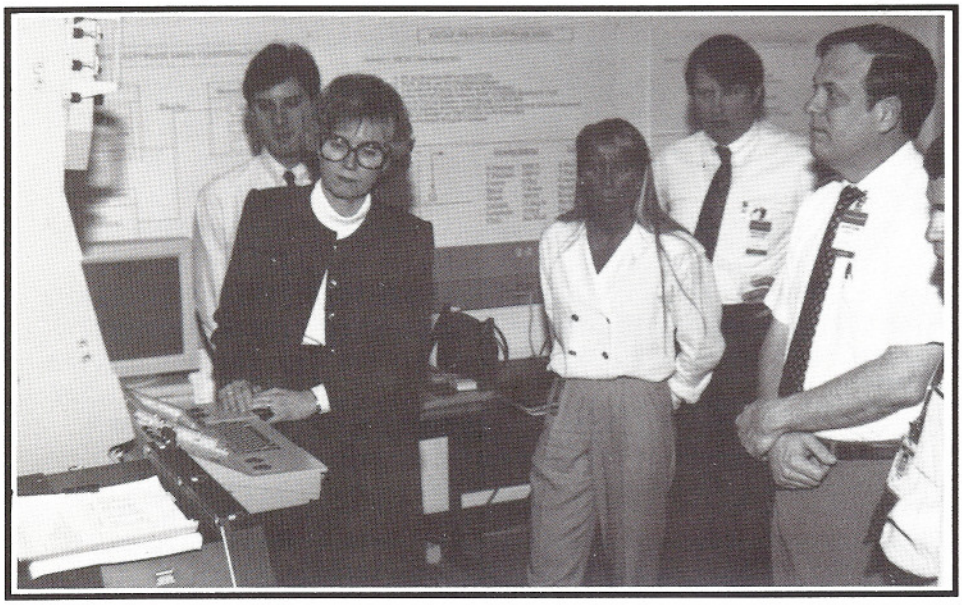
# Librazette

March 1992

Librascope Corporation, Glendale, California


## Another Team Achievement for AN/BSY-2



The AN/BSY-2 development team achieved another significant milestone last week with the demonstration of a simulated launch of an ADCAP torpedo and Harpoon missile.

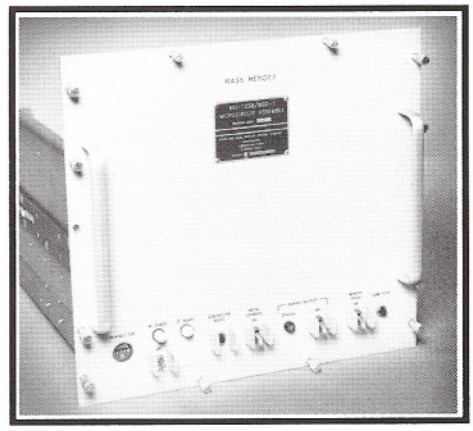
Pictured, from left, John Paliotta and Jannette McGreevy, representing the weapons software development team; Donna Doane, Naval Underwater Weapons Center (NUWC); Dick Schubert, GE BSY-2 Program Office; Dick Horne, PMS418; and Ernie Olivera, NUWC. ■

*-BSY-2 Highlights on Page 2-*

## Librascope Receives VECP Award from Navy

The Company has been awarded $302,883 from the Navy, SPAWAR, for an Integrated Radio Room (IRR) Mass Memory Value Engineering Change Proposal (VECP). The award is the result of a joint VECP effort by GE Aerospace (formerly RCA), Camden, and Librascope, affecting the TRIDENT Submarine Integrated Radio Room (IRR). The change resulted in the replacement of the CL107MA Magnetic Disc Memory Controller and Auxiliary Memory Unit with a solid state Memory Controller (RAMdisk) utilizing Static RAM (SRAM) technology. GE is the prime contractor of the TRIDENT IRR program sponsored by SPAWAR.

The RAMdisk (a.k.a. EWEGO disk) has provided many extraordinary benefits to the Radio Room, not the least of which are lower cost and higher reliability. Performance improvements include access time of 1 ms (was 17 ms average), and



Integrated Radio Room RAMdisk

error rate of 0 (was 1 in 10 to the 10th). Also, Data Transfer Rate and memory capacity growth capability were increased significantly. In addition, power consumption was reduced from 450 watts to 50 watts, and weight was reduced from 250 pounds to 40 pounds.

VECP approval resulted in the delivery of a Qualification unit, and 12 production RAMdisks (6 shipsets).

The $303K received is Librascope's share of the Instant, Concurrent, and Collateral Savings realized by the Navy. Royalties in the amount of $63K apply to any future units delivered within the 3 year savings share period.

Don Barton, Program Manager, reports that an award for an additional unit (and royalty), plus spares is expected in June, and backfit of some 18 Trident Submarines is planned starting in 1994 requiring an additional 36 RAMdisks, including shore-based requirements.

Don also reports that an additional $122K is expected from SPAWAR next month for the RD-433/SSH VECP, bringing that total to $749K.

The RD-433/SSH VECP was reported on in the December '91 issue of the Librazette. ■

# MESSAGE FROM THE PRESIDENT

**On Wednesday, March 25, we reviewed our Strategic Plan at Loral's Corporate headquarters in New York City.**

**The strategic Plan forms the business and financial basis for Librascope for the next three years.**

**Messrs. Bernard Schwartz, Chairman and Chief Executive Officer; Frank Lanza, President and Chief Operating Officer; Robert LaPenta, Controller; Michael DeBlasio, Finance; Nicholas Moren, Treasurer; and Lawrence Schwartz, Technology, participated in the two plus hour review.**

**The Plan is the result of the extraordinary efforts of many of our employees during a turbulent time for all of us in Librascope.**

**The Strategic Plan was well received and I want to personally thank each of the individuals involved.**

*Bill*

**Bill Hudson**
**President**

# AN/BSY-2 HIGHLIGHTS

## Production Stop Work Update . . .

At an Executive Review Session conducted on March 26, Frank DeBritz, General Manager, Submarine Combat Systems Department (SCSD), GE, Syracuse, announced that the AN/BSY-2 system for the SSN 22 was being restarted. For Librascope this means that one-half of the equipment affected by the stop work has been reinstated. Mr. DeBritz also stated that although it may be some time before a decision is reached, "there is a better than 50/50 chance" that the additional ship's set would also be restarted. ■

## Displays . . .

The first step in the certification of the CSDC was started in early March. Unit Design Certification Testing (UDCT) at two of our subcontractors, IEC, who manufactures the displays for the CSDC and ORBIT, the manufacturer of the data entry panel. The UDCT process will continue through May resulting in certification that the CSDC is ready for shipboard installation. The first two CSDC's, for the BQG-5, are scheduled to be installed in October of this year.

An updated version of the Virtual Display Interface (VDI) was delivered to GE on March 1. This version added some critical functions and included several performance enhancements. The significance of the start of UDCT and this delivery was such that it warranted an announcement in a GE "BSY-2 NEWS" bulletin with a "congratulations" from the Subcontractors Administrator. ■

## Weapons . . .

On March 25 the weapons software development team achieved a significant milestone by demonstrating the simulated launch of single and multiple salvos of the ADCAP torpedo and the HARPOON missile. The demonstration included presetting and firing the weapons and, for ADCAP, wireguide control after launch.

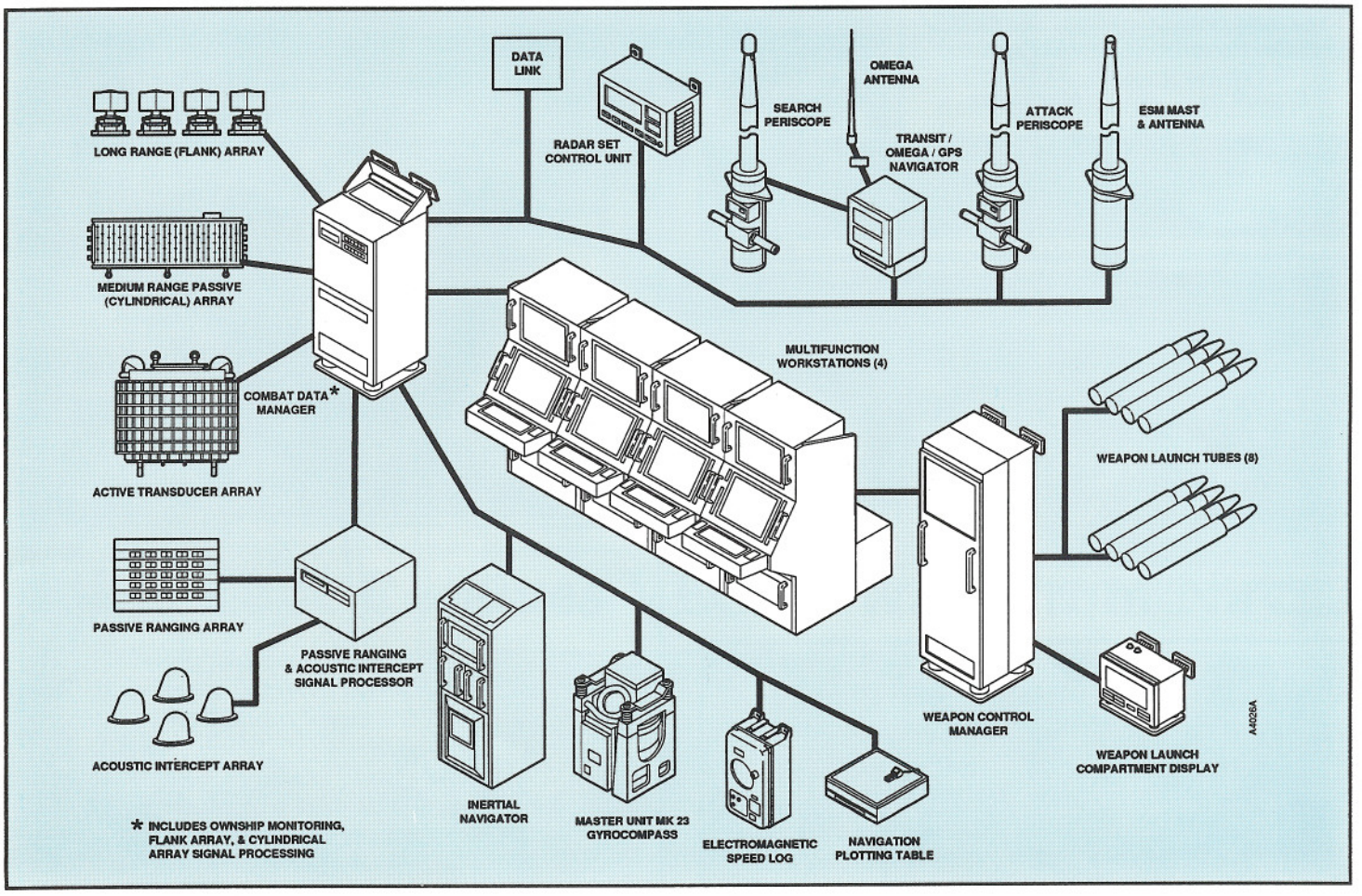
This is the first in a series of scheduled demonstrations that will include TOMAHAWK, presettable mines, the MK48 torpedo, as well as ADCAP and HARPOON.

The demonstration was conducted using an On-Board-Training system which is also deliverable software under the BSY-2 contract. Some additional work will be done during the coming weeks to integrate our software with GE's software and hardware in preparation for an April Critical Item Test (CIT) of the ADCAP Snapshot capability of the BSY-2 system. This is a critical milestone in BSY-2 System development and Librascope engineers and technicians will assist GE in preparing for these tests at Syracuse. ■


SET CLOCKS AHEAD ONE HOUR

DESIGNED TO MEET THE MISSION REQUIREMENTS
OF TODAY'S MODERN DIESEL SUBMARINES

# Librascope's Advanced Submarine Integrated Combat System (SUBICS-900)




Librascope's most recent development for the international market is Submarine Integrated Combat System—SUBICS-900. This totally integrated submarine combat system has been designed to meet the mission requirements of today's modern diesel submarines.

This advanced combat system is the result of Librascope's extensive submarine combat system design experience.

**Librascope has produced tactical command and control systems for the U. S. Navy submarines and international submarines for over four decades.**

In recent years there has been an enormous increase in the amount of incoming data that must be processed and analyzed in real time aboard submarines at sea. The amount of data generated by ownship sensors is significantly large and the situation is further complicated with tactical data inputs from sources external to ownship. A submarine's operational performance now depends directly on its needs to enter, store, process, integrate, recall, display and act upon this data as capabilities of surface ships and submarines increase. SUBCIS-900 is designed to meet these needs.

SUBICS-900 is designed to provide effective multi-mission tactical operations by providing the functions of—Tactical Evaluation and Planning, Integrated Surveillance, Threat Prosecution, and Combat Navigation.

## System Design

The SUBICS-900 design is based on the use of production hardware and software for the primary elements of the system. The system, illustrated above, is centered on a Combat Data Manager, four Multi-Function WorkStations, and a Weapon Control Manager. These system components are used to integrate sensor data, convert the

# SUBICS-900

-Continued-

data into contact information, identify threats to ownship's mission, and control weapons, as required, against those threats. The sensor data is provided by navigation, acoustic, elctromagnetic, and optronic sensors which are an integral part of the system. Using this equipment, SUBICS-900 provides Combat Navigation, Tactical Planning, Integrated Surveillance, Threat Prosecution, Performance Monitoring/Fault Localizatiion, On-Board Training, and digital, audio, and video data Logging/Retrieval for Multi-Mission Operations.

The navigation, acoustic, electromagnetic, and optronic sensors are connected to the Combat Data Manager using dedicated digital, audio, and video communication channels. Next, the Combat Data Manager, the four MultiFunction WorkStations, and the Weapon Control Manager are interconnected via a dual Combat Information Bus. Finally, the Weapon Control Manager is connected to the launch tubes and weapons which include torpedoes and underwater launched missiles.

### System Features

SUBICS-900 provides the following features:

- ★ Tactical Evaluation and Planning for Integrated Surveillance and Threat Prosecution operations.
- ★ Integrated Surveillance using acoustic, electro magnetic, and optronic sensors including the capability to track 68 contacts simultaneously.
- ★ Threat Prosecution of 4 targets simultaneously using 3 wireguided torpedoes and a salvo of underwater launched missiles.
- ★ Combat Navigation support including the display of navigation charts, ownship position fixing and dead reckoning, recommended course and speed maneuvers based on the tactical plans, and automatic alerts to natural and man made hazards.
- ★ System Performance Monitoring and Fault Localization.
- ★ On-Board Training in port and at sea.
- ★ Data Logging and Retrieval of digital, audio, and video data.

### SUBICS-900 Marketing Plan

Librascope is currently proposing a variation of this system—SUBICS-901—for the Egyptian Navy. Also underway is the design of a SUBICS-900 system model along with brochures and an international trade magazine advertising campaign.

Current trade show and marketing plans for this year include introducing the SUBICS-900 in Canada, England, the Netherlands, Spain, Chile, Korea, Malaysia, Turkey, and Egypt. ■

# Librascope Gives Award to Navy SPCC

**Bill LaPorte, right, from Librascope's Newport Office, presents award to Gerald Minnich, Director of the SPCC Competition Advocate/Technical Breakout Department, Navy Ships Parts Control Center.**

Librascope recently presented a Value Engineering Award to the Department of the Navy Ships Parts Control Center, SPCC. The award names SPCC with several other contractors and government agencies as having contributed toward a major value engineering accomplishment involving Librascope's RD-433/SSH Value Engineering Change Proposal (VECP)—story in the Dec., '91 issue of the Librazette.

Following the implementation of Librascope's VECP, the Navy SPCC realized significant savings on its buy of Recorder-Reproducers used in a Navy satellite communication system known as the UIIF SATCOM system. ■

# Security Department To Manage First Aid Program

With the retirement of the Company nurse, Anita Hagan, the Security Department will now be responsible for handling Medical Department functions which involve—responding to medical first aid incidents, providing limited non-prescription medications, and assisting with the completion of the necessary forms for medical treatment involving Worker's Compensation Benefits.

Security Department personnel, including security guards, are trained and certified in Red Cross first aid procedures and CPR.

The Compensation and Benefits department will assist employees with questions concerning medical benefits, verification of medical benefits to outside agencies and medical leave of absence requests. ■

# LORAL News Briefs

## ❑ Loral—Telemetry and Instrumentation Group

**Loral Conic's Multi-Application Space Products Continue to Win Contract Awards**—Loral Conic, San Diego, once again showed the versatility of its space products—in this case its NASA-approved STDN transponders—by winning two new satellite support contracts: RADARSAT, which is being built by Ball Aerospace for a joint US/Canadian venture, and the Total Ozone Measuring System (TOMS), a TRW project. The contract awards for TOMS and RADARSAT total at just over $1.2 and $1.4M respectively, with agreements to supply two STDN transponders to each customer.

The STDN transponder for the RADARSAT project will provide a GSTDN link for command, telemetry, and ranging for the satellite, which will generate research data related to global ice, oceans, renewable resources, and non-renewable resources.

**The STDN tranponder used in the TOMS project will also provide a GSTDN command, telemetry, and ranging link for the TOMS satellite, which will be gathering information on ozone depletion over the polar region.**

Loral Conic's STDN and DoD-approved SGLS transponders have been chosen for support of various satellite programs, such as LANDSAT 6, a mapping satellite (STDN); STEP, a multi-purpose, low-cost satellite (SGLS); and the International Solar Polar Mission (ISPM), a joint US/European/Japanese effort in which a constellation of four satellites—two produced by the US—are used to collect scientific data. Under the Global Geosciences Satellite (GGS) sector of the program, Loral Conic provides STDN transponders for GGS Wind and GGS Polar projects. The GGS Wind satellite is to be placed between Earth and the sun, and will track data demonstrating how Earth is affected by activity on the sun (such as solar flares). The GGS Polar satellite will orbit Earth and collect geological data.

**Conic also has provided FM and PM transmitters and real-time GSTDN receivers for TIROS, a weather tracking and search-and-rescue satellite.**

For the future, the Loral Conic Space Products group, in conjunction with the company's Encoders and Telemetry Systems (ETS) group, plans to aggressively compete for a piece of the BRILLIANT PEBBLES and BRILLIANT EYES contracts, which are part of the Strategic Defense Initiative (SDI).

Loral Conic would supply SGLS transponders with encryption/decryption capabilities. ■

## ❑ Loral—Western Development Labs

**Loral/ Siemens Group Wins Major Military PACS BID—**

Loral Western Development Labs of San Jose, and Siemens Gammasonics Inc. have been awarded intial contracts to install diagnostic image management and storage systems—called the Medical Diagnostic Imaging Support (MDIS) system— in US military hospitals. The MDIS umbrella contract initiates the largest, most comprehensive picture archiving and communication system (PACS) in existence.

The initial sole-source delivery orders, totalling over $20M, call for the Loral-Siemens team to design, produce, install and integrate the new imaging system at military hospitals, and install several teleradiology systems and field systems that will make mobile medical units MDIS-compatibile.

Siemens Gammasonics Inc. is a subsidiary of Siemens Medical Corp., a leading developer of PACS, as well as one of the largest developers and suppliers of Nuclear Medicine equipment to the world market.

The program, run by the US Army Engineering Division in Huntsville, Ala., and sponsored by the Office of the Surgeon General, is called the Medical Diagnostic Imaging Support (MDIS) system.

The MDIS program is potentially valued at up to $350 million and will allow the government to purchase systems for military hospitals over a 4-year period.

MDIS will digitise, process, store and distribute in electronic form radiologic images—X-ray, CT, MRI, etc.—which are currently stored on film. MDIS will also enable hospitals to communicate this data to other hospitals and institutions over a variety of available communications channels.

**Loral-Siemens expects that the technology used in this new system will have widespread application throughout the US military medical community and significant potential in the commercial health-care industry.**

Municipal and rural hospitals, university medical centers, outpatient clinics and mobile imaging centers are all targeted users for MDIS-type picture archiving and communications systems.

MDIS is based, in part, on technology used in military reconnaissance systems such as the TR-1 ground station, which manages data from different airborne sensors and makes it readily available to battlefield commanders.

At the heart of these systems is Loral's working storage unit, a powerful high-speed disk system which rapidly stores, retrieves and distributes a large quantity of image data along local area networks and through fiber optic channels. ■

# Libravets thru March

*Helen Perez*
*40 Years*
*Expediting*

*Al Peppi*
*25 Years*
*Machining*

*Al Wilson*
*25 Years*
*Expediting*

*Melba Puryear*
*25 Years*
*Contracts*

## More Libravets . . .

**20 Years**—William Blakely

**10 Years**—Leah Nicodemo, James Stanley, Gregory Firth.

**5 Years**—Stig Ronngren, Pat Burk

# Retirements

**Chuck Reuter,** 33 yrs, Engineering Administration, with wife Carol.

**John Hayden,** center, 33 yrs, Field Service, with Tom Kokinda, left, and Bill Brockway.

## Retirements Not Pictured . . .

**Manuel Gil,** 34 yr, Quality Engineering
**Cesar Fernandez,** 31 yrs, Art Department
**Roger Mahoney,** 27 yrs, Engineering Design Services
**Richard Korn,** 28 yrs, Mechanical Engineering
**Phyllis Elkins,** 21 yrs, Purchasing
**Jerry Smith,** 21 yrs, Purchasing
**Aki Maehara,** 19 yrs, Product Engineering Support
**Robert Riley,** 17 yrs, Quality Engineering
**Melvin Pearlman,** 16 yrs, Electromechanical Engr.
**Joann Ruzicka,** 15 yrs, Program Management
**Bill Stewart,** 12 yrs, Marketing
**John Becker,** 10 yrs, Mechanical Design
**Chickie Kelley,** 10 yrs, Engineering Design


**The Red Cross Bloodmobile will be at Librascope - Friday - April 24.**

**Due to a current blood shortage—blood is urgently needed! Give your blood so it will be there in the event you or someone in your family needs it!**

**Blood donor cards will be distributed to all employees during the week of April 6.**