Vol. 14 No. 2

SEASONS GREETINGS

FALL/WINTER 1992

December 1992

To All Employees and Families:

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

1992 was a tough year for Loral Data Systems as orders, revenues and profit were down from last year. Backlog is still at approximately 7 months worth of shipments based on our current, reduced rate. Orders were down from last year by approximately 19%. We have reduced head count 9% through attrition and incentives. We are moving employees to protect jobs to the maximum extent possible. Our products and capabilities remain state of the art but we are affected by the international recession which doesn't want to go away. The dismal state of the airline business is our biggest problem. Airlines around the world continue to delay receipt of new aircraft because of profit and cash problems. The FAA is delaying a data recorder retrofit program because of the financial plight of the airlines.

We are projecting that 1993 will be another tough year because we don't see our current markets improving over the short haul. Head count will continue to decrease through attrition and possible involuntary separations. The extent of head count reduction depends entirely on our success in booking orders. Our new products, VLDS and CPS-100, are developing very well. VLDS has received excellent market reception and we will start shipping recorders around mid-1993. We are in the process of signing an agreement with an established telecommunications company to be our distributor for the CPS-100. This will give us a jump start in selling this product into a market which is new to us. We expect to begin producing limited quantities in April for testing and evaluation. Our first revenue producing units will ship by March 1994.

I wish I could bring you better news for the holiday season. We will continue to be poised for growth as economic conditions improve. In looking at our competitors I have no doubts that we have the best work force and products.

Have a safe and happy holiday season with your loved ones. Rest up and return to make 1993 as successful as possible. Also, depending on your religious inclinations, say a prayer for President Elect Clinton that he is successful in turning around the economy.

Joe Keller

President









Jud Strock

Test Evaluation Educator Of The Year

he International Test and Evaluation Association (ITEA) has recently recognized something that we at Loral Data Systems have known all along . . .that when it comes to contributions towards education in the field of Telemetry, our Jud Strock stands among the best. For his efforts, Jud was awarded the Richard G. Cross Award for his "educational achievements in test and evaluation."

Jud, who serves as a Senior Applications Engineer at LDS, was nominated for this award by LDS Marketing Vice President Gary Schumacher and seconded by the ITEA's Southern Cross Chapter. With publication of three books and numerous related technical papers and articles to his credit, Jud was a solid candidate for this prestigious recognition. He won. Jud was presented the award at a banquet at the ITEA Annual Symposium in Albuquerque on October 14th.

When asked how he felt about the award, Jud replied with a chuckle of modesty, "I've always had the feeling that they've made a mistake (in giving me this award), that this is a case of mistaken identity."

Gary Schumacher disagreed. "Over the years, Jud has invested a great deal of his personal time and energy in developing and presenting educational material in the field of telemetry. He has contributed to the development of the current generation of telemetry professionals throughout the world," said Schumacher. "Besides the pure educational value, his effort has provided outstanding advertising for the company. The ITEA Award is a well deserved recognition."

Unfortunately for LDS, the tribute may come at a time when Jud's career is reaching its conclusion. Jud is slated for retirement on January 1, 1993. However, he has left the door open to the possibility of returning on a contract basis, particularly if the need is for his first love in the profession, teaching telemetry.

Jud's career with Loral Data Systems began in 1957, the year that the company (then EMR) moved to Sarasota. During his first stint, Jud served as a project engineer on a wide array of telemetry ground station systems from single-rack quick look systems to the pre-launch Gemini ground stations. He then left EMR for a series of related positions that gained him experience in the development of general-purpose computer interface systems.

Jud's climb to his current status as being one of the most recognized authorities in the telemetry field began in earnest when he brought all of his additional experience back to EMR in 1978. Recognizing his well-rounded knowledge of the industry combined with his proven writing skills, the company challenged Jud to develop and implement a much needed training course on telemetry concepts that could be presented to employees and customers alike.

From this mandate, combined with his own parallel interests in both writing and teaching, Introduction to Telemetry was conceived. Jud wrote an easy-to-follow accompanying training manual, that is well stocked with both theory and illustrated practical applications. With the publication of

this first edition also came the birth of the Little Professor, which has evolved into a de-facto trademark of Jud's books. The cartoon character, which appears throughout Jud's books, aiding him in his explanations, was the brainchild of Jim Horvath, Marketing Communications and Advertising Manager, who was then in drafting.

The popularity of the course and its complement training manual surprised even Jud. He estimates that since the first class in 1981, he has taught the course over 70 times at sites throughout the USA and the world, - including mainland China, Russia, Australia, and South Africa.

At the urging of his colleagues and students alike, Jud submitted his looseleaf book to *Prentice Hall Corporation*, a leading reference and textbook publisher. They turned it down flat. Undaunted, Jud submitted to *Instrument Society of America* (ISA), and they snatched his book up for hardback publication in 1983 as *Telemetry Computer Systems An Introduction*.

The book was in demand as soon as it hit the streets. Ironically, Prentice Hall recognized that they had made a mistake in not publishing Jud's book. They rectified the situation by negotiating a contract with ISA to publish copies of Jud's book with the PH logo.

Asked about the recognition that he got as a result of his book, Jud replied, "I was surprised that I got recognition at all because of my book. I always felt that it was someone else that they were recognizing."

"Once, I was approached by a student in Czechoslovakia," Jud continued. "He came up to me, and commented 'Ah, Jud Strock, I've read your book...' At other times, representatives at airports in Israel and Taiwan met me by holding up my book. I found it humorous."

There is another irony in Jud's publishing history. When ISA published the first edition of *Telemetry Computer Systems An Introduction*, the editors at the time made the determination that the Little Professor had to go because he did not fit the image that they were trying to convey. So all appearances of the Little Professor were edited out except for one, which was too complicated to remove. However, the Little Professor remained in the looseleaf version.

Jud rewrote the book to reflect the changes in the industry. When he submitted the new edition to the ISA editors, they noticed the Little Professor in that one drawing. One of the editors contacted Jud to ask him if he had any more drawings of the Little Professor because he would be perfect for the image that they were trying to convey.

When the second edition hit the shelves in 1988, the Little Professor was back. Since then and at the request of ISA, Jud has written and published a third book called *Introduction to Telemetry*. Essentially, this book is geared in the mold of ISA's Independent Learning Module series.

Whether at Loral or at other sites, Jud plans to continue teaching telemetry because he truly enjoys it.

Asked about what type of students he prefers - experienced or inexperienced - Jud responded, "I like a mixture of both because I like participation from the class. I especially enjoy teaching those who have computer skills, but no telemetry knowledge. They seem to get the most out of my class.

Overall, I take satisfaction when I know that my students have learned something from the class."

Using that barometer, you've amassed a lifetime of satisfaction, Jud. Take a bow.

LDS Exhibits at ITC/USA/92

ITC/USA/92, the 28th Annual International Telemetering Conference and Technical Exhibition, took place from October 26th - 29th at the Town and Country Hotel and Convention Center in San Diego, California, and Loral Data Systems was there. This was the largest show in the history of ITC, with 2350 in attendance to see 199 booths. Loral Data Systems, Loral Conic, and Loral Instrumentation all presented exhibits, representing Loral Corporate. Special LDS products displayed this year were the O/S 90, the PCX, the 2179 Recorder and the VLDS Recorder.

Bernard Schwartz, Chairman and Chief Executive Officer of Loral Corporation, was the keynote speaker. Under his leadership Loral has become noted for its broad base of defense electronics programs and technologies, as well as for its consistent financial performance.

Awards Won At ITEA Symposium

Loral Data Systems was well represented at the 1992 International Test and Evaluation Association Symposium, held at the Hyatt Regency Hotel, Albuquerque, New Mexico, October 12th - 15th. Attendees from Loral were Wiley Dunn, Beth Rueger, Dave Johannesmeyer, Paul Mears, Jud Strock, and Mike O'Brien. Jud Strock received an award for his educational achievements in test and evaluation, and presented poster talks explaining Loral's O/S 90 and EMR 8245 which also won awards at the symposium.



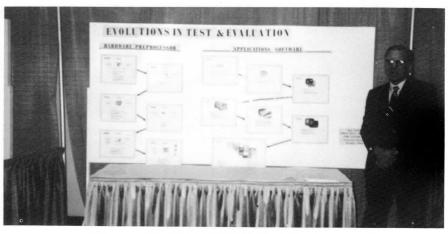








Left to Right: Paul Mears, Wiley Dunn, and Dave Johannesmeyer



Jud Strock and His Poster Paper

Invite The World Home

By: Annika Walker

Frank Black, Test Technician Specialist, opens his heart and home to exchange students from around the world.

The "New World" is often the destination for foreign exchange students. Young people who are curious and want to learn about our language, life-styles and culture dream of coming to the United States for the experience.



River rafting, ELIZABETH from France in front and DANIEL SCHULTZ, from Livercruisen, Germany

Frank and his wife, Dawn, a local program director, take pride in their involvement with the World Exchange Program, a non-profit organization specializing in international exchange.

"Our job is placing students with host families around the area who will teach and take care of the students. A host family must be caring, responsible and willing to provide a unique experience for the visiting student," said Frank.



Brazalian students at Coming of Age Birthday Party for MAYLEAN's 15th. She's third from right back row.

The program organizes special events for the students, such as a visit to Disney World and group activities with other exchange students.

The host families can plan and carry out anything extra to help the students get the feel of American family life. "So many things normal to us are amazing and different to these children," Frank said.



SANDREAN a french student with DAWN and FRANK BLACK

Frank has two children of his own but that doesn't stop his warm welcome to others. In the past five years, he and his family have volunteered their time and home to ten different exchange students.

Fourteen students from Spain, France, Germany and Turkey came to the Sarasota area this summer. A total of 52 students came to the Bay area to learn our ways, make new friends and for an experience of a lifetime.



CRYSTAL from paris, second from left. A second year college student in Pharmacy.



DAWN with Brazilian students at Channel 13, Feb. 1992, to see "Eye on Tampa Bay".

According to frank, in the past approximately ten students have stayed with other Loral employees. "With the economy being so bad, it is hard to find host families. But I have found it isn't expensive and giving to these students is rewarding," he said.



Brazalian students in the Great Smokey Mountains on trip with FRANK and DAWN BLACK.

As a whole there is a 75% success rate with the students and the host families. Said Frank, "It is special to have a lasting relationship with children around the world and many of our students have kept in touch and even come back to visit."

If you are interested in having a foreign friend, teaching our lifestyle and learning about others, the opportunity is out there, just welcome the world into your home.



DAWN BLACK and MELBA APPERSON at the 1991 French Students Going Away Party.

Loral Contributes To Hurricane Relief Effort

Loral Data Systems President Joe Keller presented Major Becky Smith of Sarasota Chapter of the Salvation Army with a check for \$14,368 as a donation to the relief efforts for Hurricane Andrew victims. The money represents employee contributions which were matched on a dollar-for-dollar basis by the company. In addition to the money, two truckloads of food and paper products were collected by employees and donated to the Salvation Army for distribution to those who were hardest hit by the storm. According to Major Smith, the food, money and other supplies come at a time when relief is needed most.

"We are very happy to be able to contribute to the fine work being done by the Salvation Army during this crisis," said Mr. Keller. "I'm especially proud that everyone here at Loral supported this effort, with special thanks going to Terry Hughes and Brian Lavanti for coordinating the overall program. We hope this provides at least some Hurricane Andrew Victims with a small measure of much needed relief until things get back to

normal.



Loral Received Award For Recycling

Congratulations to Loral Data Systems for receiving 1st Place award on its recycling program. Loral Data Systems was competing for this award against companies such as Sarasota County, Venice Hospital, Sarasota Memorial, etc.

The New Image Involvement team put the recycling program in effect one year before mandate and would like to thank each of you for your cooperation which made this program a success.

The plaque was presented by Skip Brawn and Kevin McGreevy to the group and is posted near the fish pond.

Absent from photo: Diane Hamel, Chris Lawson, Shari Nitterauer, Donna Roth, and Regina Barton.



For Fitness and Fun. . . Join a Loral League!!

By: Annika Walker

Popularity keeps in play at Loral Data systems. Leagues that are a hit: billiards, bowling, golf, softball and soccer.

Other sports facilities and fitness activities available to employees are: basketball, tennis and volleyball courts, a running team-and a fitness center.

BILLIARDS

The billiards mixed league recently scratched off another fun-filled summer season, which ran from May 13 through September 9 every Wednesday evening at Livingstons.

Participation from Loral employees, families and friends made up five league teams, each consisting of four players.

Officers of the league were Bob Wallace, President; Bill Miles, Vice President; and Lisa Powers, Secretary/Treasurer.

"We play for the fun of it," Bob said. "If we have the interest and participants, we'd even like to have a fall or winter league."

BOWLING

Since bowling strikes high on the score card, Loral has two separate leagues.

"It split into two separate leagues since participation has grown so much," said JoAnn Tonkin, Thursday night league president.

There's a Wednesday night mixed league at 8:30 and a Thursday night league at 6:15. "We give employees the opportunity to choose an early or late league," said JoAnn. Both leagues play at Sarasota Lanes.

The Wednesday night mixed league bowls a 30 week season from August through April. The Thursday night league, which requires at least one male or one female per team, bowls a 32 week season from September through early May.

Officers for the Wednesday league are Robert Carlson, President; Bill Zoerner, Vice President, and Evelyn Christian, Secretary/Treasurer. Thursday league officers are JoAnn Tonkin, President; Phil Stockton, Vice President, and Debbie Sutor, Secretary/Treasurer.



We encourage more employees and families, too. It's a fun league and it helps make good relations and communication within the company. "Anyone interested should contact one of the officers," Evelyn Christian said.

GOLF

Seventy-two participants tee-up the largest league at Loral. The mixed golf league includes employees, family members and retirees.

Thirty-six teams played every Tuesday after work from late April to mid-September at Bobby Jones Golf Course.

Officers of the league are Pat Parrish, President, and Troy Schleicher, Secretary. "We basically go out to



have fun and it's a great way to meet other employees," said Pat. "It promotes good camaraderie with employees."

The annual Loral golf tournament will be held in October. It is open to all Loral employees and family members.

VOLLEYBALL

You can spike the punch and you can punch the ball,



but you can't spike the ball in this version of intramural volleyball. On Friday's after work, a group of LDS employees convenes at the two courts at the back of the plant for some informal volleyball. Those who arrive first literally dig in their heels to "draw" the not-so-straight court boundary lines. For those nights in which fewer participants show up, the lines are brought in.

This version of the game is strictly for fun. Skill levels range from bad to worse (not really, we do OK). But it's definitely for anyone who just wants to play a little, socialize a little, and laugh a lot!

TENNIS

Tennis doesn't quite match up to the other leagues the way it did in the past. A tennis league existed at one time, but competition with the other leagues caused a small turn out.

Former league President, Bill Mandakis, said it had good intentions but never went very far. "Maybe it will start up again if we can get people interested," he said.

If you are interested in combining fitness with fun, join a Loral league and have a ball!

SOFTBALL

The Loral Data Systems Softball Team is a member of the S.A.S.A. Softball League. They play 16 games per season with three seasons per year. They are currently into their fourth season and have a very competitive team. The team plays Sundays between 4:30 and 9:30 p.m. at the 17th Street fields. For more information contact Kevin Burns.

SOCCER

Loral enters a Division 4 soccer team into the Florida Suncoast Soccer League. The soccer league just kicked off its September through mid-February season.



This adult amateur league includes nine employees, with the other half of the team comprised of family and friends. "We always need help and new players are welcome and can easily be added midseason," Chris Lester, league President, said. The league practices on Thursday evenings and Sundays are game days.

The team plays against



different club teams and companies.

Division 4 is an entry level team. "We try to make it available for those who don't have much soccer experience," Chris said. "We play for the fun and opportunity, not to mention the good workout."



Christmas Spirit Comes Early To Loral

The New Image Employee Involvement Team sponsored a "Christmas in July" Fun Day on Friday, July 31 during lunchtime. All proceeds from this event were earmarked for Loral's annual Gift of Giving Project held every December to bring a little bit of Christmas to needy area families.

After partaking of a delicious "Billy Burger" lunch, employees tried their hand at the golf, pie toss and dunk booths. Ice cold lemonade and fresh popped popcorn were available throughout the event.

The cost to participate was a canned good or a quarter at each booth, including the lemonade and popcorn stands. Winners were able to choose from a variety of Loral-logo gifts.

Thanks to the efforts of everyone who participated in one way or another, Fun Day was a huge success. The New Image Team collected over \$200 in quarters and 173 canned goods!

















So Where Were All The Ants?

By: Carolyn Peet

What does it take to make a picnic? Food, family, friends, fun, and ants. The Loral Family Picnic on a sunny Halloween at the Sarasota County Fair Grounds had all the proper ingredients, with one noticeable exception, no ants! It was a bring-your-own baby stroller event, attended by over 1500, and no picnic baskets were necessary. The food was there already - chicken, ribs, hot dogs, hamburgers, and all the right accompaniments - done right by **Bill Wright** and Done-Wright Catering.

The crowd came in all ages, including 80 plus retirees and their families for whom the occasion was immortalized in an impressive group photo. Simultaneous activities kept photographers Myron Klineschmidt and Neil Plume busy, and kept anyone occupied who wanted to be, but there was also plenty of space and time to just sit back, be there, and do nothing. Anyone could play volleyball at any time, and many did. The activity in the bingo pavilion never stopped, and neither did John Kerwin, the tireless caller. The children's Midway, provided by American Family Day Company, provided super prizes and games for all ages, with sno-cones and popcorn for sustenance. In the dining building, Mike Markaverich with his jazz trio provided the picnic ambiance with upbeat background music while the picnickers ate and talked and ate and ate.

For those with aggressions, hidden or otherwise, there was a chance at the Dunk Booth to sink **Dick Dobbyn**, **Bill Mandakis**, **Dale Dennis**, **Charlie Grouse**, and **Frank Doran**. While teens and adults exhibited prowess in the Sports Bonanza with a water balloon toss and a tug-of-war, the more serious athletes displayed their golfing skills in the Longest Drive contest. Congratulations go to women's winners: **Lynn Zarling** (first), **Valerie Kerwin** (second), **Alma Sanger** (third), and men's winners: **Ken Knicely** (first), **Andy Zarling** (second), and **Kevin Burns** (third). In another serious competition, the little people gave their all in the Kiddie Olympics with races for Crawlers, Toddlers, Trotters, and Runners.

Prize drawings took place throughout the day. Congratulations to the winners: **Bud Steinhoff** and **Cat Holmes** - bikes, **Pat Wetzer** - a camera, **Gene Flagg** - a microwave, **Chuck Jones** - a stereo AM/FM cassette/CD player, and **Bob Feather** - television.

It was a pleasant afternoon for all who came, and as for the ants - well, they just missed out!











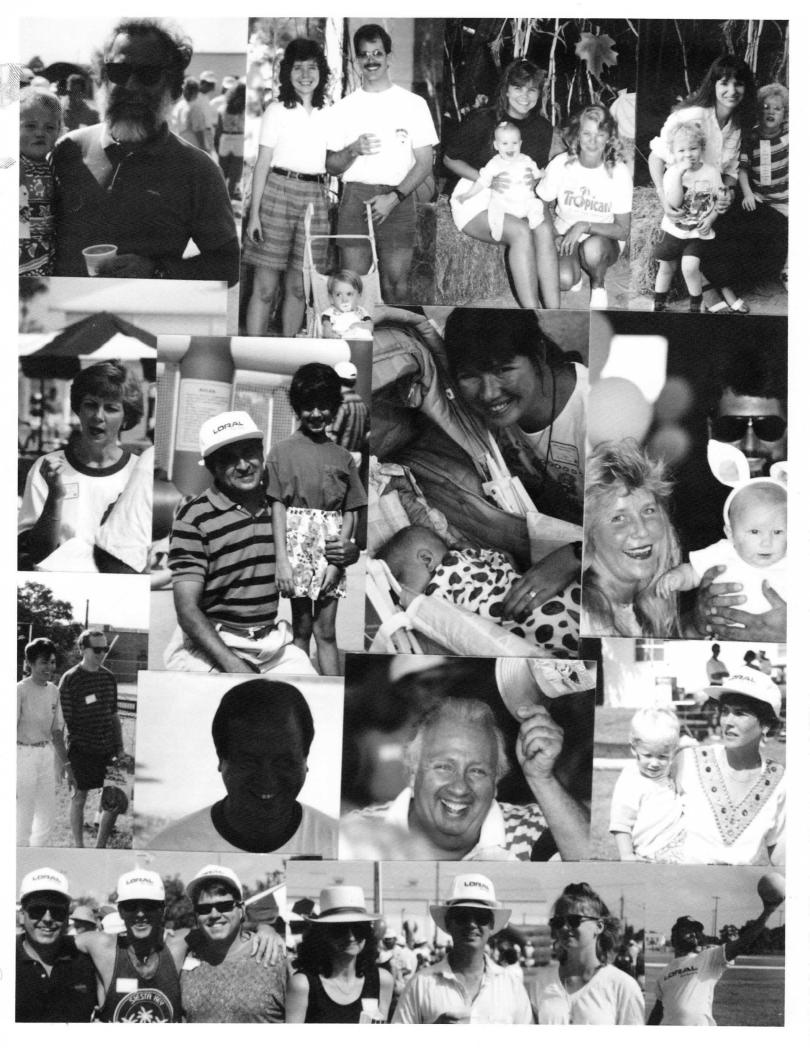












In Relation To Experience

By: Annika Walker

Loral Data Systems offers summer job/intern opportunities to high school and college students. This summer ten students took pride in their positions and purpose at LDS.

These students are Jennifer Anderson, daughter of Bill Anderson; Gerald Brown; Robin Burns, daughter of Ellis Burns; Amie Hellard; Jacquelyn Johnson; Chris Klaus; Anthony Phillips, brother of Mike Phillips; Kristi Schumacher, daughter of Gary Schumacher, Doug Taylor, nephew of Jim Casteel, and Annika Walker, daughter of Dave Walker.

The summer student program was started by Marie Keeney, Director of Human Resources. Delores Martinez, Human Resources Assistant, takes charge now and loves working with the program and the students, she said.

"It is truly a pleasure and the fun part of my job. The students have been wonderful this summer and I look forward to next year," said Delores.

The students are placed with departments that need an extra hand or in relation to the student's interest or major. Students apply for different reasons: a summer job, for the experience or even to get college credit. Whatever their reason, Loral has given these ten students professional exposure and opportunity.

The departments that worked with these students were Aviation Recorders, Computational Services Group, Contracts Administration, Human Resources, Maintenance, MIS and Technical Publications.

Working in a professional environment and learning "hands on" will greatly benefit the students. Experience and exposure are essential in making career decisions.



Chris Klaus looks forward to his first quarter at Georgia Institute of Technology, where he is majoring in electrical engineering. Working in Aviation Recorders this summer has answered some of his questions, he said. "I got a dose of

what engineers and technicians do," Chris said. "I learned a lot that will be helpful later on and each day I knew a little more."

Robin Burns and Kristi Schumacher did clerical work for Contracts Administration.



Robin is attending her first semester at Manatee Community College this fall. "I am undecided on a major, but working at Loral gave me an idea of what's out there."

Kristi is a junior at Florida State University, working on a degree in international affairs with a minor in business.



"Doing clerical work this summer has given me a lot of experience and I've leaned a lot of good skills."

All students speak highly of their summer at Loral, the friendly and helpful people they worked with and the lasting impression it will have on them.



Anthony gained exposure working in CSG and hopes to work in the field some day, he said. "Learning how to install programs and handle other jobs around the plant has made me more computer literate."

Unlike the other students, Jacquelyn Johnson has been out in the working world. Jackie works in Human Resources as a student intern. She also cares for her family and takes a full load at Manatee Community College.



After trying the nursing and banking fields, Jackie has returned to college to pursue a degree in computer programming. "As my short-term goal, I'd like to work in MIS and my long-term goal is to eventually be a software engineer. I love working at Loral in Human Resources and after I finish at MCC I hope to return, using my degree."

Two students gave a hand to the Maintenance Department. Gerald Brown and Doug Taylor worked together as a team, doing carpentry, fabricating, painting, electrical and other odd jobs that needed to be done.



Gerald is a junior at Stetson University majoring in computer engineering. "Even though my job wasn't in relation to my field, I learned a lot about how to be a handyman this summer."

Doug returns to Sarasota County Vocational Institute as a sophomore this fall. He is working on two certificates, one in automotive and one in machining. "The hands on experience has taught me a lot, enhancing me to further my education."





Amie Hellard attends the University of Central Florida. She is currently a sophomore majoring in mathematics. "Working in MIS gave me a chance to work first hand on IBM systems, updating PC databases and expanding my knowl-

edge using computer programs. I'm not sure what I want to do, but after this summer, I'm considering the programming field."

Jennifer Anderson and Annika Walker worked in Technical Publications applying their skills in relation to their majors.



Jennifer is a senior at the University of Florida pursuing a double major in journalism and Russian. "I applied for the position to get experience doing a job closely related to my major. I was able to use my journalism skills, write some

Russian and work extensively on the Interleaf system."

Annika is a senior majoring in journalism at Troy State University in Troy, Alabama. She is also working on a double minor in business and social science.



"Not only did I gain exposure, experience and a new interest in the technical field this summer, I was able to obtain college credit for the internship. I feel I have a better insight through this eye-opening experience in aspects concerning my last year in college and in the future."

Anniversaries...

5 Years



Front Row - Vivian Neelley, Joyce Cole, Linda Dudley, Cheryl Shearer, Joanna Nguyen, James Casteel, Jr. Back Row - Bob Tacy, Don Opdycke, Doug Langdon, Theodore Kwarcinski, Paul Guck, Beth Elinski

Not Pictured - Delores Martinez, Richard Crowley, Barry Knopwles, Dennis otoka, Kathy Rutherford, Terry Romine, Michael Curi, Carl Deer, Andrew Zarling, Howard Longyear, Wiley Tolbert, Stephen Borowski, Mark Short

15 Years



Left to Right - TerryVinson, Fred Hittel, Mark Stone, Pat Parrish, Iva McKinney, Judy Body

Not Pictured - David Kolchakain, Rick Englund, Shannon Lavelle, Art Tackman, Mark Venneman, Sally Sarnie, Greg Sutton, John Dezzi, Dianne Hammond, Russ Phillips, Vivian Owen, Joan Lahmers, Patti Wetjen

10 Years



Left to Right - Ray Honor, Nita Pineas, Evelyn White, Chris Moler, and Richard Painter

Not Pictured - Bill Shaw, Beth Rueger, Gene Flagg, and Howard Graham, Jr.

15 Years



Front Row - Shirley Terry, Rosie Routsong, Zoraida Muriedas, Rita Keen Back Row - Dan Konieczka, Jr., William Fincher, Nita Rose, Candy Haley

20 Years / 30 Years



Nancy Du Plantier, Phil Stockton
Not Pictured 20 Years - Janet Ellis, Marie Valence
Not Pictured 30 Years - Arlene Andrews, Len Zeiler,
Ron Basham, Frank Bost

Customer Support and the U.S. Army, Edwards Air Force Base

What is 100' around, has a disc storage capability of 3.2 giga bytes, eight wheels, a processing speed of 10 mega words / second and blue stripes down its sides? Answer: the Army's newly retro-fitted RDAPS trailer!

On May 28th the trailer was delivered to the LDS Lancaster office by the customer from EAFB, CA, where the U.S. Army Airworthiness Qualification Test Directorate conducts its flight testing. The task at hand facing our customer service group was to completely strip the interior of the 40' vehicle of its existing EMR 715 based system and to give it a face lift to make ready



In the beginning, taking it apart

for its DEC VAX 4000/EMR8715 combination replacement. Under the direction of Project Manager and Engineer, Wally Jones and Dan Passer respectively, the entire group was called upon to employ a variety of talents which normally don't fall in the category of customer support type job descriptions. The tools of the trade used to make the conversion included such items as power hand drills, metal chop saws, drill press, wood cutting circular and saber saws, electric and acetylene welders, and paint sprayers.

The interior walls and ceiling were completely repainted once all of the equipment and racks were removed. New ceiling tiles both composition and egg



Really apart - down to the trailer

crate were cut to size and installed. Being a mobile vehicle, restraint bracketry was fabricated and attached to the wall to prevent rack movement when transported. An inconvenient feature of its predecessor was the inability of one to gain access to the rear of the racks, therefore, all racks were bolted to floor slides mounted on 1/4" steel plates.



Starting back

The equipment racks had their exterior surfaces repainted. All side by side rack cabling was run in overhead panduit attached to the wall behind the system. Additional cooling to the FAX 4000 and Model 8715 racks was provided by tapping off the main overhead duct and running flexible tubes over, down, and up under these two racks. Three phase input power was employed along with two 5.3 KVA UPS backup units. A power meter was installed on the incoming side for the customer to measure consumption along with a set of switched meters to measure amplitude, frequency, and current flow of each phase.



Down to finishing touches

Emergency lighting was provided in the event of incoming power loss. For providing the customer a means of running additional cabling under the floor, 5ea flex conduits were placed crosswise under the plywood floor with left up access doors at the destination ends.

With the added space now available due to the reduction in system size, three work stations labeled TOS, FTOS, and ITOS were provided with pull out keyboard and pencil drawers. Two phone line circuits were run to each of the work stations.



A look at the finished handy work

The woodgrain laminate covered cabinetry for these along with a self standing tape storage and two overhead wall mounted book storage units were provided and installed by an outside contractor. The plywood floor was covered with deep pile anti-static medium blue carpeting held down with latex mastic.



Looking Good!

The exterior of the trailer was also repainted the same color of white with a 23" wide blue stripe down its side. Upon completion, some 60 working days from its delivery, the Army returned with their tractor to pull the completed trailer back to EAFB.

Aside from using only four outside contractors; electrical power wiring, inside and outside trailer painting, cabinetry, and lastly carpet laying, the remaining labor and engineering effort was provided by the customer service group.

Throughout the course of events that transpired in the process, numerous problems had to be resolved or changes made due to the Army rethinking how they



Rose Marie Stroface, Carl Stienecker, Wally Jones, Dan Passer, looking at an Excellent Job!



The van before external paint job



Saturday's paint job and unmasking

wanted the total system environment configured. The close proximity of the customer to our facility made this all possible.

With the success of this task and the knowledge gained, the way has been paved for its sister trailer RDAPS RED to arrive on the scene for its face lift due to commence in October.

(contriubted by Wally Jones)



THAT'S ALL FOLKS, the final Goodbye - an excellent job!



Jim Mathews presenting the Golden Hammer Award to Dan Passer, Wally Jones, and Jim Cummins at the Customer Support meeting in New Orleans

Hazardous Materials Response Team

he Loral Data Systems Hazardous Materials Response Team (HAZMAT) recently conducted a full dress exercise as part of their mandatory annual refresher training. The team members all successfully completed 40 hours of OSHA approved training prior to certification and are required to complete a minimum of eight hours of update training each year.

The HAZMAT Team responds to all hazardous materials incidents at LDS. Its responsibilities include evaluating the nature of the incident, isolating the area, evacuation and crowd control, neutralizing the hazard, clean-up and initiating disposal procedures. The HAZMAT Team is composed of all volunteers and has been in existence since 1991.

If you witness a chemical spill, immediately notify your supervisor (is practical) or call extension 6999.



HAZMAT TEAM

Front Row Left to Right:

R. F. Brawn, Kris Brown, Jim Swiatowice, Ken Nosworthy, Terry Romine, Charlie Day

Second Row Left to Right:
Mike Eisenbise, Alan Davis, Mike Mace



Operator Safety Certification

By: Terry Romine

n order to comply with recently enacted OSHA regulations, Loral Data Systems recently conducted a Forklift Operator Safety Certification and Program. Operators were certified following classroom instructions and successful completion of written and practical examinations. Instructors were Terry Romine and Ed Sleeman.



Terry Romine & Ed Sleeman Examine Jim Swiatowick's Performance



Kris Brown Negotiates Forklift Safety Performance Course

Recent Systems Deliveries...

Edwards Air Force Base O/S 90

The first O/S90 System was installed at Edwards AFB, CA, the week of August 24, 1992. Kathy Bossert performed the installation at Bldg. 1408, the site of the Air Force Flight Test Center's Advanced Data Acquisition and Processing System (ADAPS) development laboratory. After the Acceptance Test Procedure was accomplished, the system was turned over to a development team consisting of Air Force personnel and SE/TA contractors SAIC and Perimeter. Bharat Parkhani was the project engineer on this system, with Kathy Bossert as the software engineer.

The O/S90 is configured as a single PCM stream, with an 8320 bit synchronizer and 8336 simulator, and Disk Output and Ethernet Output Modules. The system may be expanded in the near future to include more data streams, including MIL-STD-1553. The O/S90 system will give the Air Force and SE/TA contractors development experience on POSIX based Open Systems as they design a data processing system to meet the requirements of the future at the Air Force Flight Test Center (AFFTC). This development, which consists of three phases, will ultimately replace current IFDAPS system at the Ridley Mission Control Center (RMCC). The first phase is workstation development, utilizing POSIX compliant systems. The second phase is a posttest processing and archival system, consisting of high capacity archival systems, integrating the workstations into a network based distributed processing system. The third phase of development involves integrating Telemetry

PreProcessors (TPPS) with workstations using a high speed network, such as FDDI. The O/S90 will hopefully play a part in the future of the AFFTC, beginning with a competitive procurement of the Telemetry PreProcessors scheduled for 1993.

(contributed by Dave Johannesmeyer)

Spanish EF/A-18 Telemetry Processing System

The first O/S90 Open Data Processing System for Europe was shipped in November. The system will be used by the Spanish Air Force to test the McDonnel Douglas EF/A-18 fighter aircraft. The system processes both PCM and IRIG Chapter 8 MIL-STD 1553 data. The system was purchased in conjunction with the Naval Air Warfare Center, China Lake, CA. Kathy Bossert, Bill Cox, and Bharat Parkhani worked with both Spanish Air Force and U.S. Navy personnel in order to produce the system. This system will act as a showcase system for the O/S90 in Europe.

(contributed by Mike O'Brien)

We received an add on to the Edwards Air Force Base O/S90 System. We received an upgrade order for Royal Australian Airforce PAP-3 Program, an O/S90 order from Fort Rocker, McClellan A-10, NASA AMES, and MARUBUN/KHI.

Sandia National Laboratories

Another successful O/S90 shipment was to Sandia National Laboratories in Livermore, CA. Sandia tests nuclear weapons (bombs, artillery shells, missiles, etc.) during the developmental phase. They develop the telemetry package for the weapon in place of the nuclear warhead. The tests include environmental features such as shock, vibration, and temperature. Their equipment must survive 16,000 Gs of acceleration and spin! Sandia is also involved in all modifications to existing weapons. The third area of testing involved stockpile weapons that are periodically tested.

The Sandia O/S90 is a six stream system with two PCM, two FM and two time inputs. Outputs include a Disk Output Module (DOM) for archiving, an Ethernet Output Module (EOM) for real-time data and a Parallel Output Module (POM) for data routed to an 8350 DAC unit. Initially the system was delivered with one SUN Server and three SUN workstations with future display expansion plans.

The system is installed and is in operation in Livermore, CA. The O/S90 philosophy matches that of Sandia with regard to future growth and flexibility. They are very pleased with the systems performance to date. The Systems Engineering Team was Len Zeiler, Teri Vokus, and Art Tackman.

(contributed by Beth Rueger)

NASA Kennedy Space Center

A showcase O/S90 shipped to KSC NASA Head-quarters December 4th. The system processes Shuttle launch data and monitors area launch conditions. This new system phases out a long-productive EMR system which included 4150 discriminators, a 429 encoder, EXPRT, and a 715 interfaced to a VAX 11/780.

The O/S90 improves data quality, automation, and maintenance using an 8470. It greatly increases performance and growth with the 8715-interfaced to a VAX 6000. The unsurpassed 9020 bit synchronizer generates more than the highest possible data quality, when processing old shuttle tapes it generates substantial manpower savings by minimizing data dropouts and eliminating repeated processing attempts. Integrated into the KSC network, the O/S90's new level of software resource is available to the Design Engineering community that it supports.

(contributed by Joel Webber)

NEC Flight Test Control System

LDS is supporting development of the Flight Test and Control System (FTCS) for the Japan Defense Agency. One contract is for a Decom System that receives and processes real-time data from aircraft and missiles from all major test ranges in Japan. This system includes two VAX-based O/S90 telemetry systems which can be configured to support two independent flight tests, or to operate in a dual redundant mode collecting the same data from a single test. Each system has 11 VAXstation 4000s for system setup and data display. A second contract for real-time 3-D graphic display software shows range safety information, aircraft configurations, combat performance, and data while tests are in progress. This software operates as part of the O/S90 system. First delivery of the FTCS Decom System was made in October; first delivery of the display software is scheduled for December. Tony Carwile and Dave Steffen are the software project engineers for the Decom and Display Software contracts, respectively. Dick Haase is the hardware project engineer. The program manager is Bill Anderson.

(contributed by Bill Anderson)

Martin TPPS

The Martin Marietta Programmable Aerospace Ground Equipment (PAGE) Telemetry PreProcessor System (TPPS) will be used for ground checkout of up to three Titan IV vehicles, simultaneously. Systems will be delivered to Denver, CO; Cape Canaveral Air Force Station, FL; and to Vandenberg Air Force Base, CA. Each system is composed of two telemetry racks and two analog tape recorder racks. Depending on the system's configuration, the telemetry racks process two or three streams of PCM data, each at a 819.2 Kilobits per second rate. The streams in each rack can operate independently or in a hot backup mode. The TPPS is the first of the new O/S90 systems to be delivered. The O/S90 software is written to industry standards that will permit it to be run on different manufacturers' workstations, in the TPPS case, a DECstation 5000.

(contributed by Jon Mather)

Boeing 777 Program

LDS is supporting the flight test program for the new Boeing 777 airplane. One contract is for development and manufacture of 30 Central Multiplexer (CMUX) units that will take information from up to 63 airplane data buses, merge it into a single 40 Mbit/second data stream, and distribute the stream to high speed digital recorders and to a real time data analysis system. A second contract is for modification to the design of the Acquisition Interface Assembly (AIA) previously developed for Boeing in 1987. This modification allows the AIA to process data received from the CMUX in the 777 flight test format, and upgrades AIA software to support additional real-time data analysis requirements. First delivery of the CMUX was made in November; first delivery of AIA is scheduled for December. Eduardo Carro is the software project engineer for both contracts. Pavlo Bobrek and Alex Hamilton are the hardware project engineers for the CMUS and AIA contracts, respectively. The program manager is Bill Anderson.

(contributed by Bill Anderson)

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Seasons Greetings







