



LORAL

Data Systems

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Happy Holidays to All

VOLUME XII, NO. 6

NOVEMBER/DECEMBER 1990

December, 1990

To All Employees:

My staff and I wish you and all your loved ones a happy and healthy holiday season and new year.

1990 was a good year for Loral Data Systems. Revenues and profit were fairly flat from the previous year but new orders were very impressive. We enter 1991 with a healthy backlog. We are fortunate because many companies are experiencing very difficult times. Our success is due to two factors; we are in very good, diverse businesses and our work force is comprised of dedicated, well trained and competent employees. I thank you for all your contributions.

1991 should also be a good year if the markets for each of our product lines remain strong. We are postured with state-of-the-art products and capabilities but our success depends on external forces. We will continue reducing costs to be competitive and prepare for a possible downturn.

The acquisition of Ford Aerospace by Loral will provide us with a new avenue for expansion. Loral has been a very good company for us and we expect further synergism to occur as time goes by.

Have a wonderful holiday season. Pray for our sons and daughters in the Mid East. Be safe and healthy. Rest up and return to make 1991 another success.

Joe Keller

Joe Keller
President



UNITED WAY CAMPAIGN '90



The Loral Data Sysems United Way Campaign for 1990 is now officially complete. The employee contributions reached the mark of \$39,203.20. This is 87% of the goal set for the campaign. This represents an excellent participation rate by our employees. Coupled with the corporate gift of \$15,000 the total is \$54,203.50.

As a whole, LDS had a 78.3% participation rate of people making contributions. It's a good feeling to see that so many of the employees of Loral are concerned about the people around them who are in need and are willing to lend a helping hand.

If you have any suggestions or ideas on how we can improve our campaign next year, please give Phil Luquette a call on Ext. 5532 or drop a line to Mail Stop 11.

RECENT RETIREMENTS...

Jean Tomkinson, Contracts Administration, retired in late October after 32 years of service. She plans to do a little travelling and spend time enjoying her favorite sport--shopping!

Ruth Erlandson, Instrumentation Recorders Coordinator, retired this month after nearly 30 years of service. Ruth plans to do a little gardening and a great deal of travelling.

Faye Bragg, Group Leader, E/M Assembler in Telemetry Assembly, is retiring this month after sixteen years with Loral. She and her husband are planning to move up to beautiful South Carolina.

We wish them all many years of good health and happiness to enjoy their retirement.

This and That....And a Little More About Our Family....

Bundles of Joy Arrived at the Homes of...

Julie Parrish, Aviation Rec. and her husband, Todd, welcomed a baby boy on November 14. Samuel Ryan Parrish weighed in at 10 pounds, 14 ounces.

Debra Walker, Electronic Publishing, and her husband, Buck, welcomed a baby girl on November 15. Virginia Lynn weighed in at 6 pounds, 6 ounces and was 20 inches long.

Tom Papst, Jr., Finance, and his wife, Denise, welcomed a baby boy on November 18. Michael Stephen weighed in at 8 pounds, 8- 1/2 ounces.

Phil Van Atta, Sr. Elec. Eng., Telemetry, and his wife, Toni, are now the proud parents of a baby girl, Sheila Camille, born on November 11. Sheila Camille weighed 7 pounds, 8-1/2 ounces.

Barry Knowles, Sr. Elec. Eng., SPS, and his wife, Lisa, proudly announce the arrival of their little girl, Kelly Ann, who arrived on November 19, weighing in at 7 pounds, 1 ounce.

Kathy Bossert, Telemetry Lead S/W Engineer, and her husband, Larry, welcomed a new son on December 2. Jason Michael weighed in at 7 pounds, 13 ounces.

Hidden Talents....

If you would like to see some beautifully designed, handmade wooden trucks and railroad cars, pay a visit to Telemetry R & D. **Gene Schroeder** brought in some of works of art for the members of his department to enjoy for the holidays.

EMR 8245 - THE NEXT GENERATION MULTIPLEXER/DEMULTIPLEXER

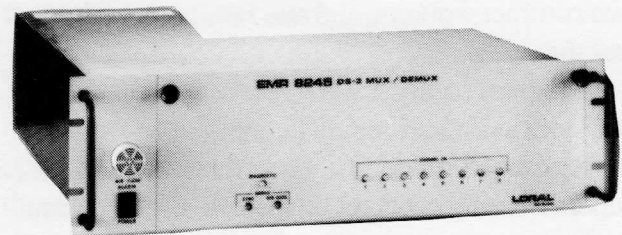
Loral Data Systems' Telemetry Hardware Product Development Group is presently developing a new multiplexer/demultiplexer system which is to be designated as the EMR 8245 Asynchronous Multiplexer/Demultiplexer System. The EMR 8245 will be used for high-speed telecommunications of multiple channels of asynchronous telemetry data over a single transmission link. The unit also has great potential for commercial telecommunication use.

The EMR 8245 circuits will be contained primarily on three printed wiring assemblies (referred to as modules). The circuits of each module are designed as basic functional building blocks that may be easily configured, via switch settings, plugs and jumpers, to function as either a multiplexer or demultiplexer.

As a multiplexer, the EMR 8245 unit continuously accepts the T3 transmission from its associated multiplexer and reconstructs the one to eight asynchronous multiplexed channels. Each channel is output as a separate PCM stream according to its original multiplexer channel number and bit rate; that is, the PCM stream input at the Channel 1 input connector of the multiplexer will be output at the Channel 1 output connector of the demultiplexer. Filler bits in the received format words will be stripped and discarded.

As designed, it takes two EMR 8245 units to comprise a system; one unit remotely installed which functions as a multiplexer and the other locally installed in the main facility functioning as a demultiplexer, both linked together via an external T3 compatible link. The basic system to be offered will be designated as the 8245-001 and will consist of two EMR 8245 units complete with the capability of multiplexing/demulti-

plexing two data channels. Additional data channels may be employed in groups of two simply by adding a module in both units. It is expected that shipments will begin as early as February 1991.



The unique beauty of the EMR 8245 System is that once it is configured as a multiplexer or demultiplexer and the type of channel input and output is selected, there is no further programming or setup required other than apply AC power to the units. The EMR 8245 System is also completely adaptable in its operation according to the number of active channels and their respective data rates. This is particularly important to the commercial world where no capability currently exists for transmission of data channel rates that fall between T1 (1.544 Mbps) and T3 (44.736 Mbps).

DONALD B. LIGNORE

A Step Back in Time OR A Leap Toward the Future...

Imagine that you did not graduate from high school. That you have been out of school for 5, 10, 15, or even 30 years. Then one day at work a stranger appears and lays down a challenge to spend three hours per night for two nights a week for ten weeks... Studying! The end result of this would be a series of tests which, upon passing, gain you your GED (General Education Development). This is a high school equivalency certificate. Next step college. Would you take up the challenge? Eight Loral Data Systems employees, two contract workers, and one family member did just that.

A dinner was held for this courageous group on November 16 to honor their efforts. The dinner was an evening out at the Brenton Reef Restaurant with a guest, each employee's supervisor, and our President, Joe Keller, in attendance. There was good food, good fellowship, and encouragement for the participants not to stop here, but to continue on this journey of education.

LDS is proud of each one and joins them in anxiously awaiting their final test results. You decide: did they take a step back in time or a leap toward the future?

Phil Luquette



Front, L to R: Willie Fisher, Abby Burke, Stella Hitsman, Mickey Caravella, Donna Cori, Back row: Tanya Austin, Penny Hattaway, Colleen Kelsey, Tamara Tornai, Gerry Schlotterback, Kiselle Hightower

SSFDR GAINING WORLD ACCEPTANCE

The Loral Data Systems Fairchild Model F1000 Solid State Flight Data Recorder (SSFDR) has been making giant strides in becoming accepted by the world aviation community.

The first major success occurred in September when the FAA issued TSO approval for this new type of recorder that relies on storage of data by utilizing solid state memory devices. This new and exciting technology is the first of its type for the commercial market.

Shortly after receiving the FAA approval, we were able to have certification approved by the European community. This was a very major effort as the Europeans have developed the latest specifications and require a much higher level of survivability requirements. By obtaining the European approved ED-55, the LDS SSFDR is the ONLY recorder available to meet this new requirement.

Additionally, we have been able to successfully test fly and demonstrate this recorder to Fokker Aircraft (manufacturer of the Fokker F-100), Aerospatiale (Airbus A320 and ATR 72), and Swiss Air. Other flights and demonstrations are being scheduled and prepared for most major customers.

The Boeing Aircraft Company recently visited our facility and spent two days reviewing our designs and equipment. All of this will lead to having our Model F1000 SSFDR certified on Boeing aircraft. As Boeing is the largest manufacturer of commercial aircraft, this certification can not be understated. Both Douglas Aircraft and Airbus Industries, are currently reviewing our technical information preparing for future aircraft installations. Additionally, several other manufacturers of smaller aircraft have selected the LDS SSFDR as a standard product and will contribute greatly to the success of the SSFDR program. Delta and United Airlines have informally notified us that we have been selected for their new aircraft which will result in a very large quantity of recorders over the next few years.

Phil Wright

PATENT AWARDS TO LORAL ENGINEERS

At the 1990 Loral Data Systems Technology Seminar held on November 20th, four Loral Data Systems engineers were recognized for patents which they received within the past fiscal year. Although LDS does not pursue many patents, patents are important in protecting our key technologies. **Guy Ellis** and **Gene Schroeder** of Telemetry were presented with a plaque for their patent, **Digital Demodulator for Frequency-Division Multiplexed Signals**, US Patent number 4884265. This patent covers many of the basic concepts used in the Model 8470 Digital Discriminator. **Joe Lehmann** of SPS holds the most basic concept for the 8470 in his patent, **Multiplex Filter**, US Patent number 4313195, issued in 1982.

John Keal of Aviation Recorders and **Bill Waggener, Sr.**, also received an award for their patent, **Frequency-hopping Type Secure Communication System for Remote Units**, US Patent number 4829540. This patent covers many basic concepts used in a datalink for remotely piloted vehicles (RPV's) and used on the Boeing BRAVE vehicle.



ANNIVERSARY CELEBRATION DINNER

A dinner in honor of our employees celebrating major anniversaries was held on Tuesday, November 27 at the Holiday Inn Lido Key. These employees were celebrating major service milestones in their career. Attending this celebration were the honorees, their guest, supervisor and managers who shared with all attending various activities and events that had happened through the years.

They were presented with their 20 year watches or plaques by their supervisors and Joe Keller. The evening was a very happy event for all those attending. This group of devoted employees represents 360 years of service to our company. Missing from the photo are Chet Reynolds, celebrating 20 years of service and Wally Jones, celebrating 25 years of service, both of whom are located in Lancaster, California.



Front Row: L to R: Mike Moninger, 25 Yrs, Tom McCarthy, 30 Yrs., Rosemary Williams, 25 Yrs., Stanley Baron, 25 Yrs. Ron Kufro, 20 Yrs. Back Row: Hal Roberts, 25 Yrs., Jud Strock, 20 Yrs., Harry Wendt, 30 Yrs., Don Riker, 25 Yrs., Harold Leslie, 20 Yrs., Roy Paxton 30 Years.

HAPPY ANNIVERSARY !!!

NOVEMBER 1990



L. to R.: Bill Mandakis, 5 Yrs., Herb Larrabee, 5 Yrs., Karen Critchlow, 10 Yrs., Harry Wendt, 30 Yrs., Teresa Towne, 5 Yrs., Mike Moninger, 25 Yrs. Missing from photo: Jerry Kallenbach, 10 Yrs. and Jim Cummins, 10 Yrs., Lancaster, California.

DECEMBER 1990



Hal Roberts, 25 Yrs. and Sandy Hatcher, 10 Yrs. Missing from photo: Wally Jones, 25 Yrs., Lancaster, CA.

LORAL TELEMETRY SYSTEMS GROUP AWARDED CONTRACT TO TEST NATO'S NEW FLAK PANZER ANTI-AIRCRAFT TANK

In November, Loral Data Systems signed the first of three contracts which total \$2M with a European consortium to provide 10 customized telemetry systems that will be used to test functional capabilities of anti-aircraft tanks. The customer consortium includes the Siemens Defense Group, Wegman & Co. GmbH, and Krauss Maffei Wehrtechnik GmbH.

The equipment to be tested by the Loral system is NATO's new FLAK PANZER II Anti Aircraft Tank, an upgraded version of the German Leopard. The Loral system will provide simulated target coordinate data to each tank's fire control computer - the tank equipment that identifies range, distance, direction, etc. of a target and then fires the tank's gun accordingly. After each simulated gun fire, the Loral system will also collect and store the data on the gun firing results.

Each system is a modified System 90. There is no PCM input data. Rather, an 8715 Distributed Processing Unit (DPU) provides the target coordinate data. The 8715 outputs this data in RS422 format to the tank's fire control computer. The

conversion of parallel output data to RS422 requires the development of a custom 8715PWA to perform parallel to serial conversion in the RS422 format.

The data on the results of tank firing exercises is passed back to the Loral system's Micro VAX3300. There, the data is available for display, storage, and further processing. A Micro VAX3100 Workstation is provided for user interface and control.

The first of these systems is scheduled for delivery to Siemens by May 1, 1991. The balance of the systems - three to Siemens, three to Wegman, and three to Krauss - are slated for June 1991 delivery.

The European consortium is creating the FLAK PANZER II under a development contract. If the contract is later converted to a production contract, then there is potential for follow-up business for Loral of 10 additional systems.

Mark Hanigan

REMINDER FROM YOUR **BENEFITS OFFICE**

NEW TELEPHONE NUMBER FOR CONNECTICUT GENERAL CLAIMS OFFICE IS:

1-800-525-5803

INTRA CORP NUMBER FOR PRE-ADMISSION TO THE HOSPITAL REMAINS THE SAME.
THE NUMBER APPEARS ON THE BACK OF YOUR INSURANCE I.D. CARD.

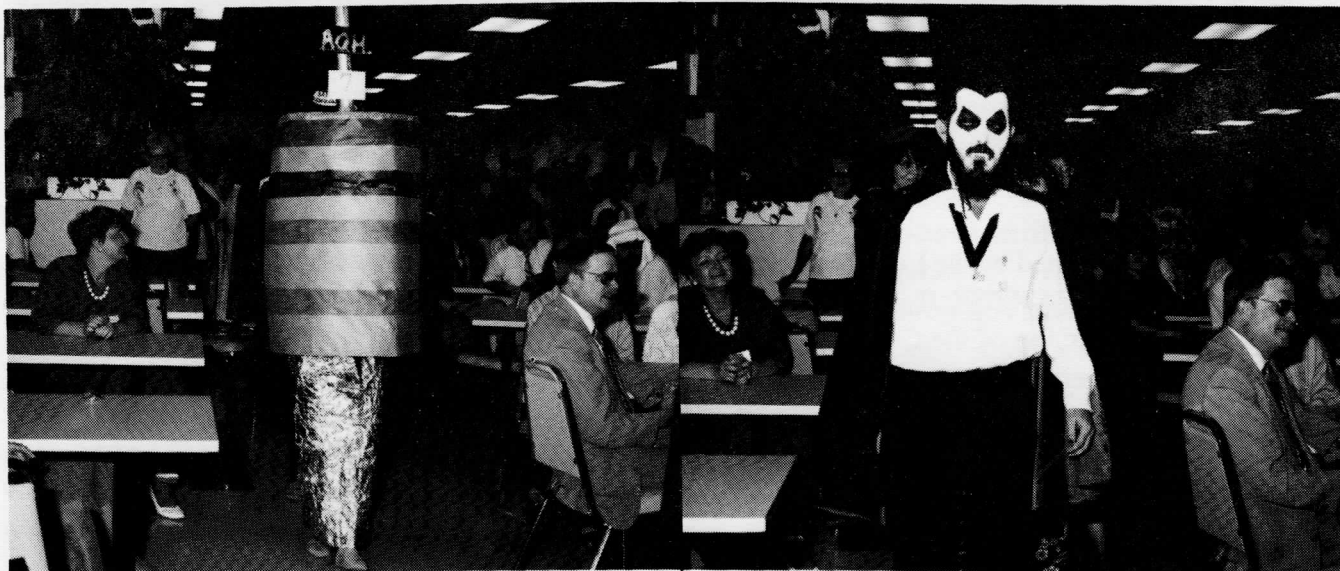
1-800-238-5834

AS OF JANUARY 1, 1991, A CLAIM FORM MUST BE SUBMITTED FOR ANY CHARGES AT THE BEGINNING OF THE YEAR FOR ALL FAMILY MEMBERS.

CURRENT PCS CARDS EXPIRE AS OF 1/1/91. NEW CARDS WILL BE ISSUED AS SOON AS THEY ARE RECEIVED IN PLANT.

"LDS DRESS CODE SHATTERED"

On October 31st the LDS dress code was shattered by the appearance of peculiarly-clad strange characters. A very friendly Frankenstein, a cowboy, an Indian maiden, a bag lady dressed in re-cycleable clothes, Count Dracula, a very strange looking ballerina, a little lost resistor that had escaped from AQH-7, and an assortment of other dress code violations.



These were all LDS employees taking part in a Halloween costume contest held in the cafeteria. The parade of contestants and the "antics" of some with the judges all added up to just plain fun enjoyed by all. Sorry if you missed it, but then there's next year.

The two first prize winners, pictured above, were: AQH-7 Resistor - Jackie Newberry and Count Dracula-Ray Thomas who were each awarded a nice ham, supplied by Wometco.

The six second prize winners were Miss Piggy, Susie Carrico; Re-cycleable Bag Lady, Ann Murray; Rosie Routsong, Old Man; Ralph Krueger, Cowboy; Sharon Krueger, Frankenstein; and Pat Parrish, House Husband. These contestants were each awarded a free lunch. Pictured below are a few of the second prize winners captured as they marched through the Cafeteria.

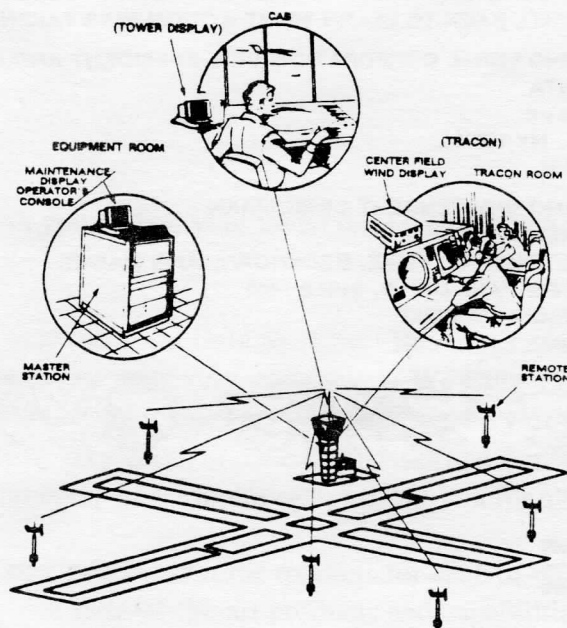


Phil Luquette

LLWAS NETWORK EXPANSION

On November 1, the FAA awarded a \$4.5M "letter contract" to Loral Data Systems for upgrading seven airports to a configuration similar to that now being used at Denver-Stapleton (see July/August PULSE write-up). This "get-started" contract is expected to more than double in value following final negotiations, which will begin this month.

In addition to the new software, hardware, and spares, LDS will be upgrading all of the Support Facilities and supplying new UHF links to all 59 airports. One of the options to this contract is a complete system for the new airport that is currently under construction just outside of Denver.



LLWAS AIRPORT CONFIGURATION

The seven sites selected for LLWAS Network Expansion are as follows:

- Orlando International Airport
- Washington D.C. National Airport
- Chicago O'Hare International Airport
- Atlanta William B. Hartsfield International Airport
- Miami International Airport
- St. Louis Lambert Field

In addition, FAA has the option to purchase an eighth LLWAS for the new Denver International Airport, now under construction.

Contract duration is expected to be 18-20 months with options for two one-year extensions for Depot, ILS, and Engineering Support Service.

John Ramsay is assigned to be the Program Manager.

Jon D. Brown

EMPLOYEE ETHICS RESPONSIBILITIES

TO COMPLY WITH LORAL'S CODE OF ETHICS

TO REPORT

- IF REQUESTED TO ENGAGE IN ANY ACTIVITY CONTRARY TO THE POLICY
- IF YOU HAVE REASON TO BELIEVE ANY OTHER EMPLOYEE OR REPRESENTATIVE OF THE COMPANY IS ENGAGED IN CONDUCT CONTRARY TO THE POLICY

CHANNELS FOR REPORTING

- HIS/HER SUPERVISOR
- SUPERVISOR'S MANAGER
- PERSON DESIGNATED WITHIN THE DIVISION FOR INVESTIGATING REPORTS

COMPLIANCE MATTERS:

MARK MUSTICO - SPS GROUP
ROYAL BECHTOLD - ALL OTHERS

SECURITY MATTERS:

BILL SHAW - ALL GROUPS

CALLING THE DIVISION HOTLINE NO. 6869

CALLS MAY BE ANONYMOUS. ALL HOT LINE CALLS WILL BE HANDLED CONFIDENTIALLY.
YOU MAY CALL BACK TO LEARN WHAT ACTION WAS TAKEN.

CALLING/WRITING LORAL CORPORATION VICE PRESIDENT AND CONTROLLER


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