



SANGAMO WESTON
Schlumberger

SANGAMO WESTON, INC
DATA SYSTEMS DIVISION
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NEWS ABOUT SANGAMO WESTON, SARASOTA

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OVER 500 EMPLOYEES BENEFIT FROM HEALTH SCREENING PROGRAM

Over 500 Sangamo Weston employees have signed up to participate in a new health benefit offered to Sangamo Weston employees--a comprehensive health screening program.

Individual employees started undergoing testing on March 10. The Health Screening Program, conducted by the Sarasota County Health Department at our facility, includes tests for blood pressure, anemia, diabetes, glaucoma and colon cancer.

"Our Company management realized that a preventive health program is a good health insurance policy, and is greatly appreciated by all employees," Occupational Health Nurse Debbie Graham said. "These health screening tests can add considerably to employees' well being, and in some cases unrecognized illnesses can be diagnosed and treatment started."

Recognizing this fact, the Company has set aside a screening area and provided time during the work day for these tests to be performed. Employees have been notified of their scheduled appointments for the remaining health tests to be completed on specific dates in April and May.



Doretha Hadley (at right), a Community Health Worker with the Sarasota County Health Department, assisted employees with their forms and eye checkups. In foreground are Joe Fesnak (Tool Crib) and Joanne Mixon (Data Recorders Assembly). In the background is Nurse Marge Fox.



Ray Sola, of Calibration Lab, has his blood pressure checked by Marge Fox, R.N., of Sarasota County Health Department's Health Screening Team. Early recognition of hypertension is important.



Bill Freund (Data Recorders Precision Assembly area) gives blood sample to Becky Clapp, R.N., of the Sarasota County Health Department's Health Screening Team. Blood tests were run for anemia and diabetes.



Eugene Harbert, of Systems Engineering, undergoes glaucoma screening by Myrna Marble, R.N., of Sarasota County Health Department.

An Equal Opportunity Employer M/F/H/V

INTRODUCING THE EMPLOYEES IN SWS FINAL ASSEMBLY & TEST

The SWS Final Assembly and Test group is the final link in manufacturing oil and gas well logging equipment for Schlumberger Well Services, Houston, and other Schlumberger organizations. We have been building logging equipment for Schlumberger in Sarasota for the past eight years.

The equipments include large blue systems called CSU (Cyber Service Unit) systems, plus a variety of individual modules. This equipment is used in Schlumberger trucks, offices and offshore units all over the world-- and as close to home as the Fort Myers area. Our Schlumberger contracts provide the Data Systems Division of Sangamo Weston with a multi-million dollar business segment.

Frank Bloechl



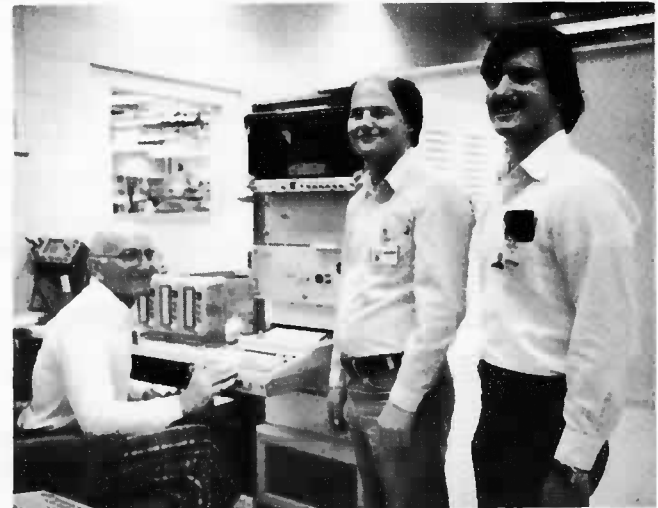
Frank W. Bloechl
Program Manager
SWS Projects



Technicians George Norton, Frank Black (kneeling), Jim White and Rich Hubbard with CSU (Cyber Service Unit) system. SWS CSU's travel around the world in Schlumberger oilfield service trucks.



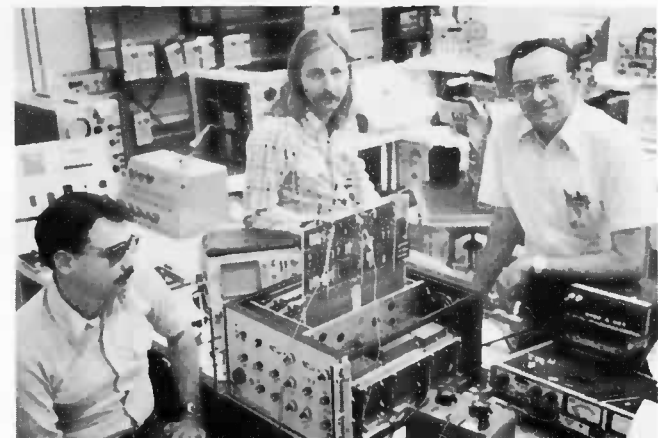
Pictured with a TPU (Tool Power Unit) are Shirley Terry (seated) and standing, Pat Parrish, Vivian Perry, Cindy Pickett and Steve Locatell.



Technician Stan Baron (seated) is running an SWS Cartridge Tape Unit test, using satellite tester. At right are Technicians Don Lamerson and Rick Enright who test power supplies and tool modules.



Rosie Routsong, seated, with Shooting Tool Module. Standing are: Lorraine Hernan, Marlowe Lymer, and Millie Baublitz. Missing from this photo is Lucille McGahee.



Technicians Phil Luquette, Robin Speidel and Wayne Norman with MWD Signal Processor undergoing testing.

INTRODUCING THE EMPLOYEES IN SWS FINAL ASSEMBLY & TEST



Ronnie Sumner (seated) doing mechanical assembly on film magazine for Optical Film Unit. Standing, Rita Balleroni and Nina Van Tassel, and Supervisor Wayne Brinton. Missing from this group is Vivian Godfrey.



Pictured with SWS Optical Electric Units are: Tony Isbell, Miriam Smith, Vi Blair, Laura Ferber and Betty Hunt (seated).



Doris Joubert (seated) is working on an Optical Monitor Unit (OMU). Standing are Group Leader Sharon Gooch, Steve Creech, Thelma Smiley and Wayne Stankovich.



In the foreground, Mark Connors is doing mechanical assembly on a Tool Interface Unit. Standing are: Shirley Strom, Shirley Chalfant, Etta Williams and Steve Thaggard. At right is an Optical Power Unit (OPU).



Joyce Williams (seated) at work on a Cable Communication System (CCS). Standing are Iva McKinney, Ruth Gentzler, Wilma Baldwin and Group Leader Carmen Ireson.

QUALITY QUIZ WINNERS

Our "A-MAZE-ING" Quality Quiz last month resulted in 88 responses from employees, including one with a note, "If I were a rat I'd be in good shape--time to complete the quiz, 2 min., 37 seconds."

Three replies were drawn to select winners of a free lunch in the Cafeteria. The lucky winners are: Steve Creech, Betty Darr, Hank Simmons.

OOPS -- A GOOF

The Old Quiz Master overlooked one of the correct answers submitted for the January Quality Quiz -- the math problem concerning the right amount of the original check. Wayne Norman, of SWS Test, sent in the first correct answer, making a total of nine employees who sent in correct answers to the Quiz we called "A Tough One."



FROM CALCULATORS TO CARS... THE MICROPROCESSOR MOVES ON

By William N. Waggener
Senior Staff Engineer

In the last issue of PULSE, we talked about the microprocessor, its history, applications, and what it does. To appreciate what the microprocessor can and can't do, let's look at the functions of the microprocessor, and how it can perform functions for a wide variety of applications.

Let's compare the operation of the microprocessor with something we have all done. Suppose you wish to mail a package from Sarasota to a relative living in Hoboken, N. J. We take the package to the Post Office and stand in line waiting for service by the Postal Clerk. We hand the package to the Postal Clerk who weighs it, calculates the postage required, and collects our money. At this point, we are free to leave the window, and the package, supposedly, is on its way. The Postal Clerk takes the package and ever so gently tosses it 25 feet into the nearest mail bag. The package resides in the mail bag for a period of time (hopefully not forever) until it is gathered up and shipped to Hoboken. In the postal center in Hoboken, another Postal Clerk retrieves the package, looks at the address and sends it on its way to the appropriate address.

Keeping the Post Office in mind, we can identify the major functions of the microprocessor with the local Post Office and the Postal Clerk. The Postal Clerk in this example performs the kinds of jobs that the central processing unit (CPU) of the microprocessor performs. When the clerk receives the package at the window, he is performing what is known as an input/output (I/O) function. He receives something from the outside which he intends to process. At the same time, he must communicate some sort of signals back to the outside when he wishes further information or further input. Once the Postal Clerk or the CPU accepts something from the outside, he then does something with what he has received. He weighs the package and computes the postage due. In the case of the CPU of a microprocessor, it might compare the value of a certain input data to see how large it is and, based upon the size of the input data, it may then perform some arithmetic calculation. Once the calculation has been performed, the CPU may request something from the outside world (such as money for the postage) or may tell the outside device that it is finished with him and is ready to accept some new input.

In the postal example, after the package has been stamped, it is put into the mail bag which is a form of temporary storage. This is the memory function associated with microprocessors; namely, a memory to hold data. The memory may be temporary or it may be intended to hold data for long periods of time. Once the CPU has processed the piece of data, it typically places the data into some temporary or long-term memory location. After the data has

been stored for a period of time, the CPU may wish to transmit the data to some other location. This can be done through the communications interface. In the Postal example, we pull a package out of storage, examine its address and send it to the desired address. In the case of the microprocessor, the CPU may retrieve some information from its local memory, determine where the data is to go and then send the data out from the microprocessor through some form of communications interface.

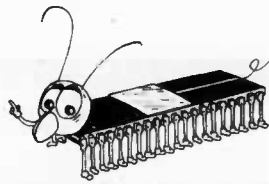
In a TV game, for example, information may be pulled from the microprocessor memory and sent out through an interface to the television set for display on the screen. Using this simple example, we illustrated some of the major functions of the microprocessor. The microprocessor performs some I/O operation in which it obtains data from the outside for processing or it supplies information to the outside. The microprocessor has the ability to do some sort of processing internally and it has the ability to store information for use at a later time.

We take the operation of the Post Office for granted. But, basically, the entire operation is based upon some previous training of the Postal Clerk so that he knows what kinds of tasks need to be performed and in what order. If we place an untrained Postal Clerk at the window, he may simply accept the package and throw it into the outgoing mail bag without weighing it or determining the postage due. Thus the Clerk, or the microprocessor CPU, must be trained to perform its job in some specific sequence of operations. In the case of the microprocessor, this training is called programming. Unlike the Postal example, however, the microprocessor training is very rigid. Once a microprocessor is programmed to execute certain steps, or sequence of operations, it will always execute those operations in exactly the same order, unless a component fails. Obviously, this is not true in the Postal example since the Postal Clerk could elect to take your package, throw it on the floor and jump on it.

Programming is one of the advantages and one of the disadvantages of the microprocessor. The advantage is that once the program is written, you can be insured that the job will always be done in exactly the same way. The disadvantage is that the job it does so well may not be the job that you need to do, and the processor cannot cope with any circumstance which has not been foreseen in the programming.

The program for microprocessors is like a recipe in cooking. The recipe consists of two parts: the first part is the set of ingredients; the second part is the sequence of operations to be performed. The ingredients are like data supplied to the microprocessor. The sequence of operations is the program. If the program is incorrectly written you might, for example, produce a chocolate brick instead of a devil's food cake. The microprocessor, in spite of all its sophistication,

MICRO-PROCESSORS



is in actual practice a very dumb component and can only follow the instructions given it. Thus, the old saying "Garbage in, garbage out." If you give the microprocessor the wrong data, or program it in a wrong way, you will get useless information out.

In addition to the many consumer items which employ microprocessors, and affect our daily lives, the microprocessor is also becoming an integral part of our business at Sangamo Weston. There have been over a dozen products, so far, at Sangamo Weston which utilize microprocessors. These include the SABRE 10 Tape Recorder, the RECON series of Industrial products, the new Model 726 Bit Synchronizer, etc. Some of the test equipments we use employ microprocessors. As our manufacturing capability is upgraded, we will find more microprocessors hidden within the machines. We will also continue to expand the number of our own products which contain microprocessors. The microprocessor will make the equipment we use far easier to use and much more flexible. In terms of manufacturing our products which contain microprocessors, the assembly of the products will remain much the same as assembling any other product with standard integrated circuits. However, the testing of the products becomes more complex and requires more sophisticated test equipment. Products no longer become simply a collection of electronic components, but small systems of their own.

What does the future hold in microprocessors? The first microprocessors had a complexity which was the equivalent of several thousand transistors on a single integrated circuit. A microprocessor introduced last year has a complexity equivalent to 70,000 transistors on a single chip. In five years or less, microprocessors with the equivalent of 700,000 transistors on a chip are possible. The cost of manufacturing the microprocessor is more due to the cost of the package than due to the cost of the silicon circuit itself.

Consequently, we can expect dramatic increases in the power of microprocessors at the same price that we currently pay for the chips. Thus, microprocessor-controlled devices will become vastly more powerful. Hand-held games could have the power and complexity of the most sophisticated arcade games, for example. Hand-held computers can have the power of our IBM accounting computer, for example. Toys such as Speak and Spell will be replaced by toys which not only speak but which can understand spoken English. The possibilities are limited only by the human imagination and by the ability to get information into and out of the integrated circuit.

The progress of products and systems at Sangamo Weston will continue to follow this trend, producing more and more complex devices in smaller and smaller packages.

SYSTEM FOR MEXICO



Gilberto Ordonez, Application Engineer with CFE, Monterrey, Mexico, and Eugene Ensell, of our Industrial Systems group, are pictured at the console of a computerized 3200-series Power Monitoring and Control System just prior to the system's shipment to Mexico.

This \$500,000 system includes 18 remote monitoring units and computerized RECON equipment which will be utilized by Mexico's Comision Federal de Electricidad, the federal power agency for Mexico. The system will be installed in Monterrey, Mexico's third largest city, and is the 19th supervisory control system we have shipped to CFE for installation at various Mexican locations. This newest system is unique in that it employs two computers, providing full redundant capability for critical power distribution control.

UNITED WAY AWARD



General Manager Kent Morgan and Personnel Representative Garry Gierlicz (right) display United Way Gold Award plaque presented to Sangamo Weston for "outstanding participation and continued support" of the 31 community agencies of the United Way. Sangamo Weston employees pledged over \$15,800 to the United Way in our recent drive. General Manager Kent Morgan has been appointed to serve on the Board of Directors of the United Way of Sarasota County.

TELEMETRY GROUP RECOGNIZES OUTSTANDING SALES PERFORMANCES

Our Telemetry Sales Group met at Lake Tahoe during the week of March 16 for technical briefings on new developments and discussions of the business outlook for the forthcoming year.

Awards were presented to the Salesmen who achieved outstanding sales records in 1980. They are:

CARL STEINECKERT, Lancaster, Calif. - First in telemetry sales, with orders of over \$2,000,000.

CAL BREWSTER, Albuquerque, N. M. - Second place winner, with orders exceeding \$2,000,000.

BOB MURPHY, Detroit area - Quota Buster.

LARRY EDWARDS, of Cupertino, Calif. - Quota Buster.

New products introduced at the meeting included the new portable EXPRT system, Model 726 Bit Synchronizer, Model 793 PCM Simulator, and two new Software Systems -- IDEAS (Interactive Display & Engineering Analysis System) and RTDMS (Real Time Data Monitor System).

CONGRATULATIONS !

NEAL & RHONDA BUSH are the proud parents of a baby girl, Melanie Denise, born on March 2, and weighing 7 lb. 4 oz. Neal is in our Paint Shop, and Rhonda worked in Wire Wrap.

BUD HINKEL (Director, Telemetry Group) and his wife Carol welcomed their new daughter, Stephanie Nicole, on Feb. 21. She weighed 6 lb. 9 oz.

JOAN ODZIC (Inspection) and her husband Richard have a new daughter, Melisa Ann, born on March 8, at 6 lb. 12 oz.

ISABEL WETZ (Quality Engineering) and her husband Warren have a baby daughter, Angela Christina, born on February 12, and weighing in at 5 lb. 13 oz.

STEVE THAGGARD (SWS Assembly) married Lori Caldwell on January 10, in Bradenton.

SHARON FERRISE and MICHAEL VENNEMAN were married on February 20, 1981. Sharon is in Magnetics and Mike is in our Sheet Metal Fab Shop.

Skipper BILL KESSLER (Data Recorders Marketing) and JOHN KERWIN (Production Control), serving as crew, took first place in the San Juan 21 Eastern Mid-winter Championship sailing race, competing against 30 boats in a five-race series, March 7-8. This is Bill Kessler's third win in this particular championship race, with his fast sailboat called "Sangamon."



Those handsome devils in our Telemetry Sales group are: Larry Edwards (Cupertino), Jim Clements (Huntsville), Terry Miller (Irvine), Bob Murphy (Detroit), Cal Brewster (Albuquerque), Bob Sayre (Washington), John Roberts (Lancaster), Bruce Holladay (Houston), and Jud Strock, Sales Manager, Sarasota. Carl Steineckert (Lancaster) is missing from photo.



Hm-m-m. Now if you push this button... Jim Massing (left), Bruce Holladay, Bob Sayre and Bob Murphy look over the new products being demonstrated at the Telemetry Sales Meeting.

HAPPY ANNIVERSARY !

Congratulations to the three employees who are celebrating major service anniversaries during March-- Rex Van Tassel and Dick Haase, both completing 20 years of service this month, and Jess Soto Mayor, rounding out five years with the Company during March.



Dick Haase

Rex Van Tassel

Jess Soto Mayor

A WINNING RECORD

Sangamo Weston's softball team in the County Slo Pitch League has a winning record of 9 wins and 3 losses to date, according to Coach Rob McLendon. With only a few games remaining for the season, the team is eyeing the playoffs.