VOL. IX, NO. 2

FEBRUARY, 1987

SPECIAL EVENTS TO MARK 30TH YEAR IN SARASOTA

Happy Anniversary, Data Systems Division!

The year 1987 marks 30 years of progress in Sarasota for our Division. To celebrate the occasion, some special events are being planned by employee committees. The events include:

*TRIVIA GAMES — Beginning in February, there will be a monthly Trivia game for all regular full—time employees. Employees on the Internal Activities Committee are in charge of conducting this monthly game which is described in a PULSE insert, the TRIVIA KORNER.

*HISTORY — A commemorative booklet, containing a company history about our Division and its employees, is being prepared by the Publications & Research Committee.

*DANCE —— Plans are underway for a Fifties—Sixties Dance later this year for all employees. The External and Retirees Activities Committee is working on this project.

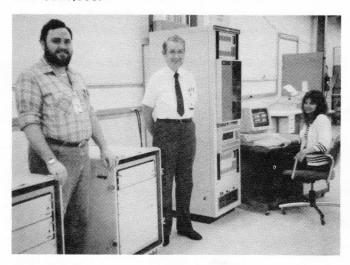
*PARADE FLOAT — A group of employees is getting together to design and build a FWSI Data Systems Division float to represent our Division at community festivals, such as the King Neptune parade in Sarasota and the DeSoto Celebration parade in Manatee County. The External Activities Committee is in charge.

"There are some other special events which are under consideration, but they are not yet firm enough to announce," said Rick Greenawalt, Personnel Director. "We'd like to invite all employees and Retirees to participate in our celebration, and hope to make 1987 a year of recognition for all the people who have contributed to the success of Data Systems Division over the years."

Volunteers who are serving on the Thirty Years Committee include: Ron Basham, Dot Berner, Butch Branson, John Burr, John Elliott, Elaine Ellis, Rick Englund, Rick Greenawalt, Mark Hanigan, Margaret Herbst, Art Kelley, Freddie Masse, Don Parker, Carol Waters, Isabel Wetz, Bill Wheeler and Dale Woodland. Subcommittees are: External & Retiree Activities; Internal Activities; and Research & Publications.

WIND ENERGY RESEARCH WILL USE OUR SYSTEM

A new system from Data Systems Division will be part of a wind energy research project funded by the U.S. Department of Energy. The system, shipped during February, is valued at over \$380,000.



Don Worthington, Erwin Lawson, and Kathy Bossert with two 600—series PCM transmitting stations and a Model 1786 Telemetry Reduction/Display Station with four EXPRTs, just before the system was shipped to Solar Energy Research Institute, Golden, Colo. The system will be used in wind energy research.

Solar Energy Research Institute (SERI) ordered the system for its Wind Energy Research Center, Golden, Colorado. The system includes two wind turbine—mounted EMR 600—series data acquisition and PCM transmitting stations, and an EMR 1786 Universal Telemetry Reduction/Display Station incorporating three EXPRT Decoms (plus one spare) and an EMR 8340 Telemetry Expander. The 600—series units can transmit to a remote ground station either via coax lines or via radio transmitter/receiver links.

SERI's wind energy research project, sponsored by the U.S. Department of Energy, involves collecting data from various types of wind turbines in various locations.

(Cont'd on Page 2)

TRIVIA KORNER BEGINS TODAY! ENTER NOW -- YOU MAY BE A WINNER!

AN EQUAL OPPORTUNITY EMPLOYER M/F/H/V

CIRCLES...TEAMS...EMPLOYEE INVOLVEMENT CONTINUE TO GROW

Data Systems Division's Employee Involvement Program has matured and grown since its beginnings in 1982. In recent months, the Circles Advisory Committee has evaluated the successes of our Circles efforts, and has charted a course for future Employee Involvement activities.

"What we're seeing is confirmation of the old saying that growth occurs through change," explains Facilitator Freddie Masse. The Advisory Committee has approved the concept of continued growth in our Employee Involvement program, and has taken major steps to make Employee Involvement a way of life for employees at Data Systems Division.

HISTORY

Initially, our introduction to Employee Involvement came in 1982 when our first Quality Circle Facilitator, Dexter Nash, introduced the program. Seven Quality Circles were started. At first, Quality Circles were made up of approximately 8 to 12 employees who did similar types of work and reported to the same Supervisor. The Supervisor was usually the Circle Leader and groups of employees addressed problems in their own work areas.

Over the years more Circles were added, and the program's name became Employee Involvement Circles. Our Teams now include the traditional Circle Teams as well as cross—Departmental and cross—functional—Teams — — so the scope of issues addressed is no longer limited to problems within one department.

ADVISORY COMMITTEE

The Advisory Committee consists of Joe Keller, Carl Aquilino, Dave Clouse, Dick Dobbyn, Rick Greenawalt, Maurice Gritzman, Freddie Masse, Ray McPartlin, Dexter Nash, Carl Schleicher, and Bob Wallace.

In recent months the Advisory Committee has met several times for intensive study of the future course of Employee Involvement. Results of a survey were analyzed, and several communication meetings were held with Managers and Team Leaders to formalize future plans.

The Advisory Committee's decision is to move closer to participative management, and Employee Involvement is the basic foundation upon which to build. This decision means that the use of team problem—solving THROUGH TEAMS, TASK FORCES, CIRCLES, AND DEPARTMENT MEETINGS IS ENCOURAGED AT ALL LEVELS.

LOOKING AHEAD

Immediately visible will be more management participation and involvement. To kick off these Employee Involvement activities, Organizational Directors met in two separate meetings with Circle Leaders to share information on their Organizational goals as well as over—all Division objectives.

"The result was a smashing success, and since then there have been numerous Department and Team meetings with Managers sharing Departmental goals," Freddie Masse reports.

The communication meetings are just the start, however. Managers will also become more involved in their Department Team efforts and will share input at the goal—setting and problem identification stages, as well as throughout the process as the Teams request information.

"There will also be some cosmetic changes to reflect the Division's over—all goal of total Employee Involvement," Freddie said. "The posters hanging in our 'Circle Row' will soon be changed, and new Team designations will be adopted."

Want more information? Give Freddie Masse a call, Ext. 5532, and see how YOUR Department can plan for more Employee Involvement.

VACATION NEWS

CAROLYN PEET (Telemetry Tech Writing) flew to Germany December 28–January 5 to visit her son Michael who is with the U.S. Air Force. They toured in the Munich–Stuttgart area where Carolyn enjoyed Gothic cathedrals, a medieval walled city, the Black Forest, and the beautiful snowy scenery — "more beautiful than any Christmas cards can portray," she reports. Carolyn found her college German was helpful — when combined with some sign language!

COMMITTEE OF 100 VISITS OUR PLANT

Members of the Board of Directors of Sarasota Committee of 100 met at Fairchild Weston's Data Systems Division on February 16. General Manager R. J. Keller gave the 16 business and professional visitors a briefing about our company, and Tom Salmon and Rick Greenawalt, of Personnel, escorted the visitors on a plant tour.

The Committee of 100 encourages economic development in Sarasota County.

WIND ENERGY RESEARCH WILL USE OUR SYSTEM

(Cont'd from Page 1)

Data Systems Division provided substantial amounts of equipment to NASA for wind energy research in the late 1970's and early 1980's, and this follow—on business can be attributed to our successful performance on the earlier NASA program, according to Jud Strock of Applications Engineering.

Erwin Lawson was Project Engineeer for this system, and Kathy Bossert was Software Engineer, with Don Worthington as Systems Technician. Erwin, Kathy and Don are scheduled to go to Colorado in March to provide training and installation support to the customer.

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REMEMBER WHEN ...

Celebrating 30 Years of Progress in Sarasota

FEBRUARY EVENTS OF THE PAST

1967 John Talbot sings King Arthur role in "Camelot" at Sarasota Players.

1969 Three EMR S—Band Transmitters launched on Titan IIIC.

1972 Wyatt Bishop promoted to Engineer.

1973 Jim Horvath completes Famous Artists School.

1975 Quote from Jean Riboud, President of Schlumberger -- "I do not want Schlumberger to be the biggest...I want Schlumberger to be the best."

(Items gleaned from past issues of PULSE by your 30 Years in Sarasota Committee)

MORE MUX-DEMUX SYSTEMS SHIPPED BY PRODUCTION

This sophisticated MUX-DEMUX system which was shipped recently was among the first of these units to go through the Production cycle in Manufacturing. The units are the 8210 Asynchronous Multiplexer and 8220 Asynchronous Demultiplexer. There is a large backlog of orders for this new standard product system, and customers include Point Mugu Test Center, Patuxent River, Kenton and Grumman.



Claude Howard, Gary Phillips, George Norton and Greg Sutton are pictured in Final Quality Control with one of our new 8200 MUX-DEMUX systems which was shipped recently.

P. C. FAB PHASE-OUT IS ANNOUNCED TO EMPLOYEES

General Manager R. J. Keller met with employees directly involved in our Printed Circuit Fabrication area on February 10 to announce that the Division plans to discontinue printed circuit board fabrication in our plant later this year or early in 1988. Sixteen employees are directly involved in the P.C. Fab area at this time.

Employees were assured that every effort will be made to find suitable placement for each of the employees affected by this change. Mr. Keller pointed out that in the recent phase—out of the Paint Shop and Plating areas, the employees involved have been placed in other positions within our facility, with no layoff of personnel.

Printed Circuit Boards are a basic component for all of our sophisticated electronic products and systems. Design of printed circuitry will continue to be done in our Research and Engineering areas, and will continue to require the support of Design & Drafting, CADDS, and other groups. Printed Wiring Assembly (PWA) and testing will continue in–house, but the printed circuit fabrication will be done by outside vendors in the future, when our P.C. Fab phase—out is completed.

There are always many factors which go into such decisions, but one of the main reasons for this change is the environmental regulatory issues involved. Although the Division has spent hundreds of thousands of dollars on a new waste management system and ongoing environmental protection processes, it appears that future regulatory changes will very likely require substantial added expenditures to continue to remain in compliance. Those companies which perform printed circuit fabrication as their primary business are better equipped to deal with regulatory issues, the General Manager said. Hence Printed Circuit Fabrication will eventually be done outside our facility.

Suitable vendors must be found and be qualified to fabricate the quality Printed Circuit Boards which are required for use in Data Systems Division equipments. Phasing out of our Printed Circuit Fabrication area will probably take place during most of 1987. Target date for completion of the phase—out process is late 1987.

"We really appreciate the cooperative response we have received from the employees in Printed Circuit Fab, and want all employees to feel free to call on Supervisors and Personnel to discuss any questions which may come up," Joe Keller said.

In addition to Joe Keller, Managers and Supervisors who met with the P. C. Fab employees included Operations Director Ray PcPartlin, Manufacturing Manager Dave Clouse, Fabrication Manager Eldon Andrews, P. C. Supervisor Gene Flagg, and Personnel Director Rick Greenawalt.

SARASOTA PIONEERS RECALL 1957 BEGINNINGS

When three of our long-time Sarasota employees get together and reminisce about the early days of Electro-Mechanical Research in Sarasota back in 1957, it's like a family reunion. Their stories, memories and laughter make for lively conversation.

DOROTHY RICHEY (P. C. Fab Photo Resist area), DELLA PRESLEY (ATE Operator) and HESTER SPANN (Telemetry Assembly) chatted recently about joining the electronic assembly training classes in the company's temporary quarters on Clark Road in February, 1957. After two weeks of training, they were put on the payroll and officially became employees.

Dorothy and Hester celebrated 30 years of service this month. Della Presley was in one of the earliest training classes, and worked for EMR for many years. She left in 1969, and rejoined the company in 1972.

While the new Production Building in Fruitville was under construction at our present location, the temporary quarters on Clark Road served as training classroom and assembly area. There was no heat or air conditioning. When the new air conditioned Production Building was completed at our present site, in late June, 1957, the Clark Road employees loaded their work into their cars and headed for Fruitville.

Hester Spann relates: "We drove from Clark Road to the brand new Production Building. It looked so huge when it was empty. We drove our cars right into the building, through the Shipping Department door, and unloaded our work. Those cars sure made a lot of noise in the building."

Della Presley remembers the Friday pot-luck parties. "We each brought in a covered dish and had great lunches. We were just like one family."

Hester continued: "I remember one of the Supervisors from up North used to tease us —— 'You Crackers may not know anything about electronics, but you sure can cook good!' he said."

Dorothy Richey recalls the early days when "I enjoyed learning the job so much I didn't want to go home until I finished what I was working on, and couldn't wait to come to work the next morning."

She told her mother, Arsenia Davis, that she ought to apply for work with this new company, too. Arsenia was one of our Assemblers for 16 years, from 1957 to 1973, when she became one of our Retirees.

Dorothy continued her stories. "Years later, when I worked in the Clean Room (our Microelectronics Assembly area) we assembled tiny components under microscope. One day a new Quality Inspector was assigned to the Clean Room. She picked up a glass dish, and thought the tiny specks in it were dust, so she blew the specks out of the dish. They



Hester Spann, Dorothy Richey and Della Presley recall 1957 start—up in Sarasota.

were actually diodes we used in subminiature assemblies under microscope. We all got down on our hands and knees to recover the tiny diodes so we could use them."

Happy anniversary to our 30-year Sarasota Pioneers. Please keep those stories coming, folks — they add flavor to Data Systems Division's celebration of 30 years of progress in Sarasota.

EAP TO HOLD LUNCHTIME SEMINAR

The next "Brown Bag" Seminar, conducted by our Employee Assistance Program Counselor Holly Burcenski, will be on the subject of Dual Career Familes. The date is Tuesday, March 17. Please check bulletin board announcements for time and place.

CONGRATULATIONS!

NANCY WENTZ, of P.C. Fab, married Al Lemacks on February 21, in a home wedding in Fort Myers, FL.

BETH GISIGER (Credit Union) became Mrs. Donald Corbin in a Sarasota church wedding on Valentine's Day, February 14.

SCOTT KELLERMAN (Customer Support, Sacramento, Calif.) and his wife Geraldine are proud parents of a baby girl. Little Melissa Ardienne was born on February 3 and weighed in at 7 lbs.

CREDIT UNION TIPS

Are you now negotiating with a bank for a loan? Stop and analyze your TOTAL LOAN COSTS, not just interest rates. Sometimes "hidden" costs can be very significant. For example, a new car loan at \$9,000 with a bank may also cost you many hundreds of dollars in credit life insurance over the term of the loan. Your Fairchild Sarasota Credit Union costs would be only \$45 for credit life insurance.

Credit Union office hours are Monday, Wednesday, and Friday, from 8:30 a.m to 12 noon, and 12:30 to 3:30 p.m. For more information, please call Ext. 5535.

BOB SAYRE SHARES MEMORIES OF 30 YEARS IN FIELD SALES

BOB SAYRE, Principal Sales Engineer in our Wheaton, Md., office, celebrated his 30th service anniversary with our company on February 18. PULSE asked Bob to tell us what it's like out there in Sales for three decades!

Bob joined ASCOP — Applied Science Corporation of Princeton — in Princeton, N.J., in February, 1957, as a Junior Sales Engineer in the Switch Division. ASCOP subsequently was acquired by Schlumberger and became part of EMR in 1959.

"At the time, ASCOP was the leading supplier of PDM (Pulse Duration Modulation) equipment to the military. It was a \$6 million a year company with between 200 and 300 employees," Bob recalls. "There were two divisions—the Instrumentation and the Switch Divisions. The Switch Division made mechanical commutators to order. The Instrumentation Division did the PDM Encoder and Decoms.

"I recall John Talbot (now in Sarasota) and Seth McCormick (now with Schlumberger in New York City) were ASCOP employees back then," he said. "Overexpansion, a limited product line and the Eisenhower defense budget of the late 1950's put ASCOP in financial trouble and in late 1959 they were purchased by EMR."

Bob transferred to Sales in Washington, D.C., where he has been ever since. Between 1960 and 1987 the office has moved locations four times, starting downtown in Washington, and it is now in Wheaton, Md., a northern suburb.

"Over the years I have seen the company go into and get out of several business areas. Remember EMR Computer Division, EMR Hatboro, Power Protection Relays, the 9600 Baud Modem, Supervisory Control and Fault Alarm Systems?" he asked.

"Life as a Field Sales Engineer has been challenging, sometimes exasperating, a lot of fun, and certainly never dull," Bob said. "I'm sure the future holds more of the same."

Thank you, Bob, for your input — and Happy Anniversary out there!

VOLUNTEERS AT WORK ON PLANS FOR FLOAT

A group of employees have volunteered to make plans for a FWSI Data Systems Division float to participate in local festivals such as the DeSoto Celebration parade and Sarasota's King Neptune pageant, as part of our celebration of 30 Years of Progress in Sarasota.

Members of the committee who have offered to help are: Chairmen John Elliott and Rick Englund, with Jim Azukas, John Burr, Dave Clouse, Cora DiVirgilio, Della Dunlap, Bill England, Art Kelley, Rita McCrea, Don Parker, Darryl Powell, Mike Russell, Jeanne Ruth, Larry Stewart, Chip Voss, Bill Wheeler, Jon Wolf and Debbie Woolard.

Want to help? Call John Elliott, Ext. 5136, or Jeanne Ruth, Ext. 5486. Your suggestions are welcome.



Bob Sayre, seated, celebrates 30 years with our company this month. Aileen Worrell marked her fifth service anniversary in November.

NEW FRIENDS AND OLD FRIENDS JOIN IN 30-YEARS CELEBRATION

Employees working on the 30–Year Anniversary Committee first got together in January, and now have formed three subcommittees to plan the activities for the year. The Subcommittees are:

EXTERNAL & RETIREE ACTIVITIES — Chairmen John Elliott and Rick Englund; Evelyn Christian, Art Kelley, Don Parker, Jeanne Ruth, Carol Waters, Isabel Wetz.

INTERNAL ACTIVITIES — Chairperson Freddie Masse, Ron Basham, Dot Berner, Elaine Ellis, Carol Waters.

PUBLICATIONS & RESEARCH — Chairman Mark Hanigan, Butch Branson, Margaret Herbst, Isabel Wetz, Dale Woodland.

"There's always room for more ideas, so feel free to call any Committee member to make suggestions and join in the fun," Freddie Masse said.

"There will be REMEMBER WHEN items, TRIVIA KORNER contests, and many other events. We'll be looking for opportunities for all employees to get involved in this celebration. Your suggestions for contests and prizes are welcome — but a trip to Hawaii is definitely out of the question," Freddie noted.

"As the celebration progresses, we'll be remembering old times and old friends who made us the great team we are today — as well as having the opportunity to make new memories and new friends," she said.

HERE COME OUR JUDGES!

Data Systems Division employees will be part of the judging teams for the Tri-County Regional Math, Science and Engineering Fair to be held at Sarasota Square Mall, February 26–28. Students from grades six through 12 are submitting entries. Fairchild Weston is also one of the contributing sponsors for the Fair.

Our judges will be Andy Berecz and Mike Russell, Marvin Edgeworth and Mike Hutchinson, and Mike Eisenbise.

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JONES AND FINCHER WINNERS IN SECOND BASS TOURNAMENT

Twenty-four people participated in the second annual Fairchild Weston Bass Team Fishing Tournament on February 14 at Myakka Lake. Brad Jones and Billy Fincher were the big winners, capturing the \$150 prize for the greatest total weight of fish caught, and the Lunker pot of \$120 for their 234 pound large mouth bass.

Additional prizewinners were \$100 to Peggy Creadon and her partner, \$75 to Bill Whaley and his partner, and \$50 to Mike and Sharon Venneman. There were drawings for other prizes contributed by Economy Tackle - - bait buckets, tackle boxes, coolers, fishing rod and reel, and hats.

"Let's do it again," was the consensus.



Brad Jones shows his team's catch at Bass Fishing Tournament.

FEBRUARY SERVICE ANNIVERSARIES INCLUDE LONG-TIME EMPLOYEES

Among the Data Systems Division employees celebrating major service milestones during February are some of our early Sarasota Pioneers who joined us back in 1957. This month there are three 30-year service anniversaries, three 25-year milestones, and one 20-year anniversary -- along with our 10-year and five-year honorees.

Congratulations to all, and a special salute to our long-time colleagues:

30 YEARS - - Dorothy Richey, Bob Sayre, Hester Spann

25 YEARS -- Marian Cook, Jay Lawton, Carl Steineckert

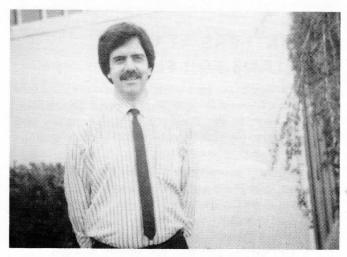
20 YEARS - - Jim White



Carl Steineckert (at right), of our Lancaster, Calif., Sales office, was congratulated by Bud Hinkel (at left) on the occasion of Carl's 25th service anniversary with our company on February 5.



Happy service anniversary to: Jay Lawton (25 years); Marian Cook (25 years); Guy Ellis (5 years); Jim White (20 years) and Paula Baker (5 years).



Jim Massing observed his 10th service anniversary on February 22.

CREDIT UNION HOLDS 20TH ANNUAL MEETING

Fairchild Sarasota Credit Union members heard favorable financial and growth reports and held elections at the group's 20th annual meeting on February 3. Sixty members attended the meeting in the cafeteria.

Assets grew by 14% to over \$882,000, and the Credit Union paid an annual dividend rate of 6.25% on savings during 1986. Membership grew to 698.

Credit Union President Wiley Dunn pointed out that Fairchild Sarasota Credit Union remained strong despite vigorous competition from falling interest rates in the banking and lending community, and automobile dealer's special low interest loans on certain new car purchases.

Wiley also noted that for the first time in eight years it was not necessary to write off a loan during the entire year—a positive factor contributing to the financial success of the Credit Union in 1986.

Board members and Committee members for 1987 are pictured in the accompanying photos.



Credit Committee members are: Chairman Paul Taylor, Cinda Whaley and Karen Critchlow. At right, Beth Jenkins serves as Loan Officer.



Supervisory Committee members: Chairman Jim Matthews, Karen Peterson and Mike Russell.



Credit Union Board members: (seated) President Wiley Dunn, Vice President Earl Studenwalt, and Treasurer Ed Annaratone. Standing, Secretary Don Parker, with Board members Walt Knopik and Ben Robinson, and Credit Union Administrator Lillian Conway. Missing from this photo: Board member Chris Hopkins, and Beth Corbin, of the Credit Union office staff.

OUR NEWEST CITIZEN

Josefina Nunez, of our Printed Wiring Assembly area, became a USA citizen at a January 23 ceremony in Tampa.



Josefina Nunez, a new citizen.

"I'm very proud to be a citizen and appreciated the opportunity to apply for citizenship while working at Fairchild Weston," Josefina said. "My next goal will be to work toward passing the GED test to receive my high school diploma."

Josefina and her parents came to Miami from Cuba in 1971, and they also lived in Tampa before moving to Sarasota in 1973. Josefina has been with us since 1978. Her interests are traveling, cooking — especially her famous chicken fricassee — and trying new restaurants. She enjoys music and her pet chihuahua, Princess.

"Being an American means to me freedom, love, caring, sharing and unity," Josefina said.

NEW RETIREES SAY FAREWELL TO FRIENDS HERE







Dave Long

MIKE GERACK, Group Leader and Gage Room Technician in our Quality Assurance organization, has chosen early retirement this month after nearly 24 years of service.

Mike's wit is well known to colleagues in Inspection, Machining and Fabrication. He sums it up by saying "It's all been fun." But on a more serious note, he added, "My last hurrah was finally getting the new Optical Comparator, after years of trying."

Now, with a little more free time, Angie and Mike Gerack can enjoy their two sons and five grandchildren. Mike might start playing with his famous roses again, and the couple is planning another vacation in Hawaii.

"I'll be leaving a lot of nice friends here," he said. See you at the Picnic, Mike!

DAVE LONG, Test Technician, is one of our long-time employees who has elected early retirement this month. Dave initially worked with us from 1961 to 1975 and rejoined us in 1977. He has seen service in Quality Assurance, Field Service, and more recently in the Test Department.

Between 1979 and 1983 Dave traveled throughout the country for Customer Support while our Division was active in the NASA wind turbine (windmill) program. "With all that travel, I learned that motels have four basic meals," Dave noted, "no matter where you journey, but some of the weekend sightseeing was very enjoyable."

Dave and his wife (the former Shirley Huston, who is also one of our Retirees) may even do some more traveling. Have fun, Dave and Shirley!

HORACE MINK, employed in our Paint Shop for 17 years, elected early retirement this month. Horace's wife, Ola, has also been a Data Systems Division early Retiree since 1984.

Horace is a native of Sarasota, born on Mink Road which was named after his father. Ola and Horace enjoy their beautiful vegetable garden, and his plans include some remodeling of their home. They will be traveling and camping with their 23–foot Allegro motor home — — Springtime to see the flowers in the Blue Ridge Mountains, and later to view the fall foliage in the Smokies. Their two Pekinese, Cindy and Jeff, will be with them, too.

"I'm going to miss the folks here," Horace stated. To a great







Frank McGowan

couple, best wishes for happy days ahead from all your Data Systems Division friends.

FRANK McGOWAN, Data Recorders Engineer, bids farewell to his many friends at Data Systems Division this month, after 24 years with our company. Frank was among our Data Recorders employees who transferred to Sarasota from Sangamo Electric, Springfield, III., back in 1978.

After receiving his BSEE from Iowa State, Frank joined Cook Electric. One high point he recalls was some test equipment he designed for an early phase of the Atlas missile program. "They were testing the intertial guidance system, and the test system was mounted on a rocket test sled at Edwards AFB. In one test the sled left the track at high speed and wound up out in the desert, with the equipment full of sand. I gave them instructions for washing out the sand, and the test system was operational after replacing just a few parts. Those are the moments you remember," Frank said.

He also holds, with several others, two patents. One patent covers the tape drive used on the Model 10 Recorder, and the other patent involves measurement of velocity of sound in liquids as part of a device known as a bathymeter.

"It's interesting to look back to the time when tape recording had just four tracks on one—inch tape, and a milestone was one kilohertz per inch per second of tape speed. Today, it's 32 tracks on one—inch tape, and heading higher — and typically 16 kHz per second of tape speed."

Another memory Frank relates was Cook Electric ordering a large quantity of FM Discriminators from Electro—Mechanical Research, and EMR had difficulty scheduling delivery because they were moving from Ridgefield, Conn., to Sarasota, Florida!

With Sangamo and Data Systems Division, Frank participated in mechanical and electrical project work on a variety of tape recorders, including the Sangamo Model 3500 — the first portable tape recorder and forerunner of our Model 3 and Model 5.

"Retirement" will be busy for Edith (Louise) and Frank McGowan. Frank plans to continue with bicycle road races, criterium and time trials. His accomplishments include winning the National time trials in Tallahassee in 1983 for the 60–65 age category, and setting some new records in the 1986 Illinois Senior Citizens Olympics for five and 10 miles in the 65 to 69 years category. Then there are five children and some grandchildren to visit.

All the best, Frank!

