

In this Issue

- Spacecraft Systems 2
- Spacecraft Ground Systems..... 3
- Ground Telemetry..... 4
- New Websites 5
- Recent Activities..... 6
- Q&A 7

UPCOMING EVENTS

SATELLITE

When: 16-18 March
Where: National Harbor, MD

NATIONAL SPACE SYMPOSIUM

When: 12-15 April
Where: Colorado Springs, CO

ARMY AVIATION ASSOC.

When: 14-17 April
Where: Ft. Worth, TX

SPACEOPS

When: 26-29 April
Where: Huntsville, AL

FOCUS - MARCH 2010

Published for customers of L-3 Telemetry & RF Products Group.

SEND FEEDBACK TO:
Focus.TW@L-3Com.com

L-3 TELEMETRY-WEST CONTINUOUS IMPROVEMENT CAMPAIGN GAINING MOMENTUM

SAN DIEGO, CA., March 11, 2010 – L-3 Telemetry-West (L-3 TW) is successfully implementing a continuous improvement campaign which includes significant facility, equipment and process improvements to meet the evolving and demanding needs in the current market. This process began 18 months ago and includes a considerable amount of effort and capital invested by the company and tremendous involvement from various customers. Improvement areas include Engineering, Operations and Mission Assurance, as well as changes to the organizational structure. The following is a summary of events/processes that have occurred already:

Engineering; Adopted a robust Worst Case Analysis (WCA) procedure and implementation of a revised Product Development Process with an increased emphasis on gate reviews.

Operations and Mission Assurance; Implementation of end-to-end bar coding, helping to eliminate kitting errors. Additionally, implemented state-of-the-art solder stenciling, printing, and pick & place equipment with built in component verification capabilities.

Organizational; Hired a Full-time Six Sigma Black Belt/Director of Continuous Improvement and have launched a division-wide Lean Six Sigma Program. These key additional resources include Systems Engineering, Power Supply Designers and Quality personnel.

Supported multiple joint customer/L-3 TW events which focused on Engineering as well as Operations process improvements. Numerous organization enhancements have been incorporated as a result.

Process/Facilities; Installed constant monitoring and humidity control systems throughout the Balboa facility including a more robust data logging/early warning system for adverse humidity conditions that could lead to an unsafe Electro-Static Discharge (ESD) environment. Our Balboa facility is part of the Ground-based Midcourse Defense (GMD) Foreign Object Debris (FOD) council and has been recognized as a benchmark facility by the MDA .




Improved Quality + Quicker Cycle Time + Reduced Costs = A Satisfied Customer

Spacecraft Systems



L-3 TELEMETRY-WEST INTRODUCES NEXT GENERATION OF HIGH SPEED MISSION DATA TRANSMITTERS

SAN DIEGO, CA., March 11, 2010 – L-3 Telemetry-West (L-3 TW) introduces the next generation of high speed mission data transmitters with the CTK-830. The CTK-830 is a mission data Ku/Ka-band transmitter developed for high rate data transmission. LVDS or PECL Interfaces and QPSK modulation are standard at data rates over 1.2 Gbps (combined for I and Q). Forward error correction encoding options are available. A high-fidelity GaAsFET amplifier section operates below compression for linear applications where spectrum conservation is critical. The transmitter includes circuitry to assure compliance with ITU NTIA and SFCG emission standards.

For more information visit – www.L-3com.com/TW.



**Ka-Band Transmitter
CTK-830**

KEY FEATURES

- | | |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> ▪ High data rates for remote sensing application ▪ Designed for use between 19 GHz and 28 GHz ▪ OQPSK Modulation ▪ Data rates > 1.2 Gbps | <ul style="list-style-type: none"> ▪ High reliability ▪ Radiation hardened ▪ PECL or LVDS interface ▪ Embedded encryption optional ▪ Optional X-Band Model Available ▪ NTIA and SFCG compatible |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

**INTRODUCING THE NEXT
GENERATION OF HIGH-SPEED
MISSION DATA TRANSMITTERS**

Ka-Band QPSK Transmitter
CTK-830

L-3's innovation in space hardware continues with the introduction of its new CTK-830 mission data transmitter. The CTK-830 operates at high data rates (>1.2 Gbps) to support a full range of remote-sensing applications. It's radiation-hardened, NTIA-compatible and available with embedded encryption for secure communications. To learn more, go to www.L-3com.com/TW.

Telemetry & RF Products L3com.com

Earth and nebula photos courtesy of NASA

Spacecraft Ground Systems



PRODUCT UPDATE—INCONTROL™

SAN DIEGO, CA., March 11, 2010 – L-3 Telemetry-West (L-3 TW) continues to upgrade functionality of the InControl™ Satellite Command and Control Software for On-Orbit, Factory Test and Ground System Monitor and Control by using advanced data displays with Jade™.

Jade is a user friendly, drag-and-drop application to display and monitor parameters and missions. Users have access to alphanumeric, time charts and custom animated graphics to create individual views and complete workbooks. For more information visit – www.L-3com.com/TW

CORE CAPABILITIES

DATA DISTRIBUTION
 JAS SCRIPTING LANGUAGE
 AUTOMATION
 ARCHIVING
 EVENT LOGGING
 DATA DISPLAYS
 CONTROL DATA RETRIEVAL

EQUIPMENT MONITOR
 REPORT GENERATION
 LEGACY PROGRAM TRANSITION SUPPORT
 BUILT-IN SIMULATION CAPABILITIES
 FAULT TOLERANCE / FAILOVER / REDUNDANCY
 XTCE TRANSLATOR
 ARCHITECTURE COMPATIBILITY WEB-BASED

L3 Telemetry & RF Products

SATELLITE COMMAND & CONTROL SOFTWARE

InControl

On-Orbit | Factory Test | Ground Control

www.L-3Com.com/TW

Ground Telemetry



L-3 TELEMETRY-WEST FINDS NEW WAY TO HANDLE THE DATA WAREHOUSE ISSUE WITH PROSPECTOR

SAN DIEGO, CA., March 11, 2010 – L-3 Telemetry-West (L-3 TW) introduces its new data warehouse application called Prospector™.

Prospector is a web browser application allowing users to quickly and easily import data files into a centralized data storage location, then visualize and export that data for use in post-test data analysis.

Prospector is a multi-user, multi-threaded, platform independent software application providing the following capabilities: supports IRIG Chapter 10, TSPI, and L-3 HFS source files; time-orders, sorts and processes data during the import process; web browser interface for client users; extracts data on demand through web page interface; and exports raw and/or processed data to multiple users.

Prospector includes privilege based management capabilities providing the ability to: manage user accounts and roles; import/process/delete data files; and export data files in CSV, TSV, & Matlab data types.

For more information, visit www.L-3com.com/TW.



PROSPECTOR KEY FEATURES

- Includes Server with RAID for high speed data storage
- Web-browser client interface
- Imports Chapter 10 or HFS files
- Allows time sliced exports of archived data
- Select single or multiple parameters for export
- Exports raw or processed data
- Provides 'snapshot' view of the data parameter
- Correlate data parameters with TSPI information
- Export video data from Chapter 10 files
- Output Data Re-sequencing
- Enhanced Flight Data History
- Trigger Export on Logical Conditions
- User Controlled Sample Rate
- User Defined Time Slices (IRIG Time)
- Import/Export Parameter Overlay
- Ability to Save/Load batch to user disk drive

L-3 TELEMETRY-EAST COMPLETES C-BAND GROUND RECEIVER AUGMENTATION

BRISTOL, PA. March 11, 2010 – L-3 Telemetry-East (L-3 TE) has completed a design that incorporates C-Band into the RCB and DR family of ground receivers. The first units from the Air Force are currently being retrofitted, and this achievement enables C-Band testing to start at AFFT Edwards AFB and NAWC-AD (Patuxent River) later this year.

L-3 TE presented a white paper describing the C-Band design and implementation at the International Telemetry Conference last October in Las Vegas.

A presentation is also scheduled at the European Telemetry Conference this May in Hamburg, Germany.

For more information visit, www.L-3com.com/TE.

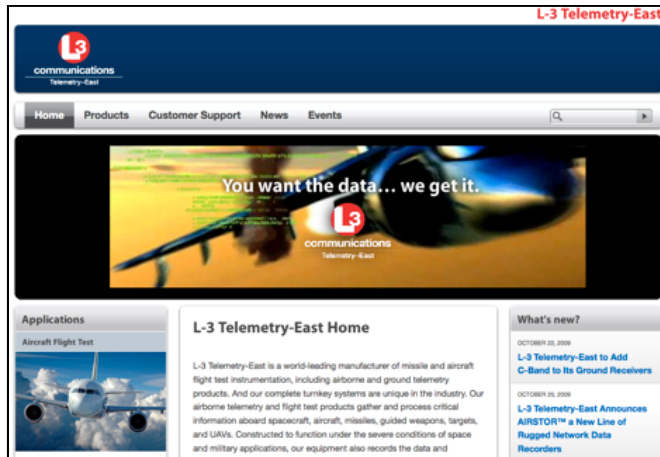


RCB-2000 C-Band Ground Receiver

WEBSITES LAUNCHED

L-3 TELEMETRY-EAST LAUNCHES REDESIGNED WEBSITE

Bristol, PA., March 11, 2010 – L-3 Telemetry-East (L-3 TE) has redesigned its web site to provide customers with the many advantages of Web 2.0 features and technologies. L-3 TE's redesign is intended to increase the site's effectiveness by making it easier for visitors to find products and services through upgraded search functions and more user-friendly navigation.



L-3 Telemetry-East Website Home Page

The site's new layout and design put L-3 TE's products within easier reach of visitors with a cleanly designed, clear, and easy-to-use format. The new site has also been optimized to improve its visibility on search engines.

The new site incorporates a sophisticated web metrics program that allows L-3 TE to view important information about where visitors go on the site. This assists in implementing ongoing improvements. Also featured is a comprehensive Content Management System (CMS), allowing L-3 TE personnel to update the site without the need for webmaster skills.

Visit the new L-3 Telemetry-East web site at: www.L-3com.com/TE

L-3 SOUTHERN CALIFORNIA MICROWAVE LAUNCHES NEW WEBSITE

SPRING VALLEY, CA, March 11, 2010 – L-3 Southern California Microwave (L-3 SCM) is proud to announce the launch of its new website at www.L-3com.com/SCM.

The easy-to-navigate website offers quick access to information about the innovative L-3 SCM products, including those in the Small UAV, Security and Surveillance and Airborne Telemetry marketplaces.

Through the new website, L-3 SCM hopes to provide customers and potential customers a place they can find all the information they need to know about L-3 SCM's organization and products.

Visit the new L-3 SCM web site at: www.L-3com.com/SCM.

L-3 GIVES BACK

L-3 TELEMETRY-WEST & SOUTHERN CALIFORNIA MICROWAVE DONATE GOODS DURING HOLIDAY SEASON

L-3 Telemetry-West and Southern California Microwave donated goods & money to various local charity's throughout the 2009 holiday season including:

Hand Up Youth Food Pantry— HANDUP Youth Food Pantry at Jewish Family Service is an innovative project run by a committee comprised of dynamic San Diego teenagers. The food pantry distributes over 850 food bags per month. Weekly distributions are made at Ohr Shalom and once per month at Camp Pendleton and Murphy Canyon military housing areas, where the Hand Up youth also provide activities for military children. www.handupfoodpantry.com

Voices for Children— Voices for Children, a nonprofit organization, endeavors to ensure that abused, neglected and abandoned children who have become dependents of the San Diego County Court will have a safe and permanent home. Through our network of trained and educated volunteer Court Appointed Special Advocates (CASAs), Voices for Children works with key agencies, legal counsel and community resources to identify and protect the best interests of each child inside and outside of court. For more information, see www.voices4children.com

Rady Children's Hospital – Rady Children's Hospital is the San Diego region's only designated pediatric trauma center and the only area hospital dedicated solely to pediatric care. We donated \$4,620 to this fine institution. The funds were received from the 2009 Holiday Party silent auction and the generous donations of our employees. L-3 TW/SCM are part of the 150 contributors that make up the Rady Miracle Maker program.

Read more information about Rady Children's Hospital at www.chsd.org

ON THE MOVE

L-3 TELEMETRY-WEST STRENGTHENS THE FRONT END OF THE BUSINESS

SAN DIEGO, CA., March 8, 2010 – L-3 Telemetry-West (L-3 TW) announced today that Larry Dobbs has joined San Diego based L-3 TW as Director of Business Development for Space Products. He was Director of Business Development for Space Electronics at L-3 Cincinnati Electronics.

Larry has a wealth of Space Business Development & Management experience having worked with Harris Corp, Ford Aerospace, Stanford Telecom, Loral, Martin Marietta, Sanders, and L-3 over the last 26 years. Larry has a Bachelors in Electrical Engineering Technology (B.E.E.T.) and a Masters in Business Administration (M.B.A.).

He succeeds Paul Brammer who has been named Director of Proposals at L-3 TW. Mr. Brammer has tremendous Proposal and Business Development experience that we will continue to leverage as we carry on with efforts to grow our Space business. Paul graduated from Colorado State University and has been with L-3 and heritage companies for over 23 years.

L-3 TELEMETRY-EAST INTRODUCES NEW VICE PRESIDENT OF ENGINEERING



Robert G. Holland
VP of Engineering
L-3 Telemetry-East

BRISTOL, PA, March 11, 2010 – L-3 Telemetry East (L-3 TE) announces the appointment of Dr. Robert G. Holland as Vice President of Engineering. Dr. Holland brings L-3 TE 25 years of engineering experience with defense and commercial communication firms.

He served as Vice President of Product Development at Ulticom, Chief Engineer and Director at L-3 Communication Systems-East, and has held numerous technical and management positions of increasing responsibility.

Dr. Holland holds a Bachelor's of Science degree in Electrical Engineering from Rutgers University, a Master's of Science degree in Electrical Engineering from Villanova University, a Master's of Science degree in System Engineering from the University of Pennsylvania, and a Doctorate in Electrical Engineering from the University of Pennsylvania.

RECENT ACTIVITIES

L-3 TELEMETRY-WEST & SOUTHERN CALIFORNIA MICROWAVE HAVE RECYCLABLE GOODS DRIVE

SAN DIEGO, CA., March 11, 2010 – L-3 Telemetry-West (L-3 TW) held a free electronics recycling drive on October 27, 2009 which collected nearly 3,200 lbs. of e-waste. The event was held in the parking lot at the L-3 TW facility from 6:30 a.m. to 2:30 p.m.

IMS recycling was on-site assisting in gathering the goods from employees. Items ranged from old computers, television sets, tape players, CD players, cell phones, mice, keyboards, monitors, video and audio equipment and any other old electronics people wanted to recycle responsibly. All electronics were destroyed and all materials recycled. Items are never reused or donated elsewhere.

"It is very important for people to take advantage of these recycling events because next year electronic equipment cannot be disposed of in our landfills," said Lorena Yescas, EH&S Coordinator for L-3 TW.

Ms. Yescas continues to say, "It's good to have the mindset to reduce, reuse and recycle unwanted electronics."

The drive was so successful that L-3 TW/SCM plans on holding another one in the Summer of 2010.



Benefits of Recycling Electronics

- Reduce the need for new landfills and incinerators by keeping electronics out of the waste stream
- Saves energy required to manufacture new products
- Reusing valuable resources such as precious metals, plastic and glass preserves natural resources from further mining
- Avoid air and water pollution as well as greenhouse gas emissions caused by the manufacturing of new products



More than 1.5 million tons of e-waste are thrown into American landfills every year. As a result, the toxins they contain, such as lead and mercury, end up being released into the air and water.

Q & A WITH L-3 TELEMETRY-WEST

L-3 Telemetry-West's new Director of Business Development for Space Products is Larry Dobbs. We asked Mr. Dobbs about his feelings on the Space industry.



Larry Dobbs
 Director of Business Development, Space Products
 L-3 Telemetry-West

Question: What's your assessment of the Space marketplace?

Answer: After a number of years of minimal satellite procurements, we are now seeing an upsurge in certain market segments. Concerning NASA, and at the expense of the cancelation of Constellation, the White House has increased spending by \$2B over the next 5 years in NASA's Sciences budget. This includes earth observation missions utilizing LEO satellites that will need communications downlink and uplink products.

Although the DoD military space budget has dropped by about 8% with no major new starts, there are a number of new observation applications concerning special users in the areas of radar imagery and situational awareness that should also bring opportunities for communications products and more emphasis on high TRL (Technology Readiness Levels).

Question: What technology changes have most improved the Space world in the last 20 years?

Answer: I would have to say the efficiencies of the electronics components used in the higher level subsystems and systems that makeup the satellite platform and payloads. Sensors have become much more "sensitive" enabling more information gathering. With this, comes the need for higher data throughput via the mission data downlinks to transfer that information down to the earth. Space communication products have seen major improvements in their interfaces, processing, error correction coding and data rates. FPGAs, Field-Programmable Gate Arrays, commonly used for transmitter and receiver data processing, have become much faster with higher levels of capacity.

I also think we will see more customers requesting higher data rates through the use of higher order modulations and/or higher frequency bands but remember also the Space community is very conservative when it comes to usage of new technologies.

It will be an exciting and challenging future for L-3 TW Space products, one I look forward to taking on.

L-3 Telemetry-West's new Director of Proposals is Paul Brammer. We asked Paul to reflect on the past and the future.



Paul Brammer
 Director of Proposals
 L-3 Telemetry-West

Question: You've led Telemetry-West Space Business Development for 7 years. What do you count as your most successful win?

Answer: There have been a number of significant wins over the years including various CXS-2000 (SGLS/USB Transponder) programs such as AEHF, MUOS and most recently a large classified program. In addition we should be proud of the strong brand recognition which both the CXS-810C (SGLS Transponder) and the MCU-110 (COMSEC GFE product) have earned. I'm probably most proud of contributing to the Space product line's growth from less than \$20M 7 years ago to over \$50M in 2009.

Question: What's your vision for Telemetry-West in Space?

Answer: We are an acknowledged leader in high reliability Space communication products. I'm confident we will continue to provide great products that meet the market needs. We need to continue to strongly support the DoD/Military space segment with our current product offerings while also addressing critical growth initiatives with targeted new products to meet our customer's requests.

Question: What do you see as your biggest challenge with taking over proposals?

Answer: Customers continue to demand higher quality submissions with shorter response timelines. We need to streamline and improve all aspects of the process with the goal of increasing our ability to propose on new products and systems which ultimately will lead to new growth opportunities.



Telemetry & RF Products

Today, L-3 Telemetry & RF Products serves commercial, military and civilian customers worldwide with a product offering that includes TT&C satellite transponders, satellite command and control software, high-power amplifiers, high-reliability receivers/transmitters, encryption/decryption units, video compression/decompression units, tactical intelligence UHF/HF and microwave radios, telemetry ground system components and solutions, specialized telemetry and surveillance products, telecommunications products and specialized networks, and advanced technologies in SIGINT, SEI, and Geolocation.

L-3 Telemetry & RF Products Group is made up of the following companies:

ADVANCED TECHNOLOGY & SYSTEMS

SOUTHERN CALIFORNIA MICROWAVE

TELEMETRY-EAST

TELEMETRY-WEST



L-3 Advanced Technology & Systems

355 Ravendale Drive | Mountain View, CA 94043

Phone: 650-961-9400 | Website: www.L-3com.com/ATS

L-3 Advanced Technology & Systems is a provider of SIGINT Systems Engineering, Specific Emitter Identification, Novel Geolocation Techniques, RF Polarimeter Processing, Technical Studies & Analyses, Software Development, and Rapid Prototyping.



L-3 Southern California Microwave

2732 Via Orange Way, Suite E | Spring Valley, CA 91978

Phone: 619-670-3414 | Website: www.L-3com.com/SCM

L-3 Southern California Microwave is a leading manufacturer of microwave transmitters, receivers, power amplifiers, repeaters and antennas for military test ranges, UAVs, RPVs, UGVs, robots and law enforcement agencies. Additionally, L-3 SCM provides standard FM PCM telemetry systems.



L-3 Telemetry-East

1515 Grundy's Lane | Bristol, PA 19007

Phone: 267-545-7000 | Website: www.L-3com.com/TE

L-3 Telemetry-East is a preeminent supplier of airborne telemetry products and systems for the aircraft and missile flight test, airborne telemetry and ground receiver markets. Additionally, L-3 TE is a worldwide supplier and integrator of quality telecommunications products and end-to-end communications solutions.



L-3 Telemetry-West

9020 Balboa Ave | San Diego, CA 92123

Phone: 858-694-7500 | Website: www.L-3com.com/TW

L-3 Telemetry-West is a premier provider of tailored flight hardware and systems solutions for missile, UAV and spacecraft telemetry, tracking and control (TT&C); software & HPAs for satellite command & control; COTS telemetry ground system solutions; tactical intelligence receivers; and terrestrial HF and microwave radios.

How do we measure up? www.L-3Com.com/TW/VOC