

LEADWIRE

FEBRUARY, 1965



FROM THE EDITOR

Congratulations are in order for the spirited group of employees who turned out at the February Rec Council meeting to voice their support for an employee little theatre group. Council members were gratified to see that employee requests for such a group were not just talk.

Some ten persons were at the meeting and the council responded with a pledge to contribute toward the group's support. A meeting will be set for the near future to set the wheels in motion. The group felt a variety show might be the best type of production to tackle as a first effort, with heavier presentations later when the group has jelled.

The idea is commendable, though not new. If you recall, the South Portland plant staged a variety show last summer which attracted some twenty talent entries, and drew an enthusiastic audience of 300. Leadwire hopes for the same kind of success for the Mountain View group.

Fairchild's softball team goes big time this season, organizer **Vince Fulginiti** tells us. The team, which this year will include some of the area's top amateur stars, has entered the tough Northern California League, a triple-A circuit. Triple-A is the highest classification of softball there is.

So when you get in a mood for top-flight softball this coming season, go out to McKelvey Park, Fairchild's home field, any Saturday night at 7:30 p.m. The league will hold its double-headers there each week.

The tow trucks swooped down again on parking rule violators in the Fairchild Mountain View lots twice again this month to haul offenders to the south end of the east lot. Some people never learn. After a year of pleading with employees to park only in the ample authorized areas for the sake of safety, company officials have been forced to call in the trucks three times.

Worst offenders are those who park autos along the exit and entrance lanes, seriously slowing down their fellow employees on the way home, and endangering autos and lives. So far, the security force has been lenient. They've merely had the car towed to another part of the lot. Next step is to haul them downtown at the owners' expense.

To repeat an old sermon, Fairchild doesn't have a parking problem. There is ALWAYS plenty of free space in the south end of the east parking lot. Employees would be wise to use it.

SEVEN TAKE HOME FIRST PRIZES IN DIODE PLANT ART CONTEST

SAN RAFAEL—Seven Diode employees and members of employee families took home firsts in the second annual art exhibit and contest at the Marin facility.

First places in the adult division were captured by Claire Sullivan, oils; Joan Robertson, watercolors; Lance King, drawings; Mary Memory, sculpture, and Robert Mizrahi, crafts. In the new children's division, Rosemary McFarland's abstract took first place for oils, and Garyanne Witham's work was judged the top drawing. Roger DeGray's drawing was second to Garyanne.

Second place winners among adults were: Bill Sanders, oils; Jean Hendricksen, watercolors; Mary Memory, drawings; Gerry Lowden, sculpture; and the Chem Mix department, crafts. Honorable mentions were awarded to Patricia Friesen for her drawing, Jean Hendricksen for a sculpture, and Inga Filtuth and Claire Sullivan for crafts.

Exhibit judges were Jack Haehl, art department chairman at Terra Linda High School, and Lewis Barber of the Barber Sign Company of Petaluma.



ART CONTEST WINNERS—Two of the winners in the recent art contest and the mother of a third display the winning entries. They are Claire Sullivan (left), oils, and Robert Mizrahi center, crafts. On right is Ann King, whose 16-year-old son Lance had the first place drawing.

MIDWEST SALES OFFICE MOVES TO ELMWOOD PARK, ILLINOIS

MOUNTAIN VIEW—Fairchild's midwest sales office opened in Elmwood Park, Illinois, February 15, after being moved from Oak Park.

Bernie Marren, central area sales manager, said the need for larger quarters to accommodate an expanded staff made the move necessary. Three sales engineers work out of the new office in addition to Marren. They are Bill Dresser, Jack MacIntosh, and John Barton.

The new office, which is Fairchild's area headquarters in the midwest, is in a new building at 70310 W. North Avenue.

INSTRUMENTATION PLANTS PLAN OPEN HOUSE FOR FAMILIES

PALO ALTO, MOUNTAIN VIEW—Instrumentation facilities in Palo Alto and Mountain View will be opened to employees and their families March 14, Plant Manager Charles Askansas announced last month.

Askansas said Instrumentation employees and their families have been invited to tour the plants and learn more about the group's function and facilities. He said guided tours and refreshments will be offered.

The open house is scheduled for 1 p.m. and will probably run until 4 p.m. Approximately 500 persons are expected to attend.

FAIRCHILD INTEGRATED CIRCUITS CUSTOM-DESIGNED FOR 'SPECTRA 70'

MOUNTAIN VIEW—Pre-production quantities of custom-designed "super-fast" integrated logic circuits have been accepted by the Radio Corporation of America for its trend-setting Spectra 70 computer series as the half-million dollar Fairchild contract moves out of development and into full production.

The new RCA Spectra 70 computer, announced last December, is the first commercially available computer to use monolithic integrated circuits extensively. In addition to its ability to handle complex computing functions in extremely short intervals of time, the Spectra 70 circuitry makes it possible for the machine to operate on "commands" originally written for other makes of computers.

The RCA-designed integrated circuits have been the subject of an intensive Fairchild development effort, with RCA's cooperation, in order to provide production units which meet the exacting performance standards of Spectra 70. The circuits are member of a new family of devices called current-mode logic. Three circuits using this mode of operation are supplied in 14-lead packages.

According to Donald T. Valentine, national sales manager, these custom circuits represent important technological advances in speed of operation and in output driving capability. The latter feature, called "fan-out" by computer engineers, is a measure of a circuit's ability to control a number of subsequent operations at the same time.

Valentine pointed out that RCA's Spectra 70 incorporates several unique functions which would not be possible with any ordinary combinations of transistors and diodes.

According to industry commentators, the Spectra 70 should be the front runner in industry-wide move toward standardization of programming language which would greatly benefit computer users and reduce operating costs.



RECORD BREAKERS—When Jerry Thomas (top left) and Darlene Brown (top right) of the Diode swing shift set a record for 8-hour production on the magnetic tinner recently, it looked like the new mark would stand for quite a while. This month, however, the day shift tandem of Helen Calawa (bottom left) and Fredna Phillips (bottom right) staged a tremendous performance to break the mark. But the girls still hold the record for their respective shifts.



FAIRCHILD GIFT—George Fadler (l.), vice president in charge of purchasing for several RCA divisions, is presented with a giant 27 by 33 inch microcircuit color plaque by FS National Sales Manager Donald T. Valentine in recognition of Mr. Fadler's contributions toward promoting goodwill between the two companies. The photo is of Fairchild's 926 custom microcircuit used in RCA's highly advanced computer, the Spectra 70. The presentation took place last month at Mr. Fadler's office in Philadelphia.

FAIRCHILD SEMICONDUCTOR SELLS 'RELIABILITY BY THE POUND'

MOUNTAIN VIEW—Fairchild ships up to 50 pounds of reliability data for each pound of devices it sells.

It's true! As data review foreman Uli Hegel of the High Reliability section puts it, Fairchild sells "reliability by the pound."

Anyone in Uli's section can tell you these are not idle words. The High Reliability section is the group that is charged with conducting critical data review on orders requiring the 100% high reliability processing for which Fairchild is noted. And this task is performed the only way possible—by testing and reviewing every single device. Ironically, the data compiled almost always outweighs the order itself.

Example: A recent order of approximately 4,000 units for the National Aeronautic and Space Administration weighed 25 pounds when packaged and ready to ship; the accompanying reliability data was 360 pounds. Another recent NASA job called for only six pounds of devices, but 180 pounds of data.

How such masses of data can be accumulated for the devices is a long and involved process.

Briefly, the "sold" units are sent to the High Reliability section so that their dependability can be verified and discrepant units removed. The Section tests for as many parameters or functions as the buyer wants.

Before actual data reviewing, the units are tested and their values recorded simultaneously on IBM cards. Since an IBM card can hold only information for 12 parameters per unit per timepoint interval, and the customer can demand testing on as many parameters and timepoint intervals during operating life and environmental tests as he wishes, each unit can wind up with several IBM cards—hence the stacks of reliability data.

During operating life, the units are on an actual operation circuit for anywhere from 24 to 2,000 hours, or more. Data logging is done at intervals specified by the customer and these test results are sent to Data Processing to be put through the computer for compilation and computation of stability criteria.

With Fairchild sales rising, the job is an endless one. The group that tests and reviews data has tackled order as small as 25 pieces and as large as 8,000. Fourteen people utilizing the latest equipment built by Fairchild process 50,000 to 100,000 pieces per month, Hegel estimates; three years ago, with fifteen people and older equipment, the section was testing 1,000 pieces per month.

The monumental rise in production is a credit to the Fairchild people who build the equipment, and to the persons in the High Reliability section who work with it.



MICROWAVE PRODUCTS GROUPS: A NEW FAIRCHILD ARM

MOUNTAIN VIEW—With the establishment of a concentrated microwave production and marketing effort recently, Fairchild Semiconductor made clear its intention to seek an increased share of the solid state microwave component and high performance device market.

The group charged with this tall order is the thirty-member unit which recently set up shop in the headquarters building in Mountain View. It is the Microwave Products Group under Dr. Irvin H. Solt.

The new group is actually a consolidation of three smaller sections which previously existed—the microwave components Department and microwave marketing at Mountain View, and the microwave physics department at R&D. The new arrangement, Dr. Solt points out, allows Fairchild to make more efficient use of its employees and its time. In addition to the persons who belonged to the former three groups, Microwave Products includes new employees as well.

Serving immediately under Dr. Solt are Drew Lance, who has charge of solid state sources, and Gary Parker, head of special transistor and varactor diode production. The remainder of the group are also experienced and skilled technical people.

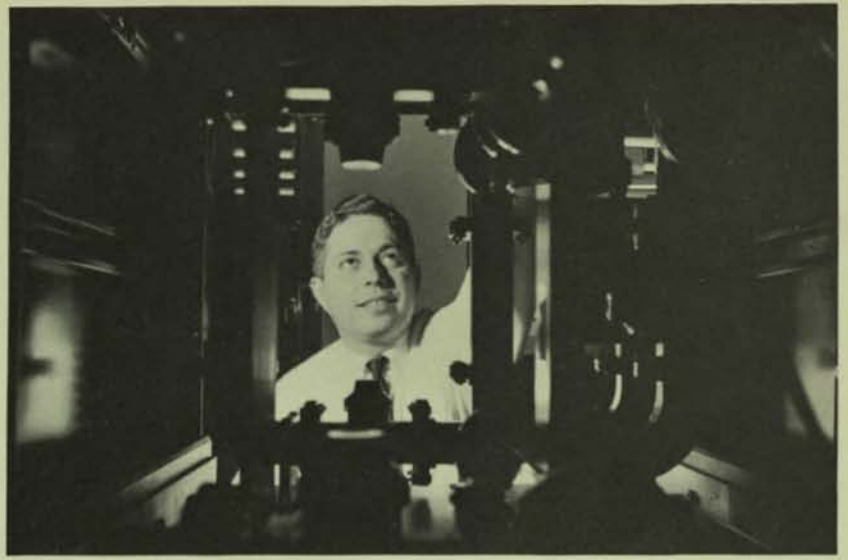
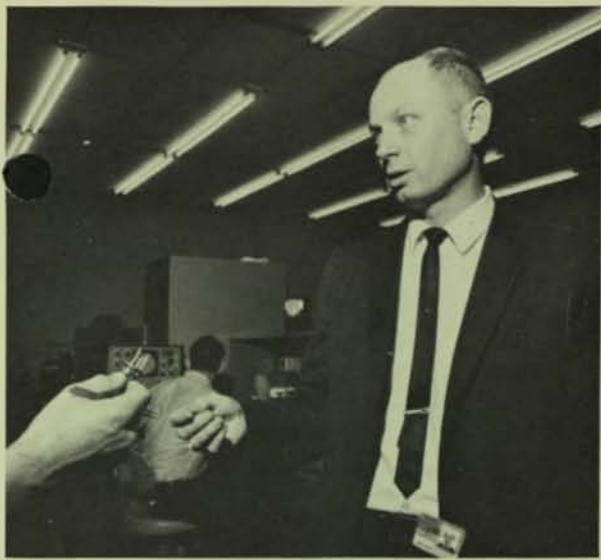
What do they manufacture, and how are their products used?

The group's chief products at present are a line of solid state (or transistorized) signal sources. These are microwave components which supply electrical energy or radio signals in receivers for systems using point-to-point relay such as communications systems, missile tracking systems, and radar.

The group also produces high frequency transistors and varactor diodes, used to regulate current in components such as sources. The fact that the group develops the devices for its own components is a major reason for the high reliability reputation enjoyed by Fairchild signal sources.

Since the company only recently decided to enter into volume production of microwave transistors and diodes, its product line is still in the formative stage, but it expects to offer a complete line in the near future.





PLAYMATES, METS TAKE LEAD IN MOUNTAIN VIEW BOWLING

MOUNTAIN VIEW—If early season forms are any indication, there is going to be some changes made this time around in the Winter Bowling League at Mountain View.

With only three sessions gone this month, the standings looked almost the way they looked at the end of the first half of play—only upside down.

Leading the pack with identical 10-2 records were the Mets who tied for last in the sixteen-team loop during the first half, and the Playmates, eleventh-place finishers in the fall round.

The Swingin'-Spastics, who shared the cellar with the Mets last time, were contending this time, in second place at 8-4.

The rest of the first division was sprinkled with teams like the Dijobes and the T-Ducers, both reformed losers.

Meanwhile the champion White Hats were wallowing in ninth place, and the Snids, who missed the title by only 1½ points, were dead last. Just Us, who ended up fourth from the top in the first half, were fourth from the bottom this month.

Individuals have recorded some outstanding performances this half, headed by Jim Boyd, Ann Lima, Agnes Myreholt, and Ed Beers. Boyd's 616 is the men's high series; Ann's 597 is far and away the women's high series; Agnes has rolled a 224 for women's high game; and Beers has the men's high game, a 249.

High handicap series belongs to Russ Maggio (697) and Pattie Alburn (699). Pattie also has the women's high handicap game at 267; while Vince Fulginiti and Adrian Haverman are tied among the men at 276.

HITS & MISSES LEADING AGAIN IN SAN RAFAEL MIXED BOWLING

SAN RAFAEL—The Hits & Misses, who wrapped up the Diode Bowling League championship a month ago, were still flying high this month with 23-9 record, good for first place.

The team, composed of Mickey and Jack O'Donnell, Carol Daly and Paul Harris, is getting staunch competition from the second place Bafmocs who own a 21-11 mark.

Individual averages for the leaders are Mickey, 135; Carol, 131; Paul, 152; and Jack, 159. Mickey has also rolled the second high game among the ladies, a 195.

The Bafmocs' averages are: Sally Calkins, 133; Sharon Trybus, 104; Palmer Merrill, 128; and Chan Desaignouard, 152.

Joe Campton has recorded the men's top game, a 241, followed closely by John Crosby's 235. Anita Spencer has the women's high game, a 211. Campton also owns the men's high series (687), with Don Brown second at 660. Among women's series Georgia Thomas is high at 624, and Margaret Sangermano is next with a 622.

STANDINGS

TEAM	WON	LOST
Playmates	10	2
The Mets	10	2
Swingin' Spastics	8	4
Dijobes	7.5	4.5
Y-Knots	7	5
T-Ducers	6.5	5.5
Something or Other	6	6
Unbelievables	6	6
White Hats	5	7
Ratt Phinques	5	7
The B & S's	5	7
Ghoul-Stones	5	7
Just Us	4	8
The Chumps	4	8
Wafers Five	4	8
The Snids	3	9

BRIDGE CLUB STILL MEETING; SEEKS NEW MEMBERS AT MV

MOUNTAIN VIEW—Spokesman Felix Rosengarten reminded fellow employees this month that the Fairchild duplicate Bridge club is still active and still welcomes new members.

The group, which plays every first and third Tuesday of the month in the headquarters building cafeteria at 7:30 p.m., is open to all Fairchild employees and their families and friends. Felix said the club would especially welcome some lady participants.

Results of recent sessions are:

- Dec. 1
1. Powers-Ankerbrand
 2. (tie) Kitkowski-Thomas
Carey-Regul

- Dec. 15
1. Kitkowski-Thomas
 2. Carey-Smullen
 3. (tie) Durand-Stabenow
Regul-Hinchcliffe

- Jan. 5
1. Mr. and Mrs. Regul
 2. Mr. and Mrs. Ramon
 3. Kitkowski-Thomas

- Jan. 19
1. Kitkowski-Thomas
 2. Rosengarten-Weller
 3. Carey-Smullen

- Feb. 2
1. Durand-Stabenow
 2. Rosengarten-Weller
 3. Ellenberger-Larsen

- Feb. 16
1. Carey-Smullen
 2. Durand-Stabenow
 3. Hinchcliffe-Larsen

New club officers, elected in January, are: Alex Weller, president; Art Stabenow, secretary-treasurer; and Rosengarten, director.

PAUL KENT NAMED TO UF POST

SAN RAFAEL—Diode Manager of Administration Paul Kent was named to the executive committee of the United Bay Area Crusade at the group's tenth annual meeting recently in San Francisco.

The committee, which meets monthly, is composed of 50 volunteers who serve a year-long term. The group recommends the yearly campaign goal of the United Fund after studying the needs of the Crusade's 171 agencies in this area, and plans the campaign along with other public relations programs.

The Diode plant's campaign, led by Personnel Administrator Gary Brandenburg, brought in a record \$9,650 last year, almost double the 1963 figure.



DICK KRAUJALIS TRANSFERS TO MINNEAPOLIS SALES OFFICE

MINNEAPOLIS—Sales engineer Dick Kraujalis has transferred to Fairchild's Minneapolis, Minnesota, sales office, Central Area Sales Manager Bernie Marren announced this month.

In his new position, Dick will be assigned exclusively to Control Data Corporation, one of Fairchild's largest customers. Marren pointed out that "The assignment of experienced men like Kraujalis to specific accounts allows us to provide much better service to our larger customers."

Jim Lucy, who formerly served the CDC account, has been promoted to regional sales manager for commercial computer sales in the midwest.

Dick Kraujalis, a graduate of Northwestern University with degrees in electrical engineering and mathematics, joined Fairchild in December, 1963.

VERNA DELAGARZA SETS RECORD

SAN RAFAEL—Verna DeLaGarza of Die Loading set a new plant record for an eight-hour shift recently when she did 86 boats.

The new mark topped the previous high set September 17, 1964, by Jane Cox.

Verna, who joined Fairchild six months ago, has been on Die Load for five months, after a month at Final Seal. The original Die Load record was set January, 1964, by Barbara Visceto.



STEFFENS IS FIVE-YEAR MAN

LOS ANGELES—Carl Steffens, western regional sales manager for commercial computer sales, joins the company's long list of five-year employees this month.

February 29 marks Carl's fifth anniversary as a member of Field Sales. A native of Iowa, he joined the sales force in 1960 and progressed through a series of promotions with an outstanding sales record. Carl was a district sales manager, and more recently a regional sales manager for northwest military sales before accepting his present assignment in the Hollywood office. He also took a year off for a return to military service as a Navy flight lieutenant during the Berlin crisis of 1961-2.

He attended Iowa State University (Ames) before obtaining BA in physics at Wayne State. He has also done graduate work at San Jose State. Carl and his wife Joan live in the Los Angeles area with their daughter, Christine, 2½, and son, Carl, Jr., 1½.



FAIRCHILD'S FIRST MICROWAVE TRANSISTOR TO BE DISPLAYED

MOUNTAIN VIEW—A high frequency microwave power transistor capable of delivering a full watt output at a fundamental frequency of 1000 megacycles with guaranteed 40 per cent efficiency will be shown for the first time by Fairchild Semiconductor at the 1965 IEEE convention.

The MT1038 represents Fairchild's entry into the very high performance microwave transistor market. The new silicon Planar epitaxial device is designed to operate both as an oscillator and as a large signal VHF or UHF class C amplifier.

The device is the first standard catalog microwave transistor of Fairchild Semiconductor's new Microwave products group.



NEWEST CITIZEN at the Diode plant is Inge Wagner, a native of Germany who was granted citizenship January 12. Her new status is richly deserved. Inge not only studied American history at College of Marin, but she also made a special trip to Chicago to enlist character witnesses from among old friends. Inge joined Diode in August, 1960.

JERRY GROUX GAINS SECOND TERM AS CREDIT UNION PRESIDENT

MOUNTAIN VIEW—Jerry Groux won an unprecedented second term as president of the Fairchild employees' Federal Credit Union in election held at the group's annual meeting January 23 at the Smorgas Table restaurant.

In other election results, the thirty members present named John MacMurray, vice president; Alyce Washburn, secretary; and Jack D'Angelo, treasurer. Bill Reifschneider, Dave Culley, and Bill Smith were named to the board of directors.

The gathering heard reports on the union's status by Groux, D'Angelo, and the credit committee.

Fairchild Semiconductor's Credit Union now numbers 1895 employees, approximately 60 per cent of the company's employee force.

NEW FACES

PAUL M. MAHAN is new Industrial Relations Manager at Diode replacing Paul Kent who moves up to the division IR staff at Mountain View. A native of San Pedro, Calif., he earned BS at University of Southern California and taught at Long Beach State. Formerly IR manager for Continental Device Corp. Member: Personnel and Industrial Relations Association.

KENNETH M. PEMBERTON joined company as systems and procedures supervisor (MV). A University of California graduate (BS, business administration), he is working toward MBA at Santa Clara. Formerly with Sunsweet Growers, Inc., San Jose. Member: Systems and Procedures Association.

HARRY J. NEIL came aboard as marketing engineer. Born in Colorado, Harry obtained BS at U. of Colorado in 1963. Formerly with Hughes Semiconductor. Member: IEEE.

MICHAEL L. BARRY joined Technical Staff at R&D. He earned engineering degree at Colorado School of Mines and Ph.D. at University of California (Berkeley). He is a native of Montana, and a member of the American Association for the Advancement of Science, and the Scientific Research Society of America.

JAMES W. FRASER is new QA foreman in Maine. A Boston native, he attended Northeastern U. and Capital Radio Engineering Institute. Formerly with Raytheon.

JOHN P. CARTER is now assistant to South Portland personnel manager Don Loring. John is a 1961 graduate of University of Maine, and an Air Force veteran. Formerly with Ward Industries.

ANTHONY P. MANINO joined Diode as Machine Shop foreman. A native of Palermo, Italy, he attended San Diego State, University of California, and Syracuse U. Anthony was formerly with Sylvania. He has a long record of civic and youth activities to his credit.

DAVID TALBOTT joined Fairchild as senior engineer and supervisor of plant engineering at Diode. A native of San Francisco, he comes to FS from Secode Corp. Member: ASTM.

MOVING UP

WILL STEFFE to manager of Device Development department at R&D, replacing Pierre Lamoind who has returned to Mountain View as manager of manufacturing.

CHARLIE BITTMAN to acting manager of Solid State Physics department at R&D.

GARY W. PARKER to product manager, microwave devices at Mountain View. He was formerly a senior engineer at R&D. Joined Fairchild in January, 1960.

HERBERT W. HENDERSON to product manager of silicon production in Materials department, Mountain View.

WILLIAM E. CROSBY to foreman from machinist at South Portland. A Portland native, he joined the company in February of 1963, after leaving Hudson Pulp and Paper.

WORLD'S LARGEST MICROCIRCUIT IS SMALLEST FLASHING SIGNBOARD

PALO ALTO—Nobody knows how many angels can dance on the head of a pin, but a team of scientists at R&D revealed that they've built the equivalent of 576 separate light bulbs on a single chip of silicon no larger than a lady's fingernail. The scientists developed a solid state electronic device which contains 576 light-emitting diodes on a silicon rectangle barely $\frac{3}{8}$ inch on its longest dimension. The diodes, which can be flashed one at a time or in various combinations, are used to record complex data on photographic film.

Called the FLPA-200, this newest advance in electronic integrated circuit technology has more active elements in one solid piece of material than ever before achieved.

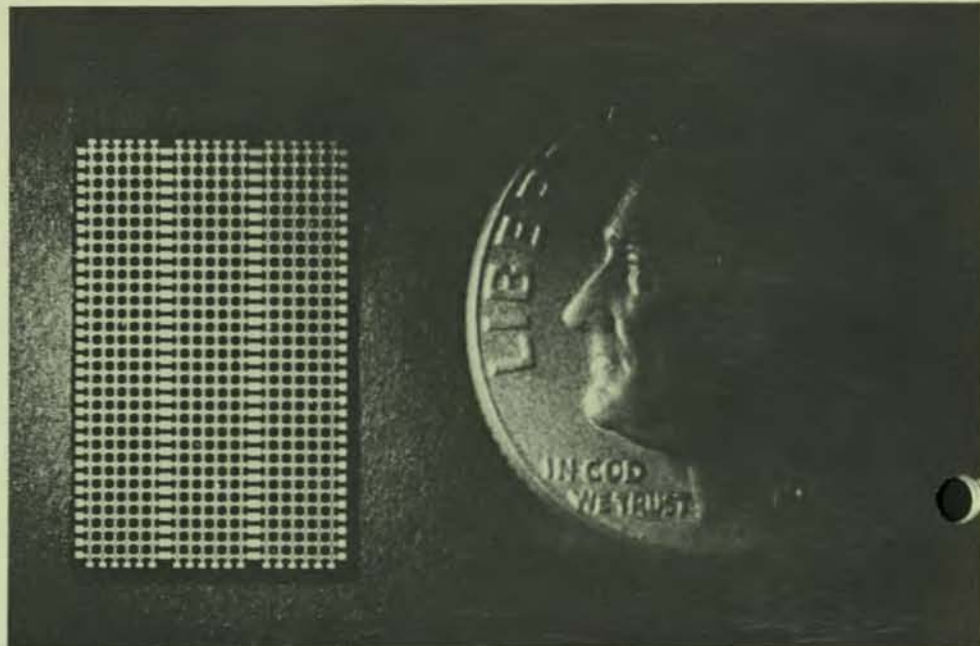
First application for the FLPA-200 is in a photographic reconnaissance camera system, being developed by Fairchild's Space and Defense Systems Division in Syosset, L. I., New York. As the film passes through the camera, the tiny device flashes various dot combinations that indicate all the information needed by the experts in later analysis of the photos. The job had been done previously by a bulky system of prisms, optical lens, cathode ray tube and power supplies.

Light from the microscopic diodes (only two-thousandths of an inch in diameter) can be seen with the unaided eye in a dimly lighted room, but the main purpose is to expose film. Without any lens system at all, the FLPA-200 produces clean circular dots on panchromatic type film in as little as three milliseconds (three one-thousandths of a second).

Although the array of diodes depends on a small computer to tell it what pattern it should flash, the actual power for the light-emitting elements can be supplied by a transistor radio battery.

From a scientific point of view, one of the most amazing aspects of the device is the precise arrangement of the diodes. They are arranged in 32 rows of 18 diodes each, and the spacing is 18 thousandths of an inch from center-to-center, each way. Since each diode in itself is a fairly complicated electronic device, considerable development was required to produce 576 diodes at the same time, all with the same operating characteristics, all the same size, and all performing perfectly.

While Fairchild is using these exotic light-flashing arrays in a complex reconnaissance camera system, many other uses are possible. Since the array can form letters, numbers or any other symbol, it can be used for instantaneous display of many types of information. A bank of the devices could display printed type information on the instrument panel of a jet aircraft or spacecraft, for example. Fairchild scientists commented also that it would be possible to use the devices to fabricate very high density memories for digital computers.



ON THE COVER



The old and the new of the company's solid state signal source capability are compared by engineers Jim Hoagland and Aaron Shipow of Fairchild's new Microwave Products Group in Mountain View. The source at the right, less than half the size of the other, is one of the group's newest products.

LEADWIRE

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EDITOR MANUEL J. ROBLES

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MOUNTAIN VIEW—Marion Cornwell, Wes Cox, Lois Egelston, Nova Fitzgerald, Nellie Jones, Vince Fulginitti, Buzz Sawyer, Maureen Waring, Ginger Tygret, Val Gale, Keith Thomson.

INSTRUMENTATION—Tom Phillips, Jack Ramon, Bob McLean.

DIODE PLANT—Paul Kent, Louise Bogandoff, Diane Brawley, Connie Maestretti, Cleatus Dunkley, Sandy Carroll, Barbara Visceto, Eleanor Wallin, Georgia Thomas.

RESEARCH & DEVELOPMENT—George Daughters, Nancy McDougal.

SOUTH PORTLAND—Don Loring.

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LEADWIRE

SEPTEMBER, 1965



FROM THE EDITOR

With summer, comes Fairchild picnic time. This issue celebrates some of the outstanding examples of employee get-togethers throughout the division.

According to the Mountain View Recreation Council, some \$12,000 was spent on departmental picnics during 1965. Yet in terms of the infinite amount of social enjoyment derived by the employees who participated, this sum seems nominal.

At this writing, two big summer bashes at Fairchild's other facilities are forthcoming: The R&D picnic on September 18 and Diode's huge social event on September 19. More on their outcomes in the next Leadwire. . . .

Congratulations to the Northern California AAA softball all-stars who trimmed regional champion Muzio Bakery (of Sacramento) 2-0 this month in an exhibition game at McKelvey Park (MV). Four Fairchild Falcons were represented on the team, including Pat Campagna at the helm as all-star manager, with players Grafton, Talbot and Ray Phillips seen in action.

Turning to the Falcons themselves, their first season as a team has been a monumental success (57-9 record), with numerous titles to their credit. But a great share must go to Manager Pat Campagna, an outstanding player himself, who almost single-handedly was responsible for the formation of the Fairchild Falcons.

Pat conceived the idea of a Fairchild triple-A softball team last year; and his reputation and recruiting prowess brought most of the team's outstanding individuals into the fold.

The team was born this year with the support of Fairchild Semiconductor, and the personal encouragement of Group Vice President Robert N. Noyce, General Manager Charles E. Sporck and the Mountain View employees of Fairchild Semiconductor through their Employee Recreation Council. Yes, the Falcons' season-long success has been a team effort in every sense of the word.

From Diode comes a report of two recent incidents of heroism: One, a fire in-plant and the other, on a skin-diving excursion. Those involved in the latter modestly decline to have their story told.

Applications at Mountain View hosted employees, their families and friends in an Open House last month. The tour was exceptionally well planned through the efforts of the department's own John MacDougall, Jim Rierson and John Reinhardt.

Growth pains of the semiconductor division is being felt not only in the number of new faces on the scene, but also in newly created departments and reorganizations taking place. For instance, at R&D, Digital Integrated Circuits—formerly a section in Device Development—has become a separate department under the command of Bob Seeds.

Another case in point is the reorientation of Product Marketing throughout the division in order to handle the growth in volume of FS product lines, number of assembly plants and markets we serve. Further details on both of the above are contained in this issue.

Then—in terms of growth—employee communications always become more complex. At Mountain View, the Recreation Council has offered to help. If you have any upcoming events, announcements or sign-ups for employee activities that you would like to publicize throughout the entire plant, simply submit nine (9) posters with all of the facts to the Rec Council secretary (Betty Philyaw—Applications). These will be strategically placed on bulletin boards in various work areas. Minimum size for the posters is 8½" by 11".

Our bulletin boards serve as an increasingly important source of information as Fairchild continues to grow. Check yours regularly for announcements of future events.

While we're on the subject of the Recreation Council, Mountain View's committee has suffered the loss of its secretary (as has Jim Rierson in Applications). Mary Jo Lewis decided to devote full time to studies in Bus. Ad. at Foothill. However, the Applications department is represented on the Council with an excellent replacement: Betty Philyaw.

Speaking of education, two ambitious fellows in Marketing at MV recently attained their MBA degrees from the University of Santa Clara (California). Both theses of Richard Bader and Phil Lenihan concentrated on computerization of forecasting data—one dealing with marketing, the other with sales projections, respectively.

EIGHTEEN FINISH SUPERVISORY COURSE AT SOUTH PORTLAND

SOUTH PORTLAND—For ten weeks, 18 supervisors at the Maine facility attended one of the finest educational television training courses of its kind available: "Modern Supervisory Practice" prepared by the Management Center, College of St. Thomas, St. Paul, Minnesota.

The hour-long sessions each week consisted of 30 minutes of instructional TV, followed by a half-hour lecture and/or group discussion conducted by Jack Carter. In addition, supplementary reading lists were provided each supervisor attending.

At the termination of the course, Certificates of Completion were presented to graduates by plant manager Jack Magarian. The 18 men participating represented a very respectable 88 per cent of all supervisors at the South Portland plant.

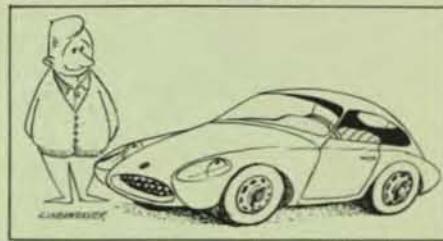
Around 25 companies in the state took part in this study program, with enrollment totaling 600 supervisors.

COME FLY WITH R&D

PALO ALTO, MOUNTAIN VIEW—The Fairchild Flying Club will take off Saturday, October 2, for its second annual one-day excursion to Ghost Town, Columbia, California. Anyone interested (especially able-bodied pilots) are encouraged to contact Chet Gunter (R&D Ext. 455).

Similar to last year's fling, pilots and guests will be treated to a reception at the airport, then travel stagecoach-style to a dinner dance in the evening. Since it's a 2½ hour drive by auto to Ghost Town, grounded employees should plan to join the spirited group in their flight plans for this trip.

NEW CAR HAPPY? SEE YOUR CREDIT UNION



MOUNTAIN VIEW—Around this time of year, bargain counter values on automobiles begin to appear in the various showrooms throughout the country as the 1966 models hit the market. Correspondingly, consumer appetites usually are whetted by new paint and attractive price tags.

If you have caught the "new car fever" and have been employed by Fairchild for one year, why not consider financing a car purchase through your Credit Union? When compared to the interest and creditor insurance charges on a bank-financed new car loan, the savings available to you as a member are astounding. Let's consider a typical example—financing on \$2,900 (allowing for trade in) on a 1965 Chevy; terms—36 months:

Total Interest paid Bank:	\$562.02 (\$6/\$100/year)
Creditor's Insurance—Bank:	222.94
	<hr/>
	\$784.96
Total Interest at Credit Union:	\$419.84 (\$4.95/\$100/year)
Creditor's Insurance—FREE!	\$ 0.00
	<hr/>
	\$419.84

This means that your net savings via the Credit Union would amount to \$365.18! And figured over the three-year period, you would have an extra \$10.13 in your pocket each month:

Monthly payments with Bank:	\$102.36
Monthly payments with Credit Union:	92.23
	<hr/>
Net Difference	\$ 10.13

Sound good? Well, if you are a member, why not drop by the Credit Union and check out the other benefits available to you as a Fairchild employee. If you're not a member, it only costs 25¢ to join.

EXPANSION OF PRODUCT MARKETING DEPARTMENT ANNOUNCED

MOUNTAIN VIEW — This month, Bob Graham, Semiconductor Product Marketing Manager of the division, outlined the current reorganization of Product Marketing to cover product and market via separate groups. Originally, this department was divided simply by product which adequately fulfilled the needs of the company's then predominantly military business. Later, the organization was revamped to a breakdown by market (industrial, commercial/computer, military and consumer), with product specialists, as the division's product line was broadened to encompass non-military fields.

Now, in order to handle a product line which is growing in volume, complexity, assembly plants, and markets serviced, Product Marketing has undergone another metamorphosis.

Under Bob Graham, the two separate entities will be divided in this way. **The Market**—There will be one group headed by Chris Coburn responsible for each of the division's markets: Industrial, Commercial/Computer, Military and Consumer. Located at Mountain View, this group will be directly responsible for

keeping abreast of and fulfilling all customers' needs by market, regardless of product type, in addition to one to five-year forecasting and supervising the marketing tools utilized in promoting sales growth.

The Product — Autonomous from the above, product marketing managers will be set up at each manufacturing facility to provide an up-to-date inflow of information on products currently in production at that plant. The men named for these positions are: Ward Gebhardt—San Rafael; Carl Steffens—South Portland; and Joe Obot—Mountain View. These men and their supporting product specialists will be directly responsible for coordinating manufacturing needs to product demand, as well as making product and competitor evaluations for their respective plants.

According to Graham, the targets of the new marketing structure are: Decentralization for rapid pin-pointing of the customer's needs relative to manufacturing, research & development, applications, etc.; ultimate continuity in defining individual market requirements; to speed up customer order processing from receipt to shipment; and finally, organizational strength and flexibility to meet Fairchild's future marketing goals.

DR. SEEDS HEADS NEW DEPARTMENT AT R&D

PALO ALTO — Dr. Gordon E. Moore, Director of Research & Development, announced the inception of another department at the Palo Alto facility this month. The new Digital Integrated Electronics group at the lab will incorporate all personnel formerly in the Digital Integrated Circuits section of the Device Development department, with Dr. Robert B. Seeds as manager.

Dr. Seeds joined Fairchild in 1962 as head of the Microelectronics section in Applications. He then moved to R&D as a section head in Device Development in 1963. Formerly a research staff member with IBM, he received his BSEE, MSEE and Ph.D. degrees from Stanford University.

In the words of Dr. Moore, "The creation of this new department reflects the present and projected importance of digital integrated circuits and subsystem functions to the growth and well being of Fairchild Semiconductor."



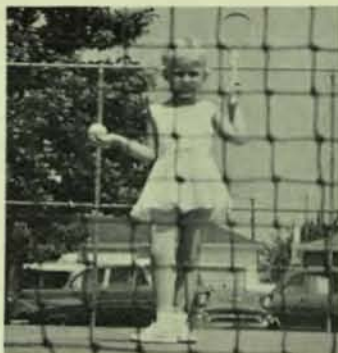
Robert B. Seeds

TENNIS CLUB BANQUET RESCHEDULED FOR OCTOBER 2

MOUNTAIN VIEW — In order to allow for completion of singles play-offs in the Fairchild tennis tournament, the date for the annual tennis banquet has been changed from September 11 to October 2. Thus far, first place winners in the doubles were Vic Fay and Corny Reese, with the team of John Hermann and Zen Zubrycky in second place. Still competing in the singles for first through fourth places are Gunther Haller, Dave Heck, Corny Reese and Zen Zubrycky. A "round-robin" tournament is scheduled for a Saturday in late September.

In any case, the Tennis Club banquet will take place at Rickey's Hyatt House, Palo Alto, on Saturday, October 2. The evening's activities include cocktails (no-host) at 6:30 p.m., dinner at 8 p.m. and presentation of trophies to tournament winners.

Any Fairchild employee and his friends can attend the banquet or practice sessions (still in progress on Tuesdays after 6 p.m. at Fremont High in Sunnyvale). For the banquet, simply make your reservations in advance with Pat Barringer (Ext. 2265), John Hermann (2174), Mike Mahoney (2632) or Zen Zubrycky (2304). This committee encourages anyone interested in taking part in tennis activities next season to use this opportunity to find out more about the operations and advantages of FS club membership.



TENNIS ANYONE? — This young Fairchild off-spring challenges any FS employee on the peninsula to practice matches still being conducted at Fremont High, Sunnyvale, every Tuesday evening after 6 p.m.

WINNERS DECLARED IN R&D ANNUAL GOLF TOURNAMENT

PALO ALTO — September 2 ended Fairchild's annual Golf League competition at R&D. According to Jack Jones, president of the League, 40 players participated in the end-of-the-season tournament, with prizes awarded on the basis of both individual and team play.

Declared overall individual winners of trophies were the following members:

- 1st place—Bob Hewitt
- 2nd place—Ernie Yim
- 3rd place—Art Rickers

A trophy was also awarded to the most improved player, Mary Bridgeman.

The annual "President's Tournament" Golf Match is slated for Sunday, September 26th, at El Rancho Verde Golf Course in San Jose. Fifteen prizes will be awarded during this event.

EDN, ELECTRONIC INDUSTRIES HIGHLIGHT FAIRCHILD ARTICLES

MOUNTAIN VIEW, PALO ALTO — The combined efforts of Don Thorn and Murray Siegel, Customer Applications, appeared in the August issue of Electrical Design News (EDN). Their article is entitled "Rapid Integrated Circuit Testing."

Moreover, the September edition features three works of Fairchilders: "Characterization of Solid-State Sources" by Drew R. Lance and Richard J. Klinker (Microwave Products), "ABC's of Custom Integrated Circuit Designing" by H. T. Chua (Microelectronics) and Cloyd E. Marvin (Field Sales — Poughkeepsie, New York), and "The Field Effect Transistor: MOS and Junction" by Bob Graham (Product Marketing).

The September Electronics Industries is special, indeed. Not only does it contain an article by two FS employees, but also the cover photo is Fairchild's own. Bob Nevala of R&D and E. R. deAtley of Marketing Services co-authored "Digital Integrated Circuits and Their Limiting Factors."

PICNIC WAVE HITS MOUNTAIN VIEW

Over the years, as the Fairchild family on the Peninsula continues to boom in population, so has the number of picnics grown. What was once two picnics (Mountain View and R&D) has mushroomed into a multitude of departmental gatherings. As such, the MV employees' Recreation Council has spent more than \$12,000 on picnics alone during the months June through September. (Moreover, this figure does not include the \$750 budgeted by the relatively young R&D Rec Council for that facility's bash scheduled for September 18.)

The few groups appearing on these pages represent only a handful of summer celebrations during the 1965 season. Nonetheless, the participants will agree that the Materials, Special Products and Marketing get-togethers—all held various days at the Blackberry Farm in Cupertino—portray three of the largest employee-organized social events to take place this year. Here's to Fairchild picnic time again in 1966!



JULY 24—MATERIALS

The Materials department's fun-filled event was made memorable by a raucous volleyball game and entertainment—a Spanish dance by Marlene Bolivia. Officiating at the barbecue pit were Sam Blakely, Bob Mikels, Frank Gamba and Ray Reposa.

All told, the occasion was a smashing and well attended success. Outstanding evidence of the turnout were five families whose clans alone totaled 36 people: The Frank Johnsons, Bob Barrons, Hank Scherlings, Chuck Altmans and the Dave Culleys.

AUGUST 8—MARKETING

In the words of the English writer, John Heywood, "Men know how the market goeth by the market men." If such is the case, the Mountain View Marketing Department's picnic indicates a highly active group. In addition to volleyball, table tennis, horseshoes and bingo, field games overseen by Phil Lenihan included adult water cup races and kiddie sack and balloon races. In charge of the day's activities and prizes was Duncan Loop, assisted by Joan Connors and Paul Hazelman.

Meanwhile, back at the barbecue pit, Bea Custer supervised a crew of ten in spreading the picnic feast: Barbequed chicken, tomatoes, rolls, etc. Complementing the bill of fare was, of course, beer and pop, with Jim Lagodzinski in charge. All in all, one highlight of the get-together was Helen Basford's prize for the closest guess at the number of Fairchild flat packs in a cookie jar—813 out of an actual 828.

In charge of the whole shebang was Jim Johnson, chairman, and Elmer Weber.





AUGUST 22—SPECIAL PRODUCTS

Special Products, Hybrid Integrated Circuits, NPN, Personnel, Linear Integrated Circuits and Production Control mixed their culinary skills to conjure up a recipe fit for 500 adults and 300 children. The ingredients included 30 gallons each of potato salad and beans, 650 steaks, 50 dozen hot dogs, 60 dozen French rolls, 263 gallons of cold beer and 1,080 cans of soft drinks.

Added to all of the above were a multitude of door prizes, games, and such activities as swimming, golf on the nine-hole pitch & putt course, and a spectacular volleyball exhibition between the Special Products All-Stars and "all comers." As a finale, a rigorous softball game filled with popflies sent many a fielder into the poison oak. Having sampled food, fun and activities, the groups went home—of course, hoping for a serving of the same fare next summer.





APPLICATIONS OPENS ITS DOORS

MOUNTAIN VIEW — Applications Engineering hosted family and friends in a gala — yet very informative open house August 22. All told, around 350 persons attended the event.

The tour commenced in the lobby on Fairchild Drive where booklets and pamphlets were distributed. Visitors then proceeded to Lab Services where there were test set ups.

Those attending then traveled to Customer Applications where they saw an integrated circuit magnified and transmitted via closed-circuit TV.

In Consumer Applications, several unique examples of employees' work in this realm were seen; for instance, numerous transistorized TV's (including a fully transistorized color TV) and a complete solid state hi-fi-stereo with FM tuner and 25 watt per channel power amplifier.

The groups were then conducted through Custom Integrated Circuits, Standard Integrated Circuits, the Transistor section (where power transistors were shown running light dimmers, electric food mixer controls, and motor controls) and the photo device dark room.

At the end of their well planned journey, tasty refreshments were served the throng in the main plant cafeteria.



MOVING UP

RICHARD L. GIFFORD to senior product engineer, military transistors, from product liaison engineer (Marketing, MV). Born in Lansing, Michigan, Dick is a 1958 graduate (BSME) of Michigan State University and is currently pursuing his MBA degree at University of California (Berkeley). Formerly associated with Bendix Corporation, he joined Fairchild in 1964.

LARRY ZISMAN from product marketing engineer (MV) to field sales, Elmwood Park, Illinois. Zisman assumes sales responsibility for Fairchild's complete line of silicon semiconductor products to consumer products manufacturers in both Illinois and Missouri. A native of Detroit and an Air Force veteran, he studied at Los Angeles and Santa Monica City Colleges and West Coast University.

MICHAEL P. KUFFEL from foreman PNP Masking to general foreman, PNP Fab & Assembly (MV). Mike joined Fairchild as a cost accountant in 1963 after receiving his MBA degree from the University of California (Berkeley). Born in Minneapolis, Minnesota.

ALBERT F. REMSON, JR. from foreman to general foreman, South Portland. A Massachusetts native, he studied at the University of Massachusetts and University of Boston, coming aboard at Fairchild in 1964 from Raytheon.

JACK ORDWAY has been appointed sales engineer, serving all commercial/computer accounts in the Minneapolis area. Upon joining Fairchild from Motorola Semiconductor, he was responsible for sales to Control Data. He obtained his BSEE degree from Lowell Technological Institute in his native Massachusetts.

ROBERT KENNY from foreman to general foreman, South Portland. After graduating from the Massachusetts Military Academy, he served as an Army officer. A native of Massachusetts, he has done graduate study at Northeastern University in Boston.

JAMES F. BELL to sales liaison engineer from production planner, Diode. After receiving an Associate of Arts degree from Contra Costa College (California), he served three years in the Army. Jim, who joined Fairchild in 1963, was born in Chester, Pennsylvania.



FIRE FIGHTER—Vickie Agenbroad, the sole occupant in Fabrication at Diode during a coffee break, successfully extinguished a fire in the phosphorus area adjacent to her work station last month. Vickie (who has been with FS almost five years) was pulling a run out of a diffusion furnace when she noticed the fire in the next area. Obviously, her quick response avoided what could have been a serious blaze.

NEW MINERAL CLUB AT DIODE TO DIG FOR KNOWLEDGE

SAN RAFAEL—In the formative stages at Diode is a unique Mineral Club which will promote outings, designed to educate its members on mining operations and spotting gems, mineral ores, gold, silver and various other rock formations.

According to Club organizers, Casey Collins and George Miller, the group will start out with about 20 members, with each individual sharing personal digging, panning and lapidary equipment with the membership. Anyone interested should contact Casey Collins, George Miller, Bill Irons or Al Mitchell.



ROCK SCAVENGERS—Organizers of a new Mineral Club, designed to educate its members on the wealth found in the earth are Casey Collins, George Miller and Ron Timm. Not pictured are Bill Irons and Al Mitchell.

FIVE-YEARS SERVICE

Robert Tobias, Diode
Vennie B. Rosenthal, Diode
Arthur S. Pearson, Diode
Jack Kabell, R&D
Harry W. Downing, Hong Kong
William B. Shumilak, Mountain View
Marilyn M. Westlake, Mountain View
Bill Richmond, Mountain View
Katherine R. Bayliss, Diode
Goldie F. Lehman, Diode
Evelyn Kim, Diode
Ingeburg Filthuth, Diode
Shirley A. Marks, Mountain View
Carmen G. Navarette, Mountain View
John J. Magarian, South Portland
Ned T. Gault, R&D
H. Peter Chiappetta, Diode
June M. Fields, Diode
Hilda Kaliczak, Diode
Florence E. Katberg, Diode
Laddie H. Wang, Mountain View
Earl C. Head, Diode
Leonard J. Walker, Diode
Dorothy E. Keller, Diode
Don Ramsay, R&D
Albert E. Mota, Mountain View
James E. Malloy, Mountain View
Joe R. Adame, Mountain View

NEW FACES



Three engineers from Fairchild affiliate SGS (Societa Generale Semiconduttori) in Milan, Italy, recently arrived for a one-year stint at R&D. Upon their return to SGS, they will become the nucleus for a development group in Milan.

Of the trio, two are no strangers at the Palo Alto facility. Paul Beneteau joined Fairchild in 1959 and left his position as head of the Analog Circuits group in Applications (MV) in 1962 to move to Italy. Last year, he became manager of Engineering at SGS. Giuseppe Faini, who spent a few months at R&D in 1964, is a three-year man at the Milan facility. He has returned to the peninsula installation to further his background in special measurements for device evaluation.

The new face on the scene is that of Geoffrey Shrank, an Englishman, whose first assignment as a new engineer with SGS is a year's duty at R&D. He is a device development engineer.

ALFRED KNOPPE came aboard as a new electronic technician in Consumer Applications (MV). Born in Kentucky, he recently retired from the Navy after 20 years' service.

FRANCISCO P. SALOMAO is a new addition to the advertising staff of Marketing Services (MV). He will be responsible for the various promotional activities for FS products internationally. Born in Rio Claro, Brazil, he graduated from Marsal College, Santos, Brazil, with a "curso classico" degree (equivalent to a B.A. in the U.S.). His former employment includes account executive—Standard Propaganda; advertising manager—Anderson, Clayton; product manager—Lever Brothers.

JAMES N. PERRY joins San Rafael as manager in Device & Reliability Testing. A native of Massachusetts, Jim obtained his BSME from Cornell University, then served three years in the Air Force. Formerly associated with Microwave Associates, Inc. (Burlington, Mass.).

FLOYD F. OLIVER is a new senior product engineer at Diode. Prior to joining Fairchild, he was associated with General Dynamics. Born in Cadillac, Michigan, he holds two BS degrees (liberal arts—Central Michigan University; engineering—Univ. of Wisconsin) and MS degree from Arizona State University. Member: IEEE.

JAMES A. PRATT recently came aboard at Diode as an industrial engineer in Methods & Process Development. He holds a BSIE degree from the University of North Dakota, his native state. Formerly employed by General Electric.

ALEX DANKS is a new supervisor in Quality Assurance at San Rafael, coming to Fairchild from Autonetics (Anaheim, California). Born in Benton, Illinois, he has completed college courses at San Jose State and Citrus Jr. College (Azusa, California).

JOSEPH H. MINGUS, hired as a senior design engineer at Diode, was formerly associated with Eaton Manufacturing. He studied at Franklin University in his native Columbus, Ohio. A veteran of the Air Force.

JOHN M. HIGGINS joins San Rafael as swing shift foreman. After serving three years in the Navy, he attended Boston University, receiving his BS in business administration in 1962. Prior to Fairchild, he was employed by California Packing.



HEAD DIODE BOWLING LEAGUE—Recently elected to officiate over Diode's Mixed Bowling League are Len Walker, vice president; Mickey O'Donnell, secretary-treasurer; and Gary Brandenburg, president.

DIODE MIXED BOWLING LEAGUE ELECTS SEASON'S OFFICERS

SAN RAFAEL—At their first meeting of the season held at Nave Lanes, Diode bowlers re-elected Gary Brandenburg president, Len Walker vice president and Mickey O'Donnell secretary-treasurer of their league. Nine teams have already formed, with more anticipated by the September 20 starting date.

Also formulated were ground rules for participants in the group's activities. This year, two additional trophies will be awarded. For further information on joining the league, the number of games entitling regular and substitute members for trophies, etc., employees should contact one of the officers.



MONEY TREE FOR MARY JO—On September 9, Applications bid a fond yet reluctant farewell to Mary Jo Lewis, secretary to Jim Rierson. Mary Jo—who left the Mountain View facility to further her education at Foothill College—received some monetary assistance from her co-workers, in addition to a going-away cake. Her money tree bore some \$35 in cash.



INTRAMURAL SOFTBALL CHAMPS—The Special Products team at MV finished the season with an unblemished record of 12 wins and no losses. The deciding game was played against R&D, with a final score of 14-3. Team members include back row (l. to r.): Dave Heck, Keith Thomson, Joe Stanic, Joe Fulginiti, Gerry Block, John Ferrelia and George Vashel. Front row (l. to r.): Max Chancellor, Andy Mattus, George Fox, Bill Bennett and Larry Phillips. Not pictured: Bill Simone. The team plans to form again next year.

FOUR FALCONS HELP ALL-STARS IN WIN OVER REGIONAL CHAMPS

MOUNTAIN VIEW—With three Fairchild players in the line-up and Falcon manager Pat Campagna at the helm, the Northern California AAA softball all-stars trimmed regional champion Muzio Bakery 2-0 in an exhibition game September 11 at McKelvey Park.

Pitcher-outfielder Verne Grafton, catcher-outfielder Al Talboy, and short-stop Ray Phillips were Fairchilders who saw action.

The game served as a warm-up for the Sacramento team which is now competing for the world championship in Clearwater, Florida. Muzio earned a spot in the world tournament by winning the recent regional tourney in Stockton—a tournament in which the Falcons placed fourth in a field of 16.

Three Falcons distinguished themselves in the regional tourney by winning all-star berths. They are first baseman Eddie Loveless, second baseman Ben Gonzales, and Talboy. Other Fairchild players were: Ray Phillips, Larry Phillips, Grafton, Rich Balswick, Larry Becker, Rich Rodrigues, Frank Aquino, Paul Melvin, Jim Duncan, John Noce, Chuck Camuso and Ed DeMartini.

With the Falcons' first season having been such a monumental success (57-9 record), Manager Campagna is already hard at work preparing for the 1966 season.

LEADWIRE

PUBLISHED BY AND FOR EMPLOYEES OF
FAIRCHILD SEMICONDUCTOR

MOUNTAIN VIEW—PALO ALTO—SAN RAFAEL—HONG KONG
SOUTH PORTLAND, MAINE—SHIPROCK, N. M.

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SEPTEMBER, 1965

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RESEARCH & DEVELOPMENT—George Daughters, Peggy Vorse, Donna Parris, Kitty Christensen.

SOUTH PORTLAND—Don Loring, John Carter.

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ON THE COVER



Ready for the return flight of that ball, Leadwire's camera captures (l. to r.) Fairchild's Roger Smullen, John Ronald, Dick Hoff, John Ross, George Reh, John Carey and Larry Stenger. This volleyball battle took place at one of the peninsula's largest picnics of the season, organized by several departments in the main Transistor plant.

ARNOLD J. POPKY
17461 PLEASANT VIEW AVE.
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SEWING MACHINES

FEARLESS

FEARLESS

SEWING MACHINES

Anniversary

FROM THE EDITOR

We're eight years old. Fairchild Semiconductor, the premier division of Fairchild Camera and Instrument Corporation, quietly celebrated its eight birthday last month.

And if the company's history has been brief, it has also been illustrious.

The division, whose employees number more than 5,000, represents more than half of the entire corporation's force, and has operations throughout the free world. All this from a nine-man shop in Dr. Victor Grinich's car port in Palo Alto, which is what the division was in October, 1957. The initial staff included Dr. Robert N. Noyce, Dr. Gordon E. Moore, Dr. Grinich, Julie Blank and a technician named Murray Siegel, now head of Customer Applications.

When the men moved into their first building, on Charleston Road in Palo Alto, they encountered problems completely new to them as scientists—such as chasing rabbits out of the ladies' restrooms. There were no lady employees at the time, of course, so the rabbits used to wander in from a neighboring field.

The old timers remembered that although the company was a threadbare operation, it was adequately financed, and was never in real danger of dying in infancy. And in that first 14,000 square foot building, it would seem that comfort of the staff was uppermost in the minds of management. It is fondly remembered that the huge building had six multi-capacity restrooms—for nine people.

The company got its first big boost in January of 1958 when IBM placed the first order for silicon transistors—100 of them.

When the Fairchild Semiconductor began its Marin county plant in 1959, the employees there experienced unlikely incidents and conditions almost identical to those of their predecessors in Palo Alto. Before the company settled in its spacious Redwood Highway plant, it operated in a temporary building in downtown San Rafael. Several of the first employees there can well remember the small testing room located in the rear of the building. This room was air-conditioned and the girls wore sweaters to keep warm. At the same time, the rest of the building was so hot that employees kept the doors open to keep cool. And with the doors open, in wandered every stray mosquito in the neighborhood, and, of course, every rabbit.

It was not unusual for supervisors to work after hours to keep up with the work load.

There was one small room at the front of the building that contained two tables and a dozen chairs. Only a coffee machine was in the room, but that was the cafeteria. For comparison, the diode plant, now with a modern building and every convenience employees could want, employs almost 1000 employees.



Donald T. Valentine . . . Director of Marketing

DONALD T. VALENTINE NAMED DIRECTOR OF MARKETING

MOUNTAIN VIEW—Donald T. Valentine, former national sales manager, this month became Fairchild Semiconductor Director of Marketing. He succeeds Thomas H. Bay, who has been promoted to General Manager of Fairchild Instrumentation.

Don held the sales manager post since December, 1962, during which time the company's sales records soared to place the company at the top of the semiconductor field.

A native of New York City, he joined Fairchild Semiconductor in February, 1960, after leaving a post with Sylvania. He earned a BS degree at Fordham University, and did post-graduate work in electrical engineering at University of Maryland, before earning an MBA degree at University of California at Los Angeles. He is an Army veteran.

In his new post, Valentine assumes responsibility for the Semiconductor division marketing efforts for all products and to all markets, including the sales force. He will continue to make his headquarters in Mountain View.

In the fall of 1960, Solid State Journal carried a feature article on the rapidly-growing company, Fairchild Semiconductor. Opening the article was this sentence: "When some future historian sets out to write the history of the solid state electronics industry, there will be more than passing mention of the 'Fairchild Formula and Philosophy.'" There will indeed.

In pouring through materials tracing the rise of Fairchild Semiconductor, we were amazed at the number of "old-timers" still with the company. Perhaps you'd like to see who they are. We're busily rounding them up for photos; and they will appear in the December Leadwire. Incidentally, if you are an old-timer (hired on or before December 31, 1959) or if you know one, please let us know at 2539 in Mountain View or by mail in Marketing Services.



Gene McClenning . . . Marketing Services Manager

GENE McCLENNING IS NEW MARKETING SERVICES MANAGER

MOUNTAIN VIEW—Lowell G. (Gene) McClenning is Fairchild Semiconductor's new Marketing Services Manager, it was announced this month by Director of Marketing Donald T. Valentine. He succeeds John W. Hall who became Instrumentation's director of administration.

McClenning, formerly senior account supervisor for Faust/Day advertising agency of Los Angeles, takes charge of the department responsible for the company's advertising, public relations, sales promotion, direct mail advertising, reproduction and literature, technical illustration services, technical writing services, and a multitude of additional internal services.

McClenning's most recent assignment with Faust/Day was as account supervisor to the Fairchild Semiconductor advertising program, and in that capacity he played a major role in shaping Fairchild's present approaches to general marketing activities, as well as the media advertising campaign now in effect which bills well over \$1 million annually through the agency.

After December 1, 1965 Mr. McClenning will make his headquarters in Mountain View, California.

FIVE-YEAR LADIES ARE "QUEENS FOR A DAY" AT R&D

PALO ALTO—A new policy which will declare each five-year lady employee "Queen for a Day" is now in effect at R&D.

Beginning recently, every lady completing five years at Fairchild will receive, in addition to her customary 5-year pin, an orchid (presented at a coffee get-together in her honor) and the honorary title of Queen for a Day.

First recipients of the honor were 18 R&D women who have completed five years at Fairchild so far. The ladies were honored last month at a gathering presided over by Dr. Gordon E. Moore, director of research. The girls' proud supervisors were also present.

FAIRCHILD DEPARTMENT WILL MANUFACTURE MEMORY PRODUCTS

MOUNTAIN VIEW—Fairchild Semiconductor this month established a new department to design, manufacture, and market components and systems for memory sections of electronic computers.

The Memory Products department, located in a modern 24,000 square-foot building at 2525 Charleston Road, Mountain View, initially will produce monolithic semiconductor "scratch-pad" assemblies, ferrite memory cores, wired memory core planes and "stacks" of core planes.

Fairchild Semiconductor sells logic circuitry components to virtually all of the electronic computer manufacturers in the United States. Products of this new department will broaden Fairchild's market to include the large memory sections of computers as well as the central processors.

Memory sections of computers have the ability to "store" electronic signals until they are called for by the central processor section. Storage times can be as little as a fraction of a second or as long as several years and more. Memories are sometimes located in the same case as the rest of the computer, sometimes installed as separate banks of equipment at remote locations.

Fairchild's first memory products will utilize the signal storage capability of microcircuit "flip-flop" elements, wherein many separate memory-bit elements on a single silicon chip indicate the information they store by the presence or absence of a signal current. This monolithic memory concept is an outgrowth of Fairchild's research and development work on other types of microcircuits.

Another memory system to be marketed by the Memory Products Department uses ferrite cores—microscopic, doughnut-shaped parts twenty or thirty thousandths of an inch across—strung in complex arrays with thin wires running through each core.

Heading the new department is memory products manager, Harley Perkins, formerly manager of memory development at the Fairchild R&D Laboratory. Mel Phelps, who has managed microcircuit, new product and industrial marketing for the Semiconductor Division is the department marketing manager. Jack Schmidt, also formerly associated with the Fairchild R&D Laboratory memory research unit, is engineering manager. Ed Watson is manufacturing manager, and Joseph Katz, formerly with Computer Ferrites Corporation, is core production manager.

Fairchild Semiconductor general manager Charles E. Sporck said the new department actually began with a research and development program instituted in 1962, and that extensive market research has indicated a need for a memory products supplier with access to the advanced research and development capability of Fairchild Semiconductor.

TOM BAY NAMED GENERAL MANAGER OF FAIRCHILD INSTRUMENTATION IN REALIGNMENT; JOHN HALL, CHRIS COBURN GAIN NEW POSTS

CLIFTON, N. J.—Thomas H. Bay, Fairchild Semiconductor director for marketing since the company's founding eight years ago, was named General Manager of Fairchild Instrumentation this month.

The announcement was made jointly by Group Vice President Robert N. Noyce and Semiconductor General Manager Charles E. Sporck. Leaving the division with Bay are Christopher F. Coburn, who has been promoted to Instrumentation director of Marketing, and John W. Hall, who was appointed director of administration. Both positions are newly created.

All three men will maintain offices at the division headquarters in Clifton, New Jersey. In another major promotion within Instrumentation division, Charles Askanas, formerly operations manager for Instrumentation's west coast facilities, became division operations manager.

Tom Bay was one of the first employees of Fairchild Semiconductor and its only director of marketing. With him at the helm, Semiconductor overcame the handicap of a late start in the hotly competitive field to become a world leader in silicon transistors, diodes, and integrated circuits; and at the same time the company came to prominence in semiconductor test equipment. Fairchild Instrumentation, which produces test equipment as well as oscilloscopes, amplifiers and digital voltmeters, was a department of the Semiconductor division until early this year.

Coburn has been head of Semiconductor's consumer product marketing during the company's big drive to place its products in consumer products. Originally selling only to government contractors, Fairchild now does more than half of its business to non-military customers.

Hall was the company's first advertising manager, and most recently headed the huge marketing services department. Hall's tenure as Marketing services manager was a period of phenomenal growth, during which time the department grew to its present size of 60 persons, and took countless new responsibilities for the company.



JOHN W. HALL . . . Administration Manager, Fairchild Instrumentation



THOMAS H. BAY . . . General Manager, Fairchild Instrumentation



CHRISTOPHER F. COBURN . . . Director of Marketing, Fairchild Instrumentation

NEW METHOD OF MASS-PRODUCING SILICON TRANSISTORS GAVE FAIRCHILD SEMICONDUCTOR START IN HIGHLY COMPETITIVE FIELD

In 1957, a group of young scientists, led by Dr. Robert N. Noyce, worked out a method of mass-producing silicon transistors using a chemical-etch system called the "mesa process."

These men knew that military electronics equipment required the high performance advantages that silicon transistors offered over the conventional germanium transistors then available, and that there was a large business potential for well-made silicon transistors.

They presented their plans to officials of Fairchild Camera and Instrument Corp., and received financial backing to go into business under the name of Fairchild Semiconductor Corp., operating as a subsidiary of the parent Fairchild Camera.

From their first setup in a garage in Palo Alto, they quickly expanded until sales volume warranted the erection of a building in Mountain View. The technology used by Fairchild Semiconductor quickly resulted in industrial acceptance of the product, and a series of expansions in Mountain View were undertaken to give the firm the growth room it needed.

With a firm position in the industry as a supplier of transistors, Fairchild began to develop a line of diodes, and sales volume increased to the point where management decided, in 1959, to build an entirely separate plant in San Rafael.

Meanwhile, the officers of Fairchild Camera had closely watched the performance of its semiconductor subsidiary, and in 1960 voted to purchase the assets of the subsidiary outright and operate it as a division of the corporation.

During this period of time, a scientific drama was beginning to unfold in the research and development laboratories of the company. Spurred by management's constant requests to find methods of lowering production costs, R&D teams began to look for ways of putting many more transistors at a time on the silicon "slices" which carry them through the processing steps.

As the number of transistors per slice increased, and as the company's ability to work with microscopically small parts improved, it was finally perceived that there might be a way of connecting a number of transistors together without separating them from the processed slice. This idea grew into the products which today are called "integrated circuits."

In 1960 a Fairchild staff-team published the first paper describing silicon integrated circuits and in 1961 Fairchild announced the first commercially available silicon integrated circuit. The price for one circuit in 1961 was more than \$200—today Fairchild sells some integrated circuits for less than a dollar.

This combination of cost reduction and constant sales growth has, over the years, caused the company to expand production facilities, many times. In 1963 the company started the South Portland, Maine, plant. In recent past years facilities have been established in Hong Kong, Australia, Italy, England and France and most recently in Shiprock, N.M. This process is continuing and existing plants are being expanded.

Fairchild Semiconductor is the world's largest manufacturer of silicon transistors, integrated circuits and diodes. The company has held this lead for many years and as yearly sales volume for the entire industry has grown, so has Fairchild's share of the market. Corporate policy prevents the division from revealing the actual dollar figures of its operation, but it is possible to measure the figures in tens of millions of dollars annually.

International operations are booming, domestic plants are being expanded, and still the company is not able to satisfy all the demand for its products, officers declared.

Particularly encouraging is the fact that while many of Fairchild's products are used by the various military services in building electronic equipment, most of the company's business comes from non-defense markets, such as the television and radio industry.



FOUNDERS—This is one of the very few photos of all the founders of Fairchild Semiconductor together. The men and their present titles are (left to right): Dr. Gordon E. Moore, director of research; Dr. Sheldon E. Roberts; Eugene Kleiner; Dr. Robert N. Noyce, group vice president for the Semiconductor and Instrumentation divisions; Dr. Victor H. Grinich, associate director of research; Julius Blank, facilities manager; Dr. Jean Hoerni; and Dr. Jay Last. The men for whom no title is indicated are no longer with the company.

PATENTS, LICENSING AGREEMENTS STRENGTHENED COMPANY POSITION

In the early days of Fairchild Semiconductor, the most significant inventions relating to the Planer process and integrated circuitry were made by Group Vice President Dr. Robert N. Noyce, Director of Research Dr. Gordon E. Moore, and Dr. Jean Hoerni (the latter left the company in 1961). The patents on these first inventions form the nucleus of our patent package.

In late 1962, Fairchild entered into its first licensing agreement with Philco Corporation (now a division of Ford Motor) in which it was agreed that Philco—for the payment of royalties—would not only be given the right to use our patents, but also furnished with the manufacturing know-how to produce Planer transistors.

By mid-1963, R&D activity (under the direction of Dr. Moore and Dr. Grinich) grew to such an extent that it was no longer feasible to rely on independent patent attorneys outside the company. Our own Patent Department was then created and Roger Borovoy came aboard as full-time Patent Counsel. In this capacity, he reports to Mr. Nelson Stone, Assistant Secretary of Fairchild Camera in Syosset, and is responsible for handling all company patent and trademark applications, for giving general advice to management on patent and trademark matters, and for carrying out Fairchild's active licensing program.

In 1964, a succession of license agreements contributed additional royalty income to the division. First, Fairchild and Sperry Rand entered into a license agreement, similar to Philco's, giving Sperry the right to manufacturer Planar transistors and integrated circuits under the Fairchild Semiconductor patents. This was followed by adding International Tel & Tel as a licensee; an exclusive license with Nippon Electric for manufacture and sale of Planar semiconductor devices in Japan; and in England, an agreement with Elliott Automation Ltd.

Just last month, a significant achievement was IBM's official recognition of Fairchild Semiconductor patents. IBM has not only agreed to pay royalties for the use of our division's patents but also granted Fairchild the right to use all IBM semiconductor patents without cost (numbering in the hundreds).

According to Roger Borovoy, the company had only eight patents (50% of which were Dr. Noyce's inventions) in 1963. Currently, the division boasts 35 patents and many more active pending patent applications. "Royalty income from all of our license agreements now contributes over one million dollars per year to Fairchild profits."

Roger says that this is only the beginning. Fairchild continues to police their patents rights and to encourage those using

the Planar process to become licensees. A case in point is current litigations with Raytheon in San Francisco because of their alleged unlawful use of Fairchild's Planar process patents. Should Fairchild prevail, the possibilities of additional royalty income under the patents are virtually unlimited.

The division's patent activity does not end in the U.S. Borovoy, assisted by his competent secretary, Donna Johns, also handle patent affairs for SGS and in foreign countries. While Donna is responsible for preparation of foreign applications for filing, Roger handles the licensing of current Fairchild patents abroad. Needless to say, this two "man" team play an important role in policing the division's dominant patent position in the industry.

BIALEK NAMED FAIRCHILD INTERNATIONAL OPERATIONS MANAGER; DILLER IS NEW SAN RAFAEL DIODE PLANT MANAGER

MOUNTAIN VIEW—Fred B. Bialek, manager of Fairchild Semiconductor's diode plant in San Rafael, California, has been promoted to the new position of International Operations Manager, and James V. Diller Jr., Product Manager will succeed Bialek as manager of the San Rafael facility.

The announcement was made this month by Fairchild General Manager Charles E. Sporck, who said the new post of International Operations Manager was created to administer more closely to the needs of Fairchild's rapidly expanding overseas operations in South Yarra, Australia, and in Hong Kong, where the plant is preparing to move into a newly-constructed larger building. The managers of both overseas plants will report to the new International Operations Manager.

Bialek has been manager of the San Rafael plant since September, 1962. He joined the company in April, 1959, in Mountain View as an industrial engineer, and was assigned to the diode plant the following year as chief industrial engineer. He advanced through several managerial posts, including production control manager, and product services manager. Bialek will make his office in Mountain View.

A native of New York City, Bialek earned a BS in Industrial Engineering at Massachusetts Institute of Technology.

Diller takes charge of a plant, staffed by approximately 900 employees, which produces silicon diodes and special products from wafer fabrication through final seal. The plant was started in 1959 in downtown San Rafael, and moved into its present modern building at 4300 Redwood Highway the following year.

Diller joined the company in San Rafael in March, 1963 as a supervising engineer and was named product manager in 1964. A native of Ashland, Kentucky, he obtained a BS degree at University of Rhode Island, and has done graduate study at MIT.



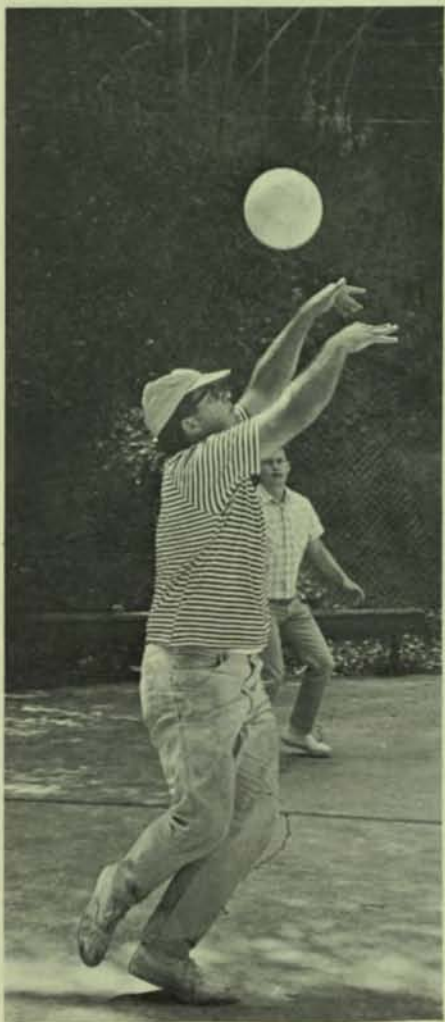
FIRST BUILDING—From the standpoint of physical facilities, Fairchild Semiconductor's beginnings were far from humble. After a few days in Dr. Grinich's garage, the company, then nine-men strong, moved into this building at 844 Charleston Road in Palo Alto. The building is now occupied by Instrumentation.



Fred B. Bialek



James V. Diller Jr.



R&D'S OUTING DRAWS CROWD OF NEARLY 550

PALO ALTO—R&D feted its annual picnic at Blackberry Farm in Cupertino with some 340 adults and 191 children in attendance recently.

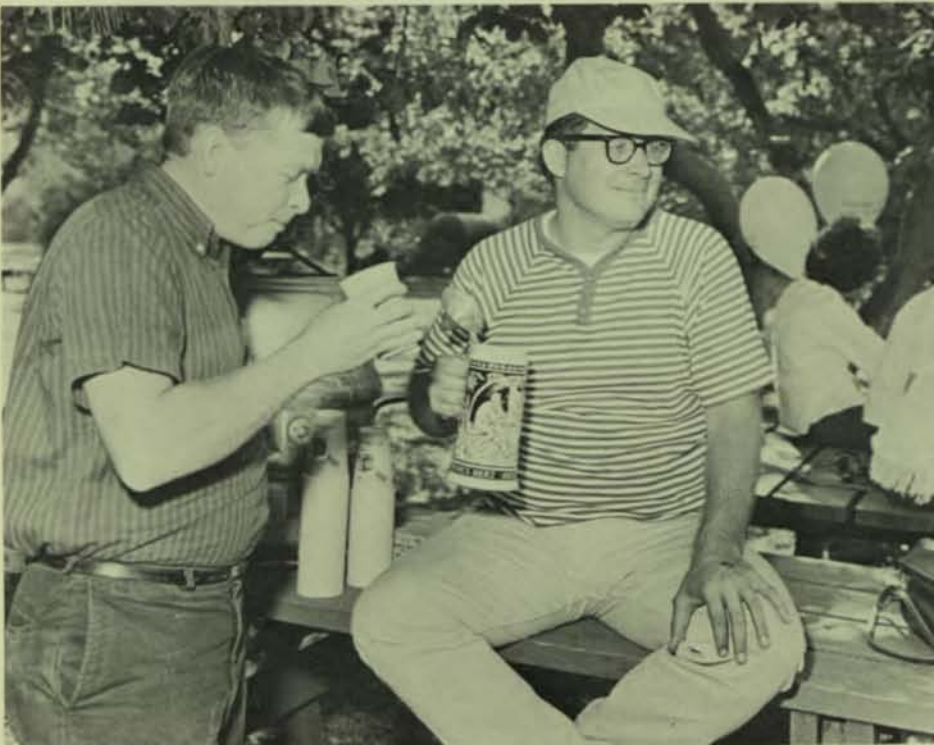
Through the efforts of the picnic committee—Lynn Clark, Alam Herboldsheimer, Sally Mizote, Jack Noll, Dick Parker, Don Ramsay and Irene Collins—the day's activities and food were "par excellence."

Don and Sally conducted the children's games, with prizes for all small fries who participated.

Among other entertainment, the adults took part in volleyball and mixed-team softball games, as well as swimming. A notable event of the day was a multitude of helium-filled balloons, bearing the names and addresses of each guest, which were released and crowded the sky. The object was: To see whose balloon traveled the farthest distance. The contest for a cash prize is still open and to date, Cleveland McDonald (whose balloon card was returned from Fort Ord) holds the lead.

A large number of employees and families assisted the picnic committee in spreading the day's feast.

Statistically speaking, 900 8-oz. steaks, 130 lbs. of hot dogs, 120 lbs. of garlic bread, 105 gallons of beer, and relative amounts of salad, corn-on-the-cob, ice cream bars and soft drinks were consumed by the hungry group. Needless to say, everyone is looking forward to next year's event.



DIODE PICNIC— A SMASHING SUCCESS

SAN RAFAEL—Nearly 2,300 Diode employees and their families invaded Vichy Springs at Napa for the annual picnic September 19. According to George Miller, coordinator of the plant's outing, his committees did a wonderful job in making the picnic "the best yet."

One example was Barbara Visceto who spent the day entertaining the children. Upon entering "Kiddie Land" (where free rides were available), the children were greeted by Barbara dressed in an old-fashioned bathing suit and pulling a cardboard panelled Volkswagen that was filled with toys and balloons. Later, she directed games for the younger set.

Meanwhile, the adult's favorite recreation spots were the beer garden, and dance area where the juke box played all day. Of course, grown-up and child alike enjoyed a dip in the cool water of the swimming pools.

No picnic is complete without food and this picnic was a standout in that respect. Tons of Kentucky-fried chicken and hot dogs, complemented by cole slaw, rolls, pickles, soft drinks, and coffee were consumed by the throng.

Judging by the 1965 attendance which was nearly three times greater than that of a year ago, the outing was undoubtedly a smashing success.



SGS EXPANSION PROGRAM BEGUN IN FOUR EUROPEAN COUNTRIES

Fairchild affiliate SGS (Societa Generale Semiconduttori) has launched a vast expansion project which will place facilities in France, Germany, Sweden, and Scotland.

Renato Bonifacio, Managing Director of the SGS Fairchild group, in making the announcement, said that the new facilities in conjunction with Fairchild Semiconductor will give the group "a chain of production and application experience across the technologically-rich areas of the world." SGS currently has two plants in operation—the headquarters and production plant in Agrate, near Milan, Italy, and in Ruislip, England. The Ruislip plant, which recently began producing integrated circuits, will be expanded in the program also.



SGS 'CAMPUS'—Lunchtime on the beautiful grounds of SGS Agrate factory, headquarters for the huge European Fairchild affiliate.

The SGS-Fairchild plant in France will be at Rennes, which is expected to be a center of the French electronics industry. With the building near completion, production is expected to begin in the spring of next year.

The Sweden facility will be at Marsta, near Stockholm, and SGS officials have indicated that they expect that factory to produce more than 65 per cent of SGS sales in Scandinavia during 1966.

The second plant in the United Kingdom will be at Falkirk, Scotland, where initially epoxy devices for consumer applications will be produced.

Bonifacio said that SGS also intends to build new research and development facilities in Europe.



SGS TRAINING—Employees of the future Rennes SGS plant are now undergoing training in multilingual sessions such as these.

R&D WINS TOP FIRE PREVENTION AWARD FROM PALO ALTO FIRE DEPARTMENT

PALO ALTO—Fairchild Semiconductor's Research and Development Laboratory in Palo Alto recently was presented an award by the Palo Alto Fire Department for having the city's most outstanding fire prevention and protection program in any large-employment establishment.

Based on a combination of fire protection and safety engineering details, the award recognized R&D's fire prevention education program, the many devices available at various strategic locations to quickly put out fires, and the automatic alarm and sprinkler system.

Palo Alto Fire Marshal Dewey Jacques, together with Dick Russell of the Downtown Palo Alto Optimist Club and Elmer Hawkins, of Hare, Brewer and Kelley (all members of the Palo Alto Chamber of Commerce), presented the award to Fairchild at a Fire Prevention Week "Kick-Off Luncheon" at Rickey's.



INSPECTION—R&D's fire safety system gets the critical eye from (l. to r.): Elmer Hawkins, representative of the Palo Alto Chamber of Commerce; Ralph Fitzgerald, R&D safety engineer; and fire marshal Dewey Jacques.

KENNETH BERKLEY NAMED REGIONAL SALES MANAGER

MOUNTAIN VIEW—Kenneth Berkley has been named regional manager for military sales in the central region by Fairchild Semiconductor.

His appointment was announced by Central Area sales manager Bernard T. Marren, who said Berkley has responsibility for the sale of Fairchild's complete line of silicon semiconductor products to military customers in the central region.

Berkley will make his headquarters in Fairchild's Elmwood Park, Illinois, office, at 7310 W. North Avenue.

A native of New York, Berkeley earned a BSEE at Manhattan College, Rosedale, and served three years as a Navy officer. He joined Fairchild in February, 1963, and has been a sales engineer in several Fairchild offices, most recently in Wakefield, Mass.



KEN BERKLEY

SIX FAIRCHILD PEOPLE TALK AT ELECTRON DEVICES MEETING

Fairchild Semiconductor was ably represented at the recent International Electron Devices Meeting in Washington, D.C., with six persons making presentations.

Ken Moyle read a paper co-authored with Bob Seeds entitled "A Novel Method for Selective Storage Time Control in Saturating Integrated Circuitry."

Les Vadasz delivered a paper "MOS Resistor—A Monolithic Approach to High Value Resistance."

"A Silicon Photodevice to Operate in a Photon Flux Integrated Mode" was delivered by Gene Weckler.

A paper by Will Steffe and Jean LeGall was delivered by Will. "Thermal Switchback in High ft Epitaxial Transistors."

H. B. Grutchfield and Tom Moutoux co-authored "Current Mode Second Breakdown in Epitaxial Planar Transistors" and the talk was given by Mr. Grutchfield.

JOHN SO—MARKSMAN DELUXE

PALO ALTO—Engineer John So of R&D isn't given to bragging. But if he were, he could tell some hair-raising tales of his exploits with firearms—like the times he has shot a ping pong ball off of a dog's nose; or the times he has fired a bullet at a knife so that the bullet will split and burst balloons on either side of the knife.

Astounding feats of marksmanship such as these have earned John recognition throughout Taiwan, Northern California, and his native Hong Kong; as well as earning him countless awards such as the Gold Medal for small bore short distance shooting.

His interest in firearms dates back to his early teens, when he began firing rifles for the sport of it. While attending high school in Hong Kong as a 17-year-old, he joined the police reserve and was soon "top gun." That was the foundation for his marksman career.



MARKSMAN JOHN SO, kneeling at the right, with the National Taiwan University team.

His career blossomed in 1955 at National Taiwan University, when John entered Taiwan's equivalent of our Reserve Officer Training Corps. That program gave him the idea to turn out for the University's famed shooting team. John did so and earned a spot on the first five—from among 5,000 candidates.

The University's team, with John as its star, was an outstanding one, thanks to a brutal six-hour-a-day training regimen. It gained fame, even in this country, when it was publicized in San Francisco Chinese publications; and it impressed people deeply with stunts such as those mentioned above.

John graduated from NTU in 1959 and returned to Hong Kong, thus losing his eligibility for the 1960 Olympic games competition.

From then on, his academic career began to dominate his life. He earned a Master's degree at University of Nevada in 1962, taught at that school for a year, then did further graduate study at University of California. He joined R&D in November, 1962.

He still uses firearms, but only as a casual pastime. And he doesn't dwell on his remarkable record as a marksman. "That was in the past," he says, "We must look to the future."

GOOD GUYS HOLD R&D BOWLING LEAD AFTER SIX ROUNDS

PALO ALTO—The Good Guys forged into the lead in the R&D bowling league after six weeks of action at El Camino Bowl, followed by the Wild Ones.

The rest of the league is composed of (in order of their standing): the Bad Guys, the Lucky Strikers, the Weaklings and the Five Stooges.

Individually, Toni Dragmire, Cletus Linsenmayer, and Sam Uyeda have the outstanding records in games to date. Toni is the women's top kegler with a high game of 191, and a high series of 521, both good for first place among the ladies. Cletus and Sam split the honors among the men, Cletus holding the high game at 222, and Sam with the top series at 581.

League president Jack Noll and secretary Brownie Lee Boyd invite all Fairchilders to attend bowling sessions as spectators or substitute bowlers. The league bowls every Thursday at 6:25 p.m. at El Camino. For further information, contact Jack at extension 488 or Brownie at 450.



GOLF CHAMPS—Winners in the company Summer Golf League at Mountain View display their trophies. The champions are (seated) Jack Sheets (left) and John Sentous. Standing (l. to r.) are George Reh, Ray Headrick, Lowell Erickson, and George Lao. George Lao and Lowell took second place in the league; and George Reh and Ray won third place.

LISA LARSEN, DAN FLOYD, MURPHYS WIN IN OCT. BRIDGE

MOUNTAIN VIEW—The team of Lisa Larsen and Dan Floyd and Kattie and Howard Murphy were winners in October sessions of the company Bridge club at Mountain View.

Lisa and Dan won in October 4 action, with Frank Durand and Charles Ellenberger in second place. Third place went to the team of Carol Thomas and A. McBeth.

The Murphys were first in the October 18 session followed by Durand and Ellenberger. Dick Felter and Lloyd Hackley finished third.

The club meets the first and third Tuesday of the month at 7:30 p.m. in the headquarters building cafeteria.

GROWLERS, IN-CROWD CONTEST LEAD IN MT. VIEW BOWLING

MOUNTAIN VIEW—The Growlers and the In Crowd were still battling for the top spot in the company Winter League at Mountain View, going into November 18 action.

The Growlers, who have held first place by a slim margin most of the season, were still hanging on by two points at 25.5-10.5 while the In Crowd trailed at 23.5-12.5.

But the league, which is seeing one of its tightest races in quite a while, has more than two teams vying for the top rung. Half of the teams in the 16-member loop were within four points of first place.

The Growlers, from Fairchild Controls, are led by Ty Rockhold's 165 average and Mike Warren's 160 mark. Other team members are Claude Leathers (157); Katie Guida (136); and Marian Oswald (133). The In Crowd's standouts are George Reh at 176 and Jack Sheets at 161. The team includes John Sentous (159); Corny Reese (148); Ginger Tygret (136); Louise Sheets (123); and Pauline Reh (112).

In individual performances, Mr. and Mrs. Myreholt (Keith and Agnes) are dominating the high series chase. Keith's 624 set is high among the men so far, and Agnes' 545 leads the women. George Reh trails Keith at 590; and Ann Lima is second to Agnes at 528.

George has the men's high game, a 253, followed by Ty Rockhold, 243. Alice Stidham's 234 is tops among the ladies, and Agnes Myreholt's 229 is good for second.

	Won	Lost	Average
Growlers	25.5	10.5	752
The In Crowd	23.5	12.5	723
Klunkers	23	13	727
Lucky Strikes	22	14	732
No. 2	21.5	14.5	674
Snids	21	15	702
Black Hats	21	15	693
The Tenth Framers	21	15	687
Sandbaggers	19.5	16.5	628
The Lively Ones	19	17	694
Bad Charges	16	20	691
Timber Smashers	13	23	713
The Flingers	13	23	626
The Rinky Dinkies	11	25	668
Power Rejects	10	26	659
No. 16	8	28	619

R&D GUN CLUB NOW OPEN TO RIFLE, PISTOL ENTHUSIASTS

PALO ALTO—Activities of the R&D-based Fairchild Gun Club are now open to pistol and rifle enthusiasts in Peninsula plants.

Heretofore, membership in the club has been limited to skeet and trap shooting with shotgun only. But numerous requests by employees have prompted the club to expand its activities, according to spokesman Alan Herboldsheimer.

Employees interested in joining the club are urged to contact Ralph Fitzgerald (extension 232 at R&D) or Alan Herboldsheimer (446).

MOVING UP

JOHN CAREY from engineer to supervising engineer in MV. John, who was born in Cheshire, England, graduated from Liverpool University with a BSEE degree. He joined Fairchild in 1963 from Northern Electric Co. in Montreal, Canada.

JACK BELOVE from supervising engineer, Digital Integrated Circuits, to production manager, PNP, in MV. He received his BS degree in chemical engineering from his native Brooklyn Polytechnic Institute. Formerly employed by Transiron, he came aboard Fairchild in 1963.

STAN HORTON, formerly Materials control engineer, has joined the Epoxy Products group in Entertainment Devices (MV).

DON KOLLER from Stores supervisor to Materials Control (MV). In this capacity, he will be responsible for systems work, analysis, designed to provide information and to improve routines within that department.

IN MEMORIAM

Fairchild Camera and Instrument Corporation this month mourned the death of Dr. Allen B. Du Mont November 15 in New York City.

Dr. Du Mont, one of the country's great men of science, and the "father of television," founded Allen B. Du Mont Laboratories. That company was purchased by FCIC in 1960 and has since become part of the Fairchild Instrumentation division and of the Fairchild Du Mont Electron division.

In announcing Dr. Du Mont's death, Board Chairman John Carter told employees, "He was a thorough gentleman and a wonderful man. The world will miss men such as Dr. Du Mont."

FIVE-YEARS SERVICE

Bernie Marren, Field Sales
Paul F. Kent, Mountain View
Alice M. Wollaston, Mountain View
Renee P. Grenier, Mountain View
Alice Sabory, R&D
William A. Bennett, Mountain View
Barbara C. Gaines, San Rafael
Fred D. Murphy, R&D
Joe M. Dietz, Jr., Mountain View
Al Weddle, Mountain View
Charlie Isherwood, Mountain View
Kay Abbott, Mountain View
Phala A. Watkins, Mountain View
Robert Schreiner, Mountain View
Jack Andersen, Mountain View
Arthur Sullivan, Mountain View
Henry Blume, Jr., R&D
Walter A. Sinclair, R&D



RECORD BREAKER—Gwendolyn Horton, a Fairchild Employee since May 1962, broke another record in visual sorting. She has held the position of Utility Operator since March 1964. Gwen has trained a number of girls now doing high standard in visual sorting. The secret of her success? "You need good eyes and fast fingers."



MEYERS' BEAUTY—This beautiful double orchid (two blossoms on one stem) was grown by R&D's glassblower Edward Meyer in his San Francisco home. Edward converted his patio into a garden by putting a corrugated plastic roof over it, after his brother gave him several orchid plants to experiment with. This beauty is truly a product of Edward's ingenious green thumb, since the garden has no humidity controls or temperature controls as is normally advised. But this isn't Ed's greatest horticultural success; he once produced a triple orchid blossom.

NEW FACES

HORST MANFRED MUENZENBERG came aboard at Diode as a new supervisor. He completed graduate work at Donali Schule in his native West Berlin, with further studies at Arizona State University. Formerly associated with Motorola Semiconductor in Phoenix.

KEITH R. HAMPE came aboard as product engineer at San Rafael from Motorola Semiconductor in Phoenix. Born in Canada, Keith received his BS degree in chemistry from Arizona State University in 1963. Member: American Chemical Society.

JOHN SABASTEANSKI is a new design engineer at South Portland. A Maine native, he served three years in the Army. Prior to joining Fairchild, John was associated with Southworth Machine Company. Member: ASTM.

FRANK PROENZA is a recent addition at Diode as a technical supervisor. Born in Kobe, Japan, he has studied at Loyola University (New Orleans, La.), Los Angeles City College and Glendale College. Formerly employed by Continental Device Corp.

BUFORD N. (WILL) WILLIS comes to Systems & Procedures (MV) as a systems analyst. A graduate of San Jose State with a BS in accounting, his prior employment includes Valley Title Company and Ames (NASA) Research Lab.

PHILIP J. HASKELL has come aboard at South Portland as production foreman. He received his BSME degree from the University of Maine in his native state and has nearly completed work toward an MBA from Xavier University (New Orleans, La.). Formerly associated with General Electric.

JOHN A. ARCHER, a native of Nottingham, England, comes to R&D's Device Development group as a technician. Following service in the British Army, he attended the University of Nottingham, receiving his BS degree in 1952. Prior to Fairchild, he was employed by Stanford Research Institute.

FRANK S. GREENE, JR. joins Fairchild as a senior engineer in High Speed Memory Engineering (R&D). Frank comes directly from the Air Force where he served as captain. Born in Washington, D.C., he earned his MS degree from Purdue University, Lafayette, Indiana. Member: IEEE, Sigma Xi.

JOSEPH RIZZI joined Digital Integrated Circuits as a new product engineer, after receiving his MSEE degree from the University of New Hampshire.

NGHIEM UNG PHAN recently joined Digital Integrated Circuits (MV) as a product engineer. He received his MS degree from Northwestern University in 1962. Formerly employed by the semiconductor division of Minneapolis-Honeywell, he was born in South Vietnam. Member: IEEE.

MICHAEL EARL SHANNON came aboard at MV as foreman in the diffusion area, Digital Integrated Circuits, after receiving his BSEE from the University of California, Berkeley. He was born in DeQueen, Arkansas.

EUGENE J. FLATH is a new foreman in Fab #3 (MV). He graduated from the University of Wisconsin, his native state, with a BSEE in 1960. Following service in the Navy, he obtained his MSEE degree from the University of New Hampshire this year. Member: IEEE.

