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**Upcoming Tradeshows**

**AFA Air Warfare Symposium**  
**When:** 21-22 February  
**Where:** Orlando, FL  
**URL:** [www.AFA.com](http://www.AFA.com)

**Satellite 2008**  
**When:** 26-28 February  
**Where:** Washington, DC  
**URL:** [www.satellite2008.com](http://www.satellite2008.com)

**National Space Symposium**  
**When:** 7-10 April  
**Where:** Colorado Springs, CO  
**URL:** [www.nationalspacesymposium.org](http://www.nationalspacesymposium.org)

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**L-3 Combines  
Telemetry-East & Global Network Solutions**

L-3 Communications recently combined *L-3 Telemetry-East (L-3 TE)* with *L-3 Global Network Solutions (L-3 GNS)* into one company. The new entity benefits from the flexibility and agility of a commercial enterprise with the quality certifications of an aerospace company.

L-3 TE, a leading manufacturer of missile and aircraft flight test instrumentation and L-3 GNS, a leading merchant supplier of telecommunications products are now a single company working in a 90,000 square foot manufacturing facility in Bristol, PA.

The two companies realized they had similar goals and shared synergies in their operations, company officials said. They have been running their separate operations in the same facility for the last 3 years. Marc Lienard, newly appointed President of L-3 TE/GNS says the combined entity will bring more responsiveness to its customers. "Our goal is to be ever more responsive to our customers; as we combine the 2 organizations and share best practices, we are adopting the processes and tools that make us a company our customers want to do business with".

- **L-3 GNS** brings strong international commercial sales channels, coupled with a very successful telecommunications product suite and a track record of significant R&D accomplishments.
- **L-3 TE's** greatest strengths lie in its telemetry domain expertise, distinguished product legacy, structured and well-defined procedures as well as its Quality Management System (ISO 9001 and AS-9100 quality certifications).



**L-3 Telemetry-East/Global Network Solutions Facility**

**L-3 TE/GNS BUSINESS AREAS**

**Telecommunications** — Trunk Compression Systems, Voice and Data Telecommunications Systems, Subscriber Terminals, Digital Video Surveillance Technology

**Airborne Telemetry** — Data Acquisition Systems, Flight Test, Video Compression, Data Links

**Ground & Advanced Programs** — Telemetry Ground Receivers, Inter-Divisional Programs, Specialized Networks

*Excellence You Can Measure*



## L-3 TE/GNS - Product Updates

### NOW AVAILABLE - MAXPROSLIM TRANSCODER

L-3 TE/GNS announces the release of its 3rd generation of voice compression products, the *MaxPro Slim*. This new platform leverages earlier designs using the same advanced (MPLQ) voice compression algorithm, thus offering toll-quality voice at compression ratios of up to 12:1. Using a highly integrated architecture, the product offers options for both full redundancy (1+1) and hot-standby (N+1) redundancy in a 2 RU height chassis.

One of the most important design features is product scalability. The product can be factory configured for 4:1 compression ratios and later field expanded to either 8:1 or 12:1 with the simple addition of plug-in "vocoder" boards. Customers can further raise the compression ratio to 16:1 through the linked-addition of a second populated chassis. Field configuration is simple using the intuitive, Windows-based graphic user interface (GUI). Remote access and configuration changes are also made possible via the on-board Ethernet capability or by using the "far-side" link access. This feature can eliminate the need for personnel to travel to remote sites when upgrades or configuration changes are warranted.

The *MaxPro Slim* represents a leap forward in voice compression technology offering features, reliability and performance found in much more expensive products.



**MaxProSlim**  
(Digital Circuit Multiplication Equipment)

### Features

- Dynamic bandwidth keeps high voice quality
- Multi-clique capability
- Multi-destination
- G.168-2000 echo cancellation up to 25 ms per channel
- Tandem Free Operation (TFO)
- Q.50 Support
- Compressed CAS including R2 and E&M
- Transparent CCS including ISDN, QSIG & SS7
- DTMF / MFR2 / MFC signal detection, generation, relay
- Group III Fax support
- 4.8 kbps to 14.4 kbps

### NOW AVAILABLE - ADR 7050 AVIONICS DIGITAL RADIO

L-3 TE/GNS announces the release of its *Avionic Digital Radio (ADR)*, a remotely mounted and controlled avionics Navigation (NAV) and Communications (COM) transceiver. The ADR provides the means of bi-directional voice communications between aircraft, ground stations and other aircraft, as well as the means of receiving and processing VHF Omni-directional Radio range (VOR) for navigation and Instrument Landing Systems (ILS), both Glideslope and Localizer. In addition, the navigation subsystem decodes the Morse code station identifier. The ADR 7050 provides the above information to the other components in the system via a RS-232 serial link and discrete analog output signals.



The L-3 GNS ADR Radio is part of the L-3 Avionics Systems next generation integrated cockpit: SmartDeck™

## L-3 TE/GNS - Product Updates

### PRODUCT EVOLUTION UPDATE – TRANSCODER LINE MOVES CLOSER TO RoHS COMPLIANCE

L-3 TE/GNS announces its telecom product, *MaxPro Slim* is one step closer to full compliance with the “Reduction of Hazardous Substances” (RoHS) initiative as set forth by the European Union (EU). This step was accomplished with the successful transition and manufacture of a major assembly, its “*vocoder-board*.” These assemblies, manufactured by NuVisions in Springfield, Mass, were certified fully compliant to the RoHS standard. All electronic products shipped into the EU must be certified compliant with this new standard. Although legal exemptions exist for telecom and military use, many EU based customers still request certificates of compliance for these types of products. This has created an opportunity for our company to showcase both its commitment to safeguarding the environment and its ability to build high-tech products under the stringent rules and guidelines mandated by RoHS.

The *vocoder card* features a design incorporating 67 ball-grid array (BGA) components on a 10-layer PCB. RoHS, also more commonly known as “lead-free”, requires the use of solder without any lead content. This requirement, forces the soldering process to use much higher reflow temperatures, thereby pushing the individual components closer to their thermal limits. Even with higher process temperatures on these technically challenging boards, the delivered vocoders yielded greater than a 99% acceptance rate. On-site thermal cycling, burn-in testing, and functional testing proved these boards exceeded our requirements and permitted approval of the processes used.

The successful manufacture and field deployment of these boards is the first major step towards becoming fully compliant with the MaxPro Slim product. Follow-on plans include building other RoHS compliant assemblies. Ultimately, the goal is 100% RoHS compliance with all current and future telecom products.



Vocoder Card

## L-3 TE/GNS – Personnel Update

### JIM POLILLO GIVEN OUTSTANDING EMPOWERED OFFICIAL AWARD

Jim Polillo was recently selected by L-3 Washington Operations (WashOps) as an outstanding empowered official (EO). Jim was selected, along with 11 of his peers, from more than 200 EO's and Export Compliance Coordinators (ECC's) for his outstanding performance to export/import compliance on behalf of L-3 GNS.

This award was created to show appreciation and recognition to individuals who reflected exemplary dedication and commitment to the spirit of export/import compliance. Selection for this award was based upon the following criteria:



- ★ **Expertise and Knowledge** of overall export/import compliance policies and procedures
- ★ **Adaptability** to the L-3 standards for compliance
- ★ **Responsiveness** to procedures and requirements
- ★ **Proactive** in establishment of company policies and procedures
- ★ **Individuality** in decision making and principles
- ★ **Congentiality and Professionalism** in response to requirements

*Congratulations Jim!*



## L-3 Telemetry-West –Product Update

### NOW AVAILABLE – LOW COST SGLS TRANSPONDER (CXS-811)

L-3 Communications Telemetry-West is proud of our long and rich space heritage. The **CXS-811** provides the basic SGLS command, telemetry, and ranging functions for the quick reaction small satellite market. The product draws on the design heritage of the CXS-810C, which has an exemplary record in space with over 50 units in orbit or in production. In the current Operationally Responsive Space (ORS) environment, delivery schedules are becoming increasingly critical during standardization.

The CXS-811 will provide the same space qualification heritage as the CXS-810C. By standardizing all of the program documentation, we are able to pass on significant cost and schedule reductions to our customers. The CXS-811 is ideal for programs looking for an inexpensive, low risk, low cost transponder. The CXS-811 will exceed your expectations! For those applications requiring COMSEC, the CXS-811 is compatible with the MCU-110. These improvements provide a technically superior unit with a reduced delivery schedule of 10 months.

### UPGRADES

- Standardization of all documentation
- SPEC, SOW, reviews, and engineering analysis reports
- 10 month delivery schedule (estimated)
- MCU-110 COMSEC compatibility
- Minimization of all NRE activities in order to provide a low risk cost competitive product
- The transmitter has been designed to allow for flexible data rates on the downlink
- 28V input voltage
- Diplexer available (Optional)
- Transmitter frequency agility: 2200 to 2300 MHz operation using a stocked TCXO (Optional)



**CXS-811**  
**SGLS Transponder**

### L-3 TELEMETRY-WEST PROVIDES SATELLITE COMMAND AND CONTROL SOFTWARE FOR THE CORNELL UNIVERSITY CUSAT NANOSATELLITE PROGRAM

**SAN DIEGO, CA, August 21, 2007** – L-3 Telemetry-West, a division of L-3 Communications, announced today that it has provided licenses of its InControl software application to Cornell University for the CUSat Nanosatellite program. The InControl software product is a robust system designed to support satellite test and on-orbit operations. InControl will provide the test executive for CUSat Assembly, Integration and Test (AI&T), as well as perform on-orbit operations.

“With the InControl software that L-3 has given us, we have the last major component needed to launch our satellite, without needing to make any changes to existing designs,” said Nate Parsons, Satellite Control Center Director at Cornell University.

L-3 has provided InControl to the Cornell University CUSat facilities on the university’s campus in Ithaca, New York. Key features of the software include routine satellite fleet and ground station control, use of flexible open system standards, such as CORBA, Java and Linux, and single or multiple operator control of multiple entities. Archiving, archive retrieval and data analysis are also integrated within the functionality of the InControl software suite. Key features for factory test include straightforward database integration, rapid development and validation of test sequences and automated report generation.

CUSat is a multi-year effort to design, build and launch an autonomous in-orbit inspection satellite system.

*“With the integration of InControl and continued support L-3 will provide, we are well on our way towards a successful mission.”*

*Nate Parsons, Satellite Control Center Director at Cornell University*

# InControl™

## On-Going Programs With Our Products Onboard

### WORLDVIEW-1 – 17 SEPTEMBER 2007 [WWW.BOEING.COM/DEFENSE-SPACE](http://WWW.BOEING.COM/DEFENSE-SPACE)

The WorldView-1 satellite was launched on Tuesday, September 18, 2007, from Vandenberg Air Force Base in California. WorldView-1 is the first of two new next-generation satellites DigitalGlobe, a leader in the global commercial Earth imagery and geospatial information market, plans to launch. Boeing Launch Services has been contracted to provide the end-to-end launch services for DigitalGlobe.

L-3 Telemetry-West provided a MDU-133 Caribou Decryptor Authenticator Unit.



WORLDVIEW-1

### TACSAT-3 – 20 SEPTEMBER 2007 [WWW.SPACEWAR.COM](http://WWW.SPACEWAR.COM)

Alliant Techsystems announced that it has delivered the Department of Defense's Tactical Satellite 3 Spacecraft Bus (TacSat-3) to the U.S. Air Force Research Laboratory (AFRL) for final integration and test. The TacSat-3 spacecraft is a pioneer of the emerging Operationally Responsive Space (ORS) program, and designed to meet the needs of U.S. forces for flexible, affordable and responsive satellite systems

L-3 Telemetry-West provided their first CXS-811 SGLS Transponder for this mission.



TACSAT-3

## L-3 TELEMETRY-WEST OPENS NEW CLEAN ROOM AND ENVIRONMENTAL TESTING LAB

### Clean Room

Opened: **July 2007**

Square Footage: **3,000**

The new L-3 TW clean room supports **slice-level manufacturing** for all **Space** products. All technicians and assemblers are trained in the unique processes in support of hi-rel slice assembly and testing.

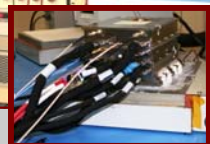


### Environmental Test Lab

Opened: **September 2007**

Square Footage: **1,000**

The new L-3 TW ETL is primarily used for **Space Transponder** testing. All technicians have gone through, "Mistake Proofing" training which better prepares them to avoid future potential errors.





## Intel Solutions

### NOW AVAILABLE – ENTR (Embedded National Tactical Receiver) Accessory Kit

The ENTR Accessory Kit improves SATCOM reception by letting the user remote the antenna from the receiver. The ability to remote the antenna allows the operator to obtain a clear line of site to the Satellite. To drive the additional cable, without signal degradation, a filtered Low Noise Amplifier (LNA) is included. The amplifier is powered by a DC inserter that injects a DC drive signal through the RF cable. For best performance the LNA assembly should always be located as close as possible to the antenna. The kit is provided with a 10M cable to connect the LNA to the DC inserter. Longer cables can be utilized between the LNA and DC inserter.



ENTR Card



ENTR Accessory Kit



**Directional Yagi Antenna** – requires the user to point it in the appropriate direction for best signal reception



**OMNI Directional Antenna** – does not require the user to point it in a particular direction

## L-3 GIVES BACK



### L-3 TELEMETRY-WEST & SOUTHERN CALIFORNIA MICROWAVE DONATE TO RADY CHILDREN'S HOSPITAL

L-3 Communications TW and SCM donated \$7,228 to Rady Children's Hospital, up from \$2,840 last year. The funds were received from the 2007 Holiday Party silent auction, and the generous donations of our employees.

L-3 is now part of the 150 contributors that make up the Rady Miracle Maker program. 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.

Read more information about Rady Children's Hospital at [www.chsd.org](http://www.chsd.org)

### L-3 TELEMETRY-WEST & SOUTHERN CALIFORNIA MICROWAVE CONTRIBUTE TO VOICES FOR CHILDREN HOLIDAY PARTY

32 children at the Polinsky Center and in the foster care system received generous holiday gifts from our employees through the Voices for Children program. This is an annual event given for the children and their Court Appointed Special Advocates.

Read more information about Voices For Children at [www.voices4children.com](http://www.voices4children.com)

### L-3 TELEMETRY-WEST & SOUTHERN CALIFORNIA MICROWAVE EMPLOYEES WALK FOR STRIDES AGAINST BREAST CANCER

L-3 TW and SCM had a team of walkers at the Making Strides Against Breast Cancer Walk who raised over \$2,000 for the fight against breast cancer. A special shout out to Tammy Le and Robert Trocke who trained and completed the Breast Cancer 3-Day walk in addition to raising money for the cause. Read more information about the Breast Cancer Walk at [www.The3Day.org](http://www.The3Day.org)

## Recent Activities

### L-3 TELEMETRY-WEST CELEBRATES JSOW (JOINT STANDOFF WEAPON) PROGRAM SUCCESS



**October 2007**— L-3 Telemetry-West celebrates JSOW program success in October 2007. L-3 TW has been instrumental in providing Airborne Products for this very important Joint U.S. Navy/Air Force Program. L-3 TW builds, tests and ships three Airborne Products for the JSOW program — the FTR515J Receiver, CTS905J Transmitter, and PCM600 Encoder. Pictured is the operations team responsible for the successful delivery of these products. Not depicted are the numerous other team members who are involved with the Engineering Design, Development and Documentation, as well as the Planning, Financing, Procurement and Contractual Details that provide the means for the Assemblers, Technicians and Inspectors to build these Airborne products.

**JSOW** is a glide weapon that can be carried by U.S. Navy and Air Force strike aircraft. Using global positioning system (GPS) satellite information for guidance, it finds its way to the target. On January 25, three JSOWs were successfully launched against Iraqi targets. The lethal effectiveness of these weapons was reconfirmed only days after the Navy declared JSOW operational, ushering in a new era of air combat effectiveness dubbed The Revolution in Strike Warfare.

Getting JSOW to the fleet required a concerted effort from the entire government and contractor JSOW team. The two biggest challenges facing the JSOW team were to ensure the JSOW software was compatible with the Carrier Air Wing 11 (CVW-11) aircraft operating in the Persian Gulf, and the logistics of moving the missiles half way around the world.



**FTR515  
Receiver**



**CTS-905  
Transmitter**



**PCM 600  
Encoder**

**How do we measure up? [www.L-3Com.com/TW/VOC](http://www.L-3Com.com/TW/VOC)**



**communications**  
Telemetry & RF Products

Today, Telemetry & RF Products serves commercial, military, and civilian customers worldwide, with a product offering that includes TT&C satellite transponders, high data rate satellite transmitters, high-power amplifiers, high-reliability receivers/transmitters, encryption/decryption units, video compression/decompression units, tactical intelligence radios, tactical HF/SSB and microwave radios, telemetry ground system components and solutions, and specialized telemetry and surveillance products, telecommunications products, and specialized networks.

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[www.L-3Com.com/GNS](http://www.L-3Com.com/GNS)



### L-3 Southern California Microwave

2732 Via Orange Way, Suite E  
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Website: [www.L-3Com.com/TW](http://www.L-3Com.com/TW)



## President's View

L-3 Telemetry-East (L-3 TE) recently combined with L-3 Global Network Solutions (L-3 GNS). The merged entity is led by Marc Lienard who is President of L-3 TE/GNS based in Bristol PA. Mr. Lienard reflects on the combination of the L-3 TE and GNS teams.



**Marc Lienard**

President

L-3 Communications  
Telemetry-East/Global  
Network Solutions

**Question:** With the recent addition of L-3 GNS to your product and technology portfolio, what changes and synergies can we expect to see?

**Answer:** The TE/GNS merger will bring about many positive changes. As you know, GNS has earned a reputation for solving difficult technical problems by utilizing unique, cutting-edge technology solutions. While its traditional market is telecom related, more recently GNS has developed advanced radio platforms for other L-3 divisions using software defined radios. These capabilities are applicable to new telemetry products, offering greater performance and features at attractive cost points. At the same time, TE brings its great telemetry legacy and robust processes that provide GNS with the required structure to grow.

**Question:** What benefits of transcoder technologies might be applied to the telemetry world and how might we expect any leverage to occur moving forward into the future?

**Answer:** Transcoder technology is driven by the extensive use of very fast digital signal processors (DSPs). The telemetry industry is also adopting DSP technology. Our combined expertise in using these components lends itself to a wide variety of applications. Leveraging this expertise and GNS' successful track record of introducing COTS solutions will permit the development of low-cost, high performance devices, creating a significant competitive advantage as we look to capture additional market positions.

**Question:** With the Philadelphia area being such a strong technology hub, how does TE/GNS leverage available resources?

**Answer:** The Philadelphia region has a tremendous history as a center of commerce, education, and innovation. There is significant talent in the area and our workforce is highly qualified. Obviously we are always trying to attract and retain the best; our broader portfolio of products and development opportunities will help us continue to do that.

**Question:** How has the global economy affected the L-3 Bristol facility and what can we expect to see in the international business arena over the next several years as it relates to your markets?

**Answer:** The global economy is at the heart of GNS's success; all our Transcoder sales are international. And there are still vast areas of the world where we can grow our Telecom Products sales; Latin America and Eastern Europe to name the most obvious ones. On the TE side, we are also working with our sales team to make sure that we serve the international market and the first results are very encouraging. Another benefit is the ability to source high-quality parts, components, and assemblies off-shore at competitive prices.