were in order from Betty Landis, R.N. (left) and Dr. Dickerson (right) to Dolores King, Norman Dunning, Janet McHenry, and Russell Roering.

There've been some changes made

There's been some changes made.

Over the past 10 years, we witnessed a very visible change in some areas of our workforce. We've seen Black, Chicanos, American Indians and women moving into positions they had never held before in any significant numbers. Being an engineer no longer means being white and male. Engineers today come in several colors and two sexes; so do managers and technicians and supervisors. Virtually everyone agrees that the quality of one's work was never dependent on the color of one's skin or an individual's sex. In response to an itemization of the progress that has been made in equal employment opportunity, most people say, "It's about time. Do you want a pat on the head for doing something you should have been doing all along?" The rightness of equal employment is so obvious few would choose to argue with it head-on.

Yet, the change that has occurred at Fairchild and other industries didn't just evolve. Shattering stereotypes requires some very aggressive action.

Still Time For MSEE Registration

The deadline for registration in the first Fairchild-Santa Clara University MSEE program has been extended from April 15 to May 15. The program is being offered by the Santa Clara Department of Electrical Engineering and Computer Science and is designed to provide an opportunity for MSEE and Engineering degree students to pursue in-depth graduate level studies in microelectronic design and processing.

The first course in the program, which begins June 18, will cover basic material properties including crystal structure and defects, crystal growth, epitaxy oxidation, diffusion ion implantation, and photo-lithography processes. Instructor for the first course, which will meet Tuesday and Thursday mornings, 7 to 9 a.m. at the Career Center, is Conrad Dell'Oca, Fairchild Manager of Process Development Engineering.

Registration can be made by contacting the Career Center Registrar, mail stop 13-117, Ext. 2327.

And that's what the Fairchild Affirmative Action Program is all about. The Program, which is available for review in Industrial Relations Offices, contains more than 100 pages in which the company's workforce is analyzed from many points of view—all related to equal employment opportunities. In this detailed program, Fairchild examines all of its actions toward employees and prospective employees to purge them of any possibility that a member of a minority group or a woman might be discouraged from seeking employment with the company or from preparing for promotion. But, even then, it's not enough to say that, "Look, we don't discriminate." True affirmative action demands just what its name suggests. The company must aggressively pave the way for minorities and women to find employment opportunities within it. This is accomplished through active recruiting at colleges with a high enrollment of minorities and women, and through identification and encouragement of women and members of minority groups who can be prepared for promotion. And, it is also true that affirmative action demands that women and minorities have sym-

pathetic, trained counselors to whom they can turn if they encounter problems in the work environment.

Every industrial relations manager in Mountain View and Palo Alto has been trained in EEO counselling and is prepared—even anxious—to talk with women and minorities who would like some direction in achieving their career goals or some help in resolving problems they are encountering in their work lives.

Most supervisors in Mountain View and Palo Alto are also prepared to assist women and minority group members in achieving their full potential within the organization. As the result of Awareness Seminars that have been conducted over the past year, these supervisors have examined and discussed the problems that women and minorities might experience in progressing in their careers and are prepared to help them push away real and imagined obstacles.

Sure, there've been some changes made, but with a corporate commitment to equal employment as strong as that expressed by Fairchild management, you ain't seen nothing yet.



THE HIGH RELIABILITY DEPARTMENT OF DISCRETE PRODUCTS MUST HAVE SOMETHING SPECIAL—something that attracts long-term employees. In April alone, three women in the department (left to right) Helen Iverson, Beverly Watts and Connie Tawaka, celebrated 15th anniversaries with Fairchild. The men in the background (left to right) George Harwell, Greg Reyes, Larry Piper and Bob Bylin were on hand to present service awards and their congratulations to the long-term trio. MICROWIRE regrets that it is unable to run photos

of all five-, ten- and 15-year award recipients. As demonstrated in the monthly lists of long-service employees, the awards made at these service plateaus are becoming so numerous that if photographs of each of the recipients were published, there would be little room for other news coverage. Beginning this month, employees will be pictured at 20 years of service and the names of five-, ten- and 15-year employees will be published in the month in which their anniversary occurs.

And so the list grows



Doris Watry
One-month employee

The list of benefits you receive as a Fairchild employee grows with your service with the company.

At the completion of one full calendar month of service, employees receive:

- Fully paid medical insurance for themselves, and they can elect to enroll for coverage for members of their families.
- Pay for up to nine holidays during their first year of employment.
- Employees on the hourly and salaried non-exempt payrolls begin accumulating Paid Personal Absence time at the rate of ½ day each month (up to a maximum of five PPA days during the first year of service).
- Life insurance equal to the amount of their basic annual earnings.
- Business travel and accident insurance of \$50,000.
- They can enroll for accidental death and dismemberment insurance for themselves and members of their families.
- They're eligible for membership in the Fairchild Employees' Federal Credit Union.
- They receive paid absence while on jury duty or for bereavement.
- They're members in the Fairchild Employees' Activities Association.
- Hourly employees become pension plan members.



Ray Negron
Six-month employee

After completing six full calendar months of employment, the following benefits are added:

- Five vacation days credit to their benefit account.
- They're eligible for dental insurance coverage for themselves and members of their families if they enrolled for family coverage at the time of employment.
- Hourly and salaried non-exempt employees in Grades one through four become eligible to bid for promotion in the Job Op—Employees with six or more months of service are eligible for tuition reimbursement for the cost of



David Aganon
One-year employee

job-related courses. (Supervisor's approval must be obtained before registration in order to qualify for reimbursement.)

At nine months

- Hourly and salaried non-exempt employees in Grade 5 and above become eligible to bid for promotion through the Job Opportunity System.

"All Fairchild employee benefits are subject to continuous review and adjustments."



THE GRUELING GRID—More than 20 managers and other Fairchild professionals completed the week-long Management Grid Program presented by the Career Development Center during April. In all, the Grid students devoted more than 70 hours to the Grid material over the five-day period in an effort to develop themselves into more effective managers. Participants in the Grid are referred by their managers or the Industrial Relations Manager who serves their departments. Future Grid sessions are planned in Mountain View for the weeks of June 3 and 17.

At or near one year of service, the following benefits are added to the list:

—On the first day of the next calendar quarter following the first anniversary with the company, employees qualify for membership in the Fairchild Profit Sharing Plan. Based on income while a member of the plan, employees share in the Profit Sharing contribution made by the company for that year.

—On the first day of the next month following one year of service, employees are covered by Long Term Disability Insurance if they enrolled for coverage at the time of employment.

—Another five days of vacation time is added to employees' benefits account on the first of the calendar month following one year of employment (to make a total of ten vacation days earned during the first year of service).

—Employees then begin accumulating future vacation credits at the rate of 5/6th of a day per month.

—On January 1, following the first full year of employment, employees on the hourly and salaried non-exempt payrolls receive six PPA days credited to their benefits accounts. These PPA days can be used, in increments of as little as an hour, to cover absence to attend to personal business or for illness.

—On the first day of the calendar month following the first anniversary with the company, hourly and salaried non-exempt employees receive 10 additional Disability Allowance Days, which can be used for income continuance during periods of personal illness. The coverage begins after all PPA days have been exhausted and the individual qualifies for some other form of disability income such as State Disability Insurance or Workmen's Compensation.

—At one year of service, life insurance coverage increases to 1½ times annual salary.



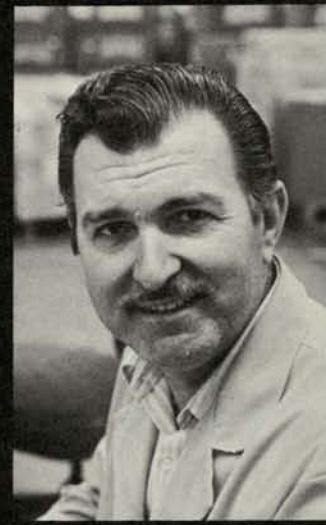
Marilyn Weed
Two-year employee



Yvonne Glover
Three-year employee



Helen Varvitsioten
Five-year employee



Nico Kaldis
Six-year employee

At two years of employment

—Employees 30 years of age and older become enrolled in the Fairchild pension plan for salaried employees. Employees who achieve two years of service before that age, become enrolled in the pension plan at the time they reach 30.

Three years of service

—Hourly and salaried non-exempt employees receive 15 days of Additional Disability Allowance annually.
—Life insurance increase to twice annual earnings.

Five years of service

—At this major anniversary, all employees receive a service award, and those on the hourly and salaried non-exempt payrolls receive 20 ADA days annually.
—ADA crediting increases to 25 days each year at 10 years of employment; 30 days annually at 15 years and 35 days at 20 years.

Six years of service

—Brings 11 days of vacation. A vacation day a year is added through the 10th year of employment at which time an employee receives 15 days of vacation annually. Between 16 and 20 years years of service, a vacation day is added each year until the employee qualifies for the maximum of 20 vacation days each year at 20 years of service.

Where to Go?

If you encountered a problem in your work, or had questions about your benefits coverage, or company policies, what would you do? Here's what five employees said:



Margaret LaPlaca
LIC

"I'd go to my work leader, and explain the problem or question. That's usually where I get all my answers."



Michael Hitley
Supervisor, MOS Manufacturing

"I'd go to the general foreman. If he didn't have the answer, I don't know what I'd do. Maybe go to his boss or to Industrial Relations. Fortunately, my general foreman always has all the answers, so I never have to go further."



Clay Wilson
General Foreman
MOS Wafer Fab Diffusion

"Usually I'm the recipient of questions and problems. That's my job. I go directly to the source for the answers—to the benefits department if it's something that relates to insurance, vacation or sick leave; to payroll if it relates to an employee's paycheck; to maintenance if it relates to house-keeping; to security or safety if it's a problem which those operations can resolve."



Bill Moerbe
MOS Fabrication

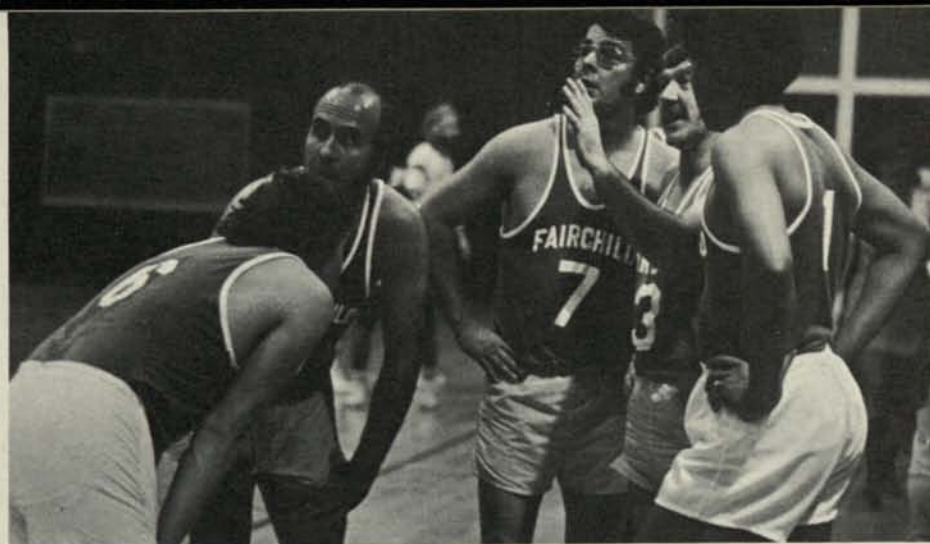
"I'd go to my immediate supervisor. If I wasn't satisfied with the answer, I'd probably go to personnel. I've never encountered a problem or a question that couldn't be resolved within my own section."



Carolyn Thomas
Training Technician

"If I couldn't solve the problem myself, I'd go to my boss. If it's a question about benefits or policies, I'd ask my supervisor. If he doesn't know the answer, he'll find it."

The five employees interviewed scored 100 percent on the "Where to go quiz." All employees should seek to resolve work or policy-benefits related with the help of their immediate supervisor. If the supervisor doesn't have the answers, he or she will search them out. Clay, a General Foreman, is right in going directly to the source to solve the problems or resolve the questions that occur within the area he manages.



FEAA BASKETBALL CHAMPS. The Transistor Division players, showed a different side of their nature in a fevered competition with the Diode Division of San Rafael. In a simultaneous competition, Transistor took the FEAA league play with a 9-0 record, but lost the three-game challenge with Diode, 1-2. In the final game of the Transistor-Diode competition, Mountain View team members put their heads together to plan strategy (top), and displayed outstanding style on the court (right), yet because of an injury to one of the team's key players, Wilbur Miles, they ended the deciding game six points short. The Transistor Division team now enters the FEAA play-off tournament to determine if they can continue their league-leading play throughout another round of games. The play-off tourney will include the dozen teams entered in the FEAA 1974 Basketball League.



Easter Bounty For San Jose Shelter

The Easter Bunny lives and gives. At least that's what the young residents of the San Jose Children's Shelter believed after a visit by Fairchild employees. The Shelter, which acts as a temporary home for children who are awaiting placement in foster homes or whose parents are unable to care for them for a short while, is in constant need of recreational supplies. Fairchild employees' generosity made possible

a delivery of dozens of gifts just before Christmas, and when they checked on the toy inventory as Easter rolled around, Dave Waldrop, Assistant Director of the Shelter, reported that the shelves were bare and that the Shelter had no budget for recreational materials.

So, Rex Atcheson and John Pizzuti circulated an Easter card which solicited donations for the Shelter. The contributions were abundant—\$313.00. The money was quickly exchanged at local toy stores for a ping pong table and supplies, a pool table, pogo sticks, croquet sets, a kiddie's swimming pool and numerous other toys, games and crafts that will occupy and entertain the youngsters.

The entire Shelter staff sent their gratitude to Fairchild contributors who made the Easter gifts possible.

Microwire 1 — May, 1974

EDITOR: Veronica Kane

REPORTERS: Geri Hadley, Marge Killian, Millie Dawson, Clint Haines, Margaret Elliott, Pat Alfred, Lorette Hayes, Bev Delos Santos, Judy Wagner, Marlene Herman, Edie Beem and Sharon Ricks.

Printed on recycled paper

FEAA News

Employees who have questions about sports and other activities sponsored by the Fairchild Employee Activities Association can contact the following Club representatives.

CLUB	CONTACT	EXT.	M.S.
Snow Ski	Rich McCoy	2287	1-0409
		5224	
Tennis	Hassan Raza	3870	20-1216
Water Ski	Vic Baker	3524	20-0701
Softball	Barry Cardoza	5530	18-100
Basketball	LeRoy Borba	4287	20-706
		4386	
Bowling	Marian Oswald	17-	30-0578
		2169	
Fishing	Gene Tom	17-	30-0977
		2001	
Bridge	Jan Gross	2966	7-612
SOCIAL			
ACTIVITIES			
Baseball Trips	Dee King	3930	13-001
Reno/Tahoe Trips	Jean McNeal	17-	30-701
		2176	

The Ski Club plans numerous outings during the summer months. The Club's recent decision to join the Far West Ski Association, an organization with approximately 35,000 members, opens up a great number of benefits for Club members. FWASA organizes group discount trips to major ski areas throughout the world, has special arrangements for the purchase of ski equipment and clothing, and conducts many non-ski-related programs such as hiking and cycling trips.

Ski Club President Rich McCoy has been nominated for a Vice Presidency in the Bay Area Ski Club. Fairchild Ski Club members will have the opportunity to vote in the election to be held in May.

George Mann, Ext. 2774, is organizing facilities and equipment for "pick-up" volleyball games to be played at the Mountain View and Palo Alto locations.

Volleyball will probably run on Tuesdays and Thursdays during the regular basketball season. George is not planning structured league games; playing areas will be designated for impromptu games whenever there are enough players available during lunch hours or after work. Interested players should contact George.

Final details will be included in future editions of MICROWIRE.

Fred Redmond, Bldg. 2, Ext. 4001; Lydia Lopez, Bldg. 2, Ext. 2015; and John O'Neil, Bldg. 18, Ext. 3750 are representatives of a newly formed Monitor Committee which will review the policies of each club within F.E.A.A. and will investigate any complaints regarding club procedures.

Also, to avoid conflicts of activities, anyone wanting to post a notice on bulletin boards about forming clubs or asking employees to sign up for trips, must first send the notice to Fred, M.S. 2-233.

Microwire

Published for the Employees of the Fairchild Corporate Headquarters and Semiconductor Components Group — Mountain View/Palo Alto

Sales Conference Offers Respite to Refuel

For some 50 weeks of the year (minus occasional gatherings of members of the regional offices) being a Fairchild field sales representative is one of the loneliest pursuits in the world. To the customer, the individual sales representative is Fairchild. They are alone out there—alone with more than 25,000 Fairchild plant people behind them. When they make or lose a sale, it's a very personal experience. They might share the success with others, but they bear the disappointment of a lost order alone.

The moods of Fairchild sales representatives swing from jubilant to downright glum, depending on how each day goes. Few sales men or women describe any working day as "alright"—you either get the order or you don't—there's rarely an in-between. A spectacular order can bring euphoria that lasts as long as 24 hours. A lost order is remembered much longer and makes the salesperson acutely aware of all the Fairchild families who depend directly on his or her performance for their income. All the sales representatives ask for, most of the year, is that little edge on the competition—the better product, or the better delivery, or the better price, or the greater history of reliability—that can swing the customer's decision Fairchild's way.

But, for one week of the year, the sales representatives spend six days refueling their minds and spirits to prepare them again for their lonely

quest of orders. Sales representatives from throughout the country gathered in Hawaii, April 21 through 27, for training, product orientation and sales strategy sessions aimed at preparing them for their next year in the field. The conference theme, Tomorrow is Now, echoed throughout the meetings stressing that the future belongs to those who prepare for it. The sales personnel studied projections for Fairchild's markets through 1980.

They took a look at the Fairchild product line today, the markets which the company serves, and how their individual efforts fit into Fairchild's overall goal of capturing an increasing share of those markets.

Conference speakers John Duffy, Corporate Vice President of Marketing; Bob Skinner, Domestic Sales Manager; Jack Ordway, Market Development Manager; Marty Weisberg, Sales Support Manager; Art Heller, Marketing Services Manager; and Bill O'Meara, Distributor Sales Manager, brought the total Semiconductor Marketing Program into focus for the sales personnel covering the needs of specific markets, describing features and applications of new products and describing the support the sales personnel can expect from headquarters marketing operations. In informal sessions and during their one free day, the sales men and women discussed among themselves the problems they confront in their assignments and shared solutions.

The formal close of the 1974 National Sales Conference came with the Sherman Fairchild Awards Banquet on Friday, April 26. To start the dinner, Dr. C. Lester Hogan took the podium

for one of the most pleasant assignments at the conference—the announcement of the recipients of the 1974 Sherman Fairchild Awards for Sales Professionalism and Sales Support. In preparing to announce the winners, he stated: "As most of you know the Sales Professionalism award is restricted to field sales persons, off-shore and domestic. The award is not based on booking or billing numbers. In each instance it is given to



Dr. Hogan prepares to announce the 1973 Sherman Fairchild sales award recipients.

an individual who exhibits outstanding development in those characteristics that are the mark of the true professional in sales: self-motivation, self-organization, sensitivity to customer needs, creativity in negotiation, accuracy in forecasting, and both precision and clarity in communication with factory personnel.

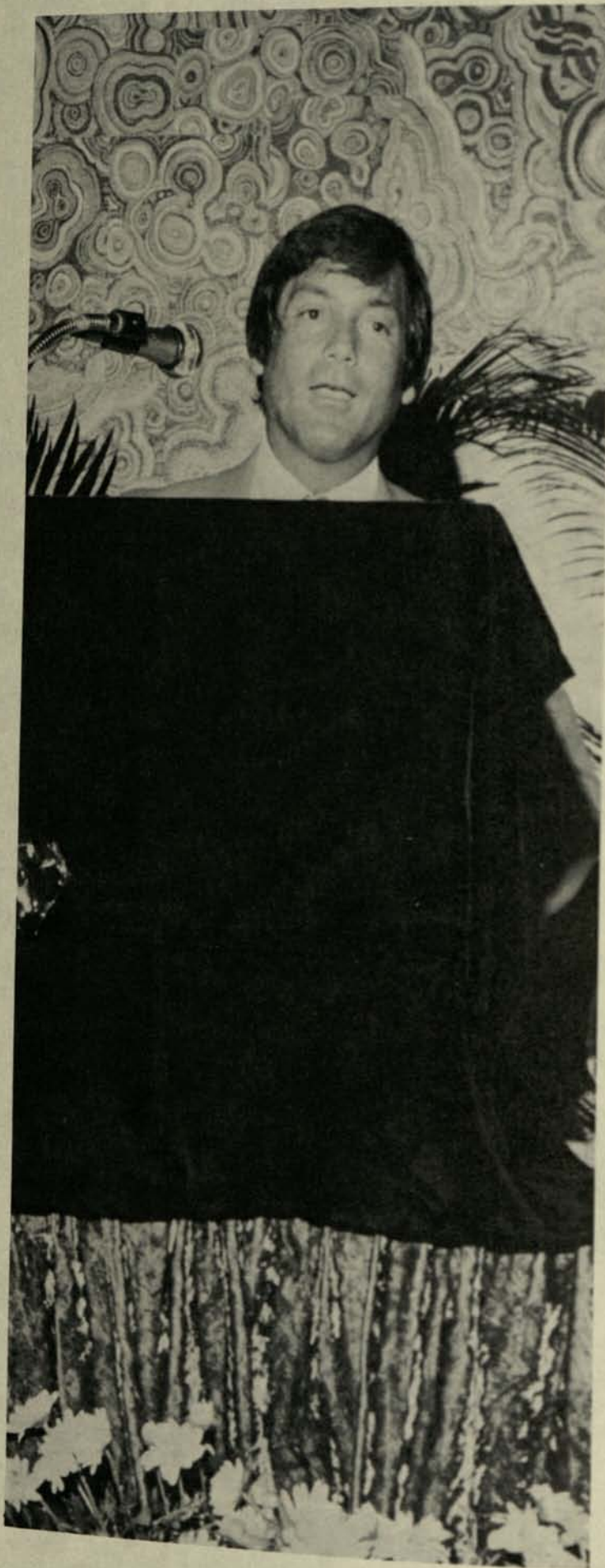
"Sales Support Awards," he explained, "are restricted to factory personnel nominated and ultimately chosen by the field sales force. Support awards are based on outstanding performance in serving the continuing

(Continued on page 5)



Tomorrow is Now

Want to know the secrets of a super salesperson?



Don't read their mail or tail them on their rounds. Ask one. And we did—recognized super salesman Herb Perry, recipient of the Sherman M. Fairchild Award for Sales Professionalism for 1973. Through a selection process by field sales management and division executives, Herb was named the outstanding Fairchild salesperson for 1973. He achieved this distinction, he believes, because he has developed "a sense of urgency" for the customer's problems and needs. Whatever it takes to respond to those needs, he'll do it. That has meant some very lengthy work days since he went into the field for the Hollywood office five years ago. Today, Herb works out of the Santa Ana office handling some of Fairchild's major computer customers in the Los Angeles area.

This dedication has paid off, both in greatly increased Fairchild sales to his customers, and in customer confidence in Herb himself. "It isn't always the lowest bidder," he reveals, "who gets the order. It's the company with record of delivery, service and meeting commitments. I won't accept an order that is not in Fairchild's and the customer's best interests," he adds. At one of his major accounts, he has increased Fairchild business from zero to approximately 50 percent of the available orders through this philosophy. "This customer views Fairchild as a responsible vendor and knows that I can be called upon for engineering support and help in emergencies; I don't drop by simply to pick up the purchase order."

But, in spite of Herb's outstanding record in developing Fairchild business, he occasionally has his down days. There are the orders that get away. Naturally, an order that he really wants which goes to another company is hard to take. But he claims he doesn't allow himself to brood about it. "I have to bounce back," he states. "Every time one gets away, I analyze the situation to determine why, and I learn something from the experience; usually something that will help assure future orders won't go to someone else."

Herb was named 1973 Sales Professional as the result of a nomination by his regional manager, and a subsequent evaluation and vote by the top management of the Semiconductor Components Group. "The honor," he states, "is in the recognition you receive from people who face the same problems you encounter every day, and who have similar objectives."

Though Herb knew that the competition was stiff for the 1974 award, he had an acceptance speech outlined in his mind long before the awards ceremony began. "I was mulling it over again and again, in an attempt to include all of the people I wanted to thank if, indeed, the award was mine." Concentrating on the speech kept his anxiety at a tolerable level until the 1973 Sales Professional was finally announced by Dr. Hogan on April 26. Even with the careful speech preparation, he admits that he was surprised—"I was up against three other great candidates and I knew it." He bounded from his chair at the sound of his name, anxious to get his hands on the beautiful replica of King Arthur's sword, "Excalibur," encased in Stueben glass which will be a lasting reminder of his distinctive achievements as a Fairchild sales professional.

"There were more good days in 1973 than bad ones . . ."

"A great day is one in which I'm able to get all the parts I want shipped out to customers," says Nadine Henderson, winner of the Sherman M. Fairchild Sales Support Award for 1973. "And," she adds, "there were more great days in the past year than bad ones."

A bad day, as defined by Nadine, is one in which she can't respond, as fast as she would like, to requests from customers and the sales representatives with whom she works. Those bits of unfinished business plague her until she can complete them to the satisfaction of the customer, the salesperson and herself.

She, as a member of the Inside Sales staff, is responsible for supporting the efforts of sales representatives in the Wellesley and Florida offices by attending to delivery, pricing, and expediting details at the plant that help to assure that the customer receives the order on time and in the quantity required—an assignment that can be peppered with a myriad of problems.

Often Nadine deals directly with customers, quoting price and delivery, and expediting delinquent orders on any product in the Semiconductor Components line. This means that she will go to the source of the product in Mountain View, Palo Alto, San Rafael or South Portland to get the answers she needs. She calls or writes the customer with a price and delivery schedule, and if it meets the customer's requirements, accepts the order. At the same time, she is documenting her exchange with the customer in order to keep the sales engineer informed on the progress of the order. Nadine sees her assignment as an Inside Sales representative as supporting the outside sales engineers in whatever information they require from the plant. "I feel very fortunate in having been assigned to the Wellesley office," she says. "I work with a super group of guys who have given us a lot of support. I really feel like a member of the team."

The Inside Sales group, formed little more than a year ago, was created to ease some of the pressure on the sales offices to allow field sales engineers to devote a greater portion of their time



Nadine Henderson presents a heart-felt acceptance speech following the announcement that she had been elected to receive the 1973 Sherman Fairchild Sales support award.

to developing new business and responding to customers' engineering needs.

Nadine, who previously worked in the Distributor Sales Support section, has been in marketing assignments throughout her 7½ years with the company. She believes that sales is the most exciting area of the Fairchild action. When she's on the phone encouraging Production Planning to set priorities for her customers, or when she's urging the pricing group to move faster on a quote she's promised to a customer, or when she's convincing a customer that products are on the way, Nadine is a very persuasive person. "Their problems—the customer's and the sales engineer's—are my problems," Nadine states and her actions demonstrate that involvement.

When her supervisor told her that she was one of five nominees for the 1974 award, she was surprised and delighted. Nadine admits that she dusted off a space on her fireplace mantle before she left for the sales conference in Hawaii where the winner was

to be named. "I hoped, but I didn't really believe, I would win it," she confesses.

The nominees—Linda Hageman, Transistor Division; Ken McCammon, Diode Division; Bill Walton, Integrated Circuits Group; Jary Stahl, Digital Division; and, of course, Nadine—were selected for consideration for the award based on the suggestions of field sales engineers who were asked to name the single plant employee who provided them with the greatest support in their work. The five nominees receiving the greatest number of votes from the field were invited to attend three days of the week-long sales conference in Hawaii. There, the sales engineers were asked to make a final determination of the Sales Support Award winner through another ballot. It was not until Dr. Hogan announced her name at the April 26 awards dinner, that Nadine knew that she was the recipient of the 1973 award. "It was the most thrilling day of my life," she claims.



Evidence of the gradual growth in operations and performance which led Bi-Polar Memory to division status was apparent throughout the past year.



What happens when an SBU becomes a Division?

"Not very much," states Bill Baker, manager of the company's first strategic business unit to be elevated to division status. His response masks the excitement which occurred within the Bi-Polar Memory organization when Dr. Tom Longo announced the divisional status. What his response does reflect is the success of the Strategic Business Unit concept.

Originally applied at Fairchild less than a year ago, SBUs were created as organizations that held divisional potential but were not at the point in their development when they could stand fully on their own. The interim organization—the SBU—was designed to allow the organization to develop to

No horns Bi-Polar M

independent divisional operation at its own pace. "It is supposed to be a natural evolution," Baker states, "and that's what happened with Bi-Polar. There were no horns, whistles or major additions to our staff at the moment we were made a division. We had gradually lessened our dependence on our parent organization—the Integrated Circuits Group—as our operations grew capable of supporting our own marketing, administrative and financial organizations. This independence evolved over a nine-month period."

In the summer of 1973, when the Bi-Polar SBU was formed—it began its existence sharing the services of the Digital Division's marketing, administrative, quality assurance and financial organizations. "As our sales grew," Baker reports, "we had the demand for and were able to support first, our own controller, then our own quality assurance operation, ultimately our own small marketing staff . . ."

From the beginning, Bi-Polar had complete responsibility for its financial destiny. "We operated our own budget and had to show a profit on the bottom line every step along the way," Baker states. "In fact, communication of our profit responsibilities to every member of the organization with responsibility for achieving our objectives has been a very effective means of moving us toward divisional status. Everyone knows the financial parameters within which we must work to achieve our profit commitment. Each step in our expansion was carefully matched against our objectives, both product and profit. We established a similar balance sheet for our sales and production goals, setting aspirations and timetables. As we met each objective, we broadened our horizons. Ours has been a careful and calculated expansion—the kind of growth that was envisioned when Fairchild developed the strategic business unit concept for some sections of the Semiconductor Operations."

Bi-Polar memory devices are not new to the semiconductor business, Baker explains. "In fact, the original transistor was a Bi-Polar product. It was not until Fairchild's development of the Isoplanar I process in 1971,



or whistles when Memory became a division

however, that Bi-Polar memory devices could be manufactured in a manner that would be price-competitive with other computer memory storage media such as core, tape and MOS devices."

The memory business—particularly the computer industry—wants the fastest, least expensive storage medium it can obtain. And there's no satisfaction in sight. Today's high-speed computers, buffer memories and computer peripheral equipment will quickly move aside for future generations that offer greater speed, higher packing densities (the amount of information that you can pack into the same relative space), and lower cost. Bi-Polar, using the Isoplanar process, offers the memory manufacturer lower cost, and higher speed than traditional core and tape media, and good information density. MOS devices outscore Bi-Polar on packing density. "There has been a long-held belief in the memory business that Bi-Polar and MOS compete head-on for the same applications. That's not true. Bi-Polar and MOS can live quite comfortably with one another each doing the job for which they are best suited. In fact," Baker continues, "it is not difficult to imagine several storage media—Bi-Polar, MOS, even tape and cores—used in an extensive computer system. Every medium has its own special values—Bi-Polar memories where speed is the main consideration; MOS used for systems which require dense information storage; and cores, tape and even disc memories used for mass storage where input-output speed are not vital."

The Bi-Polar memory market, which didn't even receive consideration in semiconductor industry market projections three years ago, today receives individualized attention. Bi-Polar memory sales industry-wide are expected to reach \$91 million in 1974, and shoot up to \$191 million annually in 1978.

Fairchild has devoted continuous attention to the development of Bi-Polar memory technology. As early as 1969, Fairchild had a Bi-Polar chip that offered 256-bit storage. But, MOS devices moved up to offer greatly increased storage capacity at significantly lower cost, encouraging many companies to desert their Bi-Polar

memory development efforts. However, the Isoplanar I technology, under development in R & D, convinced Fairchild management to hang in there, believing that lower cost Bi-Polar memories could be developed. Within five months after Isoplanar became a reality, Fairchild had a Bi-Polar memory unit, using this new lower-cost production process, under evaluation with a customer. This was the seed that brought today's Bi-Polar Memory Division to flower. Bi-Polar efforts continued within the Digital Products Division until 1973, when it first achieved distinct organization status as a strategic business unit. That Bi-Polar Memory could meet all the qualifications for a Fairchild division confirms the management belief that Bi-Polar Memory has a significant place in the semiconductor market, and reflects the tenacity of the people who, because of their belief in the product even when it wasn't in great favor, have established Fairchild as the number one supplier of Bi-Polar memories in the world.

No, not very much happened when Bi-Polar SBU became a division in April; the work that led to this organizational distinction occurred in the months and years before.

Sales Conference

(Continued from page 1)

needs of the men and women who sell our products in the field. The primary characteristics of Sales Support award winners are: Dedication to customer service, speed and accuracy in communication, creativity, and above all a high degree of sensitivity to the pressures under which our field sales force must work.

"In establishing the Sherman Fairchild awards five years ago," he continued, "we selected as an appropriate symbol an element from the legend of King Arthur—the sword in the stone—Excalibur, the undefeatable sword, buried almost to the hilt in a magical stone. As the legend goes, the sword could be withdrawn from the stone only by a singular individual; an individual with a well-developed sense of purpose, and the maturity and dedica-



Representatives of the American Cancer Society held the attention of Operation Safeguard coordinators with discussions of why women should take advantage of the ACS-Fairchild health screening clinic. The talks were designed to stimulate the clinic coordinators to return to their respective departments and promote Operation Safeguard. Promote they did. During the program, which was conducted for all shifts of employees during May, almost 1,400 Fairchild women visited the clinic which was held in the Medical Center. Results of the health screening tests will be sent to employees' homes and to their doctors.

tion to lead in the performance of great tasks."

Dr. Hogan then called to the head table the two Fairchild people who demonstrated these outstanding qualities in their performance for the company during 1973. Herb Perry, Field Salesman from the Western Area Santa Ana Office, was named the Sherman Fairchild Sales Professional for 1973; and Nadine Henderson, of Inside Sales, was elected by field personnel to receive the Sherman Fairchild Sales Support Award for 1973. (See stories on the two winners in this issue.)

The conference concluded early Saturday morning when the group of sales representatives boarded buses for the Honolulu Airport eager to return to their respective areas to begin again their assignments as Fairchild sales men and women with renewed vigor.

Toastmasters offer Self-Development and Fun

Ever have a mental proposal for an absolutely brilliant scheme that lost most of its dimension when it was related to a group. Frequently, even the most creditable ideas are hard to identify if they are not communicated effectively. Selling ideas requires organization, self-confidence, and the ability to project your thoughts to others. These qualities are available to all through the newly formed Toastmasters Club.

Now in its eighth week of operation, Toastmasters has attracted more than 25 Fairchild men and women. Following the carefully structured Toastmasters International guidelines, each of the weekly one-hour meetings is a well-prepared exercise in developing speaking skills. Members of the club give prepared speeches and are called upon to speak on virtually any topic in impromptu talks. Critiques prepared by fellow members give each speaker points to work on before his or her next speech. "And all of this self-development is fun," according to Club president Dave Reith. "Particularly the impromptu speeches. One member is assigned the task of suggesting topics and he or she then calls on fellow members at random to speak about the subject, whether they know anything about it or not. The results are usually quite entertaining."

Each of the exercises used in the club meetings is aimed at developing



Al Pagin holds the attention of fellow Toastmasters officers with his newly acquired public speaking skills. Hanging on to every word are (left to right) Jonnie Tedrick, Dave Reith and Les Wise.

an individual's self-confidence with the support of other Club members who are attempting to develop their own poise. This comfortable environment bolsters even the most timid soul.

Officers of the Fairchild Club, which calls itself Indiscrete Toastmasters (because of the large representation from the Discrete Products Group) are: Dave Reith, President; Jonnie Tedrick, Administrative Vice President; Al Pagin, Educational Vice President; Joyce

Taylor, Secretary-Treasurer; and Les Wise, Sergeant-at-Arms.

Potential public speakers or those who would just like to see the club members in action, can drop into one of the Tuesday meetings, held 11:45 a.m. to 12:45 p.m. in one of the conference rooms in the Building 13 Career Center. Dave, Ext. 4453, will be happy to answer any questions Fairchilders have about Club membership.

Employee referrals account for 30%+ of new professional hires

The success of the employee referral program is evident in figures recently released by the Professional Employment office. Throughout 1973, almost 30 percent of all new employees hired into professional assignments were referred to Fairchild by fellow employees. In the first three months of 1974, employee referrals increased to represent 39 percent of all new employees hired into professional employment.

Employees who received \$50 referral awards in the past two months are:

DIGITAL DIVISION

Esther Durden
Janet Gath
Sudhir Goyal
James Wilson
MOS DIVISION
Tony Lazaro

Roberta Sherrill
Gary Sutton
Philip Thomas
BIPOLAR MEMORY
Robert Abner
Louis Navone
ANALOG LIC
Alberta Guzman
Ingrid Kalvelage
David Yeaton
CAMERA PRODUCTS
Nickolas Vrionis
AUTOMOTIVE
Marjorie Fowler
CENTRAL OPERATIONS
Ronald Maynard
Sue Powers
Nancy Walb
TRANSISTOR DIVISION
Kuldip Jauhal
Barbara Moraga
Judith Silveira
Frank Ter Keurst
Delmar Zimmer

OFFSHORE ASSEMBLY
Ira Louis
Donald Moke
Don Villa
CORPORATE
Madelyn Garcia
Michael Mastrocovo
Donald Maurer
MARKETING OPERATIONS
Donald Dapkus
DIGITAL PRODUCTS DIVISION
Alex Au
Melvin Howard
Robert McKee
Janice Petrey
David Quammen
Glenda Willis
DISCRETE PRODUCTS DIVISION
Mohammad Aboobaker
Don Ertel
Lucinda Godin
Art Hoage (2 awards)
Roy Leventhal
Maria Martins

Roberta Santos
Rick Shepard
Sandra Taylor
John Tripp
MARKETING OPERATIONS
Betty Copeland
Harry Morrison
CENTRAL OPERATIONS DIVISION
Louise Aiello
Gabriel Michel
Deborah Percelle
ANALOG DIVISION
Sue Kim
Janet O'Neal
Jerome Sera
DIODE
Manny Fernandez
INDUSTRIAL RELATIONS
Sally Hansen
R & D
Marcelina Giron
CORPORATE
Antony King
OPTOELECTRONIC DIVISION
Nina Banks

A Sculptor In Frosting

Employees in Building 13 receive the most marvelous presents for special occasions—there have been pianos, sports cars, and typewriters presented at birthdays and major company anniversaries. It's not that the Building 13 crew in mask making are especially generous to their fellow employees. The elaborate presents are the results of the talents of an artisan within their midst. Not only are the gifts appropriate for the honored person—the piano for a musician; the car for someone who longs for a sports model; and the typewriter for an outstanding secretary—they're edible so everyone can enjoy them.

The gifts that receive gasps of admiration on special occasions are sculptured out of frosting and cake by Melba Schaeffer—a woman who has made cake baking and decorating an art. Ten years ago, Melba, who was tired of bakery variety cakes, invested in a decorating set to add some imagination to family birthday parties. Her skill with the tools immediately brought requests from outside the family for samples of her art. Today, she is overwhelmed with "special" orders—far more than she could hope to fulfill. The most difficult of her recent creations was a cake depicting the logo adopted by the hard surface area of the mask-making section. The complex design taxed her talents, she states, but everyone who saw the cake before the first slice was made agreed that it was a faithful reproduction of the section's new graphic image. Not easily satisfied, Melba covers every detail in her sculpture—the typewriter cake had a sheet of paper coming out of its carriage; the car bore the insignia of the longed-for model; the piano had distinctive keys; wedding cakes she has made, frequently, held an entire bridal party, not just the traditional bride and groom; and a cake which resembled a green apple had a worm (frosting variety, of course) crawling out of its top. And, most amazing, be-



sides being dazzling examples of creativity in cake, Melba's sculptures taste good, too, so they don't survive lengthy admiration.

And as any baker will tell you, cake creativity demands that you work fast or else your product will be inedible. Most of the time, Melba bakes and sculpts her creation in a single evening, delivering it for a party the following day. Multi-tiered wedding cakes, because she is limited to a single oven, require one evening to bake and another to frost.

Because she views her cake sculptures as a hobby, Melba will only accept the cost of the ingredients in payment for her work. If a design doesn't work—and occasionally she does end up with a cake sculpture that doesn't meet her standards—she has three eager children who are very willing to consume her so-called failures.

Easy Money

Employees who use the banking facilities of the United California Bank branch on Ellis Street can take advantage of the special payday service offered to Fairchild employees to speed up check cashing and eliminate long waits in line.

Tellers will be on duty in the outside walk-up window each payday and will cash paychecks for the entire amount shown.

To eliminate delays, no deposits or withdrawals will be accepted.

Foothill Summer Sessions Begin June 19

Listed below are Summer Quarter courses offered for employees by Foothill College at Fairchild. Registration for these evening classes will take place June 10-12, 8:30 a.m.-4:30 p.m., at the Management & Career Development Center, Building #13, 441 Whisman Road, and on June 12 and 13, 6:00 p.m.-9:00 p.m., at Foothill Community College. The registration fee is \$3 payable to Foothill Community College and due on the date of registration. Summer Quarter starts on June 19 and ends on August 14. For further information, contact the Registrar, Mail Stop 13-117, ext. 3975.

ELECTRONICS 60—SURVEY OF ELECTRONICS 4 Units

Prerequisite: None. Four hours lecture. Provides a fundamental knowledge of electronics. Covers basic theories and describes how various common electrical devices and circuits function. (Mondays, Wednesdays, 5:15-8:20 p.m.)

SEMICONDUCTOR PROCESSING 50 —INTRODUCTION TO SEMI- CONDUCTOR PROCESSING 3 Units

Prerequisite: None. Three hours lecture.

An introduction to the field of semiconductor processing intended to provide an overview of the industry, including job requirements and opportunities. (Mondays, Wednesdays, 5:15-7:10 p.m.)

BUSINESS 56—HUMAN RELATIONS IN BUSINESS 3 Units

Prerequisite: None. Three hours lecture.

Human relations behavior in business organizations emphasizing personal/interpersonal attitudes, strengthening communication skills, building job-acquisition techniques, understanding group dynamics, and developing leadership and personal qualities essential for business success. (Mondays, Wednesdays, 5:15-7:10 p.m.)

BUSINESS 1C—PRINCIPLES IN ACCOUNTING 4 Units

Prerequisite: Business 1B. Five hours lecture.

Managerial Accounting: study of process and job-order cost systems, standard costs and variances, direct costing and absorption costing, cost-volume-profit (breakdown) analysis, funds flow analysis, use of differential (relevant) cost, and performance evaluation. (Mondays, Wednesdays, 5:15-7:10 p.m.)

PICNIC PLANS

The FEAA has announced a repeat of last year's successful picnic schedule. Instead of a single, mass gathering, picnics have been scheduled by organizational units. Each will be held at the **Hidden Valley Ranch, San Jose**. The picnics will begin at 10 a.m. and the fun will go on until 6 p.m.

Luncheon will include fried chicken, potato salad, cole slaw, corn on the cob, rolls, dessert, soda, beer and coffee.

- **Analog Division**—June 30
- **Digital, R&D, MOS, CCD, BiPolar**—July 28
- **Central Operations, Marketing, Corporate, Finance, Industrial Relations, International**—August 11
- **Discrete Products Group (including Optoelectronics Division)**—August 25

Ticket cost is \$1 per person (over five years of age) for employees and members of their immediate families.

Tickets will be available at the Credit Union two weeks before each picnic.

Games . . . Contests . . . Races . . . Prizes . . . for children and adults

Fairchild Ski Club is all Wet

Snow was forgotten and water took its place when Fairchild Ski Club members and their guests, aboard 24 canoes, began an 11-mile ride down the Russian River on May 18. The awareness of water was acute. In addition to being surrounded by it and sometimes submerged in it, it fell from the skies during a brief portion of the trip.

No one escaped some dampness in



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EDITOR: Veronica Kane

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the six-hour ride of the rapids even the expert canoers who maneuvered the river without a single dunking. Inexperienced boaters report they tipped their craft up to five times before they learned to move with the whims of the water. Except for the brief downpour, the weather behaved nicely for the canoers and everyone made the trip within the six hours allotted. At the finish point, drinks and a steak dinner awaited—the perfect cure for bruised egos and bodies.

The river riders returned to Fairchild late that evening, exhausted but enthusiastic about the prospects of a repeat trip in the future.

The Ski Club officially closed its rented cabin for the summer on May 5. During the Club's first season, more than 400 visits were made by individuals to the cabin. The same lodge has been reserved for next season.

But the absence of snow won't keep the Club members apart. Excursions similar to the river trip will be planned throughout the summer and early fall. Club president Rich McCoy is presently mapping out a bike trip (keeps the legs in shape for skiing) to Peninsula points of interest and is toying with other entertaining ideas to while away the time until snow appears again.

Service Anniversaries

May, 1974

FIFTEEN YEARS

Phyllis Fullan
Albert Ingram
Frances McDonough
Lucille Laidlaw
Helen Basford

TEN YEARS

Christopher Reardon
Patricia Barnes

FIVE YEARS

Frances Renard
Adrienne Hernandez
(due to bridge of service)
Cruz Austin
Alma Gusman
Floresita Bravo
Lawrence Matthews
Adonna Alexander
Pauline Gonzalez
Karen Immer
(due to bridge of service)
Alvina Sanders
(due to bridge of service)
Jacque Collins
Lois Cortinas
Patrick Lilly
Eleanor Hernandez
Roger Potter
Robert Skinner
Jack Gaskell, Jr.
Mike Gleason
William Holland
Shirlene Admire
Benjamin Brown
M. L. Carreiro

Microwire

July, 1974

Published for the Employees of the Fairchild Corporate Headquarters and Semiconductor Components Group — Mountain View/Palo Alto

New Mask Making Capability Unmasked

Room to stretch plus equipment to handle production needs and new methods.

That is the result of an expansion in the Mask Making Department in Building 13. Walls came down and new ones went up over the past six weeks to widen the department's horizons and to support its increased production.

Mask Making shares with silicon materials the responsibility of being two primary plant operations on which all other semiconductor divisions depend. Production in silicon wafers and masks are basic to determining the amount of semiconductor product the company can produce to respond to customer need.

Mask making supplies semiconductor operations with the masks that will be used to photographically transfer circuit designs onto a silicon wafer. Up to 12 masks may be required to complete the creation of a single wafer.

The circuit design reaches mask making from device engineering in large drawings or on digitized magnetic tape. The design is reduced to the size needed in the finished device and reproduced repeatedly until sufficient images have been created on a single mask to cover a 2½- or 3-inch wafer. Since the mask makers measure their projects in micro-inches, hundreds of tiny circuit patterns can be placed on a surface the size of a standard wafer.

Vic Mitrisin, manager of the Mask

One of several areas added to mask making as a result of the department's recent expansion.



Making Department, says that the mask generation process has mushroomed in sophistication. "It has had to keep pace with the growing complexity of semiconductor devices. As more and more functions are packed onto a single chip of silicon, the circuit pattern, naturally, becomes more complex. Tolerances are reduced. The equipment we use today for mask making, measurement and inspection, is vastly different than that used in the creation of semiconductor masks in the early years of the industry. Today, our operators work with registration analyzers and measuring equipment that can read errors to five micro-inches, a measurement requiring high-powered microscopes and electronic analyzing equipment."

Vic says that although the expansion does not add new members to his department, it provides needed improvement in work flow patterns and includes vital equipment to support current and projected mask making needs. "The overwhelming explosion in demand for semiconductor devices during 1973 placed an incredible strain on our existing production operations," Vic said. "Though the market growth rate is not expected to be duplicated in 1974, our expansion is vital to support the anticipated growth we do see ahead and to provide the capability of developing new generation masks."

Employees who work in the otherworldly atmosphere of the mask making inner sanctum, where virtually all work is performed under dim, red lights in an ultra-clean atmosphere, are among the longest-term employees within the Semiconductor Operations. More than 20 percent of the mask making staff has been with Fairchild over 10 years and few claim less than five years with the company. Mask making claims the unofficial honor as the department with the greatest combined service record in relation to employee population in Semiconductor Operations.

Cost Effectiveness Program Brings Communication Change

Employee Communications has joined other company operations in developing ways to conserve costs. A new communications plan has evolved, and hopefully it will provide more company news while reducing expenditures.

Our corporate magazine, HORIZONS, will now be published monthly instead of bi-monthly with this reduced version of MICROWIRE included. Increased news items and feature stories about divisions that are of corporate-wide interest will appear in HORIZONS, while events of Mountain View or Palo Alto interest will be covered in the MICROWIRE supplement. Similar programs are planned for all plants within the company.

The re-structuring of the internal communications program will result in substantial overall cost savings while continuing to keep employees informed of both corporate and local news events.

R & Ders Recognized



The Palo Alto R&D operations claimed a 1973 award of excellence in the National Safety Council's annual evaluation of safety performance of nationwide companies. Above, left to right, Dr. Jim Early, R&D Director; Bruce Deal, Manager of Market Development R&D; and Bill Phy, Senior Memory Research Engineer R&D; accept the award certificate from Ken Rohner, Corporate Safety Manager. The National Safety Council award recognizes a full year of operations without a single accident causing an employee to lose a day of work.

Technical Education To Suit Every Schedule, Every Situation

The Career and Management Development Center has technical education programs in Mountain View and South Portland that meet the needs of virtually every employee involved in a technical assignment. These programs help assure a continuity of trained personnel to assume increasing technical responsibility. A brief description of technical courses follows.

A two-year MSEE program in cooperation with the University of Santa Clara is presently underway at the Career Development Center in Mountain View with future classes scheduled at the Fairchild Center and the Santa Clara campus. Instructor for the first session is Fairchild's Conrad Dell'Oca, Manager, Radiation Resistant Devices. The 18 students enrolled in the first quarter of the program will go on to second quarter study, a choice of Introduction to Microelectronics or Semiconductor Device Theory I, at the University, while a second group of MSEE candidates will begin the course at the Career Development Center. Enrollments for the Santa Clara-Fairchild MSEE program will open each fall thereafter.

First offering in the program is a course in Silicon Processing I and classes meet 7 to 9 a.m. Tuesday and Thursday in the Career Development Center. Selected courses in the MSEE program will be open to employees who are not working toward a degree but who can satisfy the Santa Clara requirements for undergraduate performance in order to be accepted in the classes.

Candidates for the MSEE must have undergraduate transcripts on file with the Graduate School of Engineering, University of Santa Clara, and an application on file with the Career Development Center by August 15. Applications can be obtained by contacting the Registrar, Career Development Center, Mail Stop 13-117, Ext. 2327.

For the undergraduate student who holds an AA degree, requirements can be satisfied for a BS in Engineering Technology with a semiconductor processing emphasis through a new program also developed in cooperation with The University of Santa Clara. The student can work at his or her own pace to complete the undergraduate

program in two or three years. The first courses, beginning this fall, include Introduction to Semiconductor Technology and Bi-Polar and MOS Processing. Further information can be obtained from the Registrar, Division of Continuing Education, University of Santa Clara, Santa Clara, California 94043, 984-4518.

For those desiring to become a technician, the first Semiconductor Technician's Program in the Bay Area began as a joint Fairchild/Foothill venture in the spring quarter. Fifty students have already completed the first two courses in Processing and Photomasking, with 25 more enrolled in the summer session at the Career Center. The program will reopen in the fall. Taking two courses per quarter, the student can qualify for a Certificate of Proficiency after 39 units. A program going beyond the technician's requirements includes general education classes and qualifies the student, at 90 units of credit, for an associate in arts degree. Registration in the Semiconductor Technician's Program can be accomplished at Foothill on September 9-10 or at Fairchild prior to September 6.

Detailed schedules of the technical programs offered in connection with the Fairchild Management and Career Development Center are included in a schedule of events available from the Center, mail stop 13-117, Ext. 3975.

The Tables Were Turned



on the cafeteria staff at the R&D-Opto facility in Palo Alto when employees did the serving. As a gesture of appreciation for superior service, a group of employees organized by Linda Field, held a cake and coffee party for the cafeteria staff. Each member of the staff received a card, created by Lianne March, technical illustrator, and a long-stemmed rose. "It was our way of showing our appreciation to our cafeteria friends," Linda said.

Above, left to right, cafeteria staff members Mary Corchero, Grace Reolini, Joe Kahn, (Linda Field who organized the party), Betty Carthen and May Broughman.



DISCRETE BRUINS ARE CHAMPS—The Discrete Division's Bruins claimed the 1974 Fairchild Employees' Activities Association basketball championship in June, following 27 consecutive victories. Team members are: (standing, left to right) Wilbert Miles, Greg Reyes, Wilt Savage, Art Taylor and player-coach John Lawson. (Kneeling, left to right) Richard Griffin, Don Ertel, John Tripp, Tim Goll, and Wally Crooks. Mike Haskell is absent. After 13 weeks of league competition, the teams finished as follows: Discrete #1 (Bruins), IMS, Marketing, DIC, Systems Tech, Plating, MOD, Discrete #2, Electronic Services, LIC Engineering, Mask Design, and Personnel. In post-season playoffs that involved all teams, the Bruins also claimed first place, Marketing second and Systems Tech third.