



TeCMEN Times

Economic Development Council of
Okaloosa County

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General Dynamics welcomes TeCMEN to their Niceville facility

TeCMEN hit-the-road for its March meeting, visiting General Dynamics at its Niceville facility. This local activity is one of 4 divisions in GD, namely Combat Systems; the others are Aerospace, Marine Systems, and Information Systems and Technology. Ordnance and Tactical Systems empowers the U.S. military and its allies with an extensive range of overarching product segments, applied across all levels of strategic and tactical operations. Locally, Ordnance and Tactical Systems (GD-OTS) also has Precision Systems, which consists of Precision Metal Parts, Warheads, Control Actuators, Missile Defense Subsystems, and Alternative Payloads. They are in the forefront of advanced warhead design and development to support near term and future systems. This expanded warhead systems capability will support their existing and new defense customer for the foreseeable future.

Formerly Orlando Technologies, Inc., they were purchased by GD in August 1999. They started as a design house for warheads using the systems approach process, where the desired effects are the focus. They use a design-test-analysis loop, where modeling and simulation using prototype hardware and range testing occurs. They then move to the development phase before moving to production in both Low Rate Initial Production (LRIP) and then the initial fielding. They also provide engineering services to the U.S. government, prime contractors, and various international customers. Included in this engineering support function are aircraft compatibility engineering, exterior ballistics, accuracy, vulnerability, lethality, and other special modeling and analysis.

They are process driven as evidenced by their June 2003 ISO 9001 certification, followed by their August 2005 ISO 9001:2000 upgrade, then

their October 2005 ISO 14001 and OHSAS 18001. Then in August 2007 they renewed their ISO 9001:2000, then awarded their CMMI Level 2 in December 2007. They are currently in the process of receiving their CMMI Level 3 certification, expecting completion this year.

The warheads designed by the Niceville facility include the following shaped charges: BAT (AWD), Javelin P3I, Swiss TOW, Swiss Dragon, Hellfire/Longbow PC, SMAW and the MRM. Multi-mode warheads include the NLOS PAM, Joint Common Missile, Joint Air to Ground Missile, Battle Axe, MR ROKM, and Hellfire R. Unitary warheads include the Guided Multiple Launch Rocket System (GMLRS) C+, the Hellfire with Blast Frag, XM982, LRLAP, ERGM, and the SDB2 (teamed with Raytheon).

In addition to the wide array of warheads, the Niceville operation is also responsible for numerous bombs and

penetrators, most notably the BLU-122B, I-500/I-1000, BLU-109H, MK series, HSP, MOAB, and the MOP, a 30,000 pound class weapon with 7,000 pounds of explosive (with Boeing). They have also developed the following kinetic payloads: Surface Target Ordnance Package (STOP), Passive Attack Weapon (PAW), HardSTOP, MLRS KE Rods, Counter Mine System (KMS) and GMLRS Alternative Warhead.

Much of the testing of these munitions occurs at the company's Rock Hill facility, located south of DeFuniak Springs. Rock Hill is an 800-acre test site fully equipped for experimental testing of warheads, a complete environmental and mechanical shock/vibration analysis, a 250m and 500m flight ballistic rocket range and a detonation physics research facility. The facility is also equipped with a mono-rail sled track for fully-

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CHOICE Aviation Institute/Embry-Riddle on tap for April meet

The April TeCMEN will feature the CHOICE Aviation Institute along with Embry-Riddle Aeronautical University as the program. Led by Leo Murphy, Aviation Institute director at both Choctaw and Crestview High Schools, this unique specialization affords students the opportunity to earn up to 42 credits for 15 college

classes at absolutely no cost to the student or their family.

An additional benefit is the Federal Aviation Administration (FAA) approved flight and ground training. They teach the science, practice, and business of the world of aviation and aerospace with courses provided by Embry-Riddle Aeronautical University, the world's

leader in aviation and aerospace education. Embry-Riddle is accredited by the Commission on Colleges of the Southern Association of Colleges and Schools.

In addition to Murphy, a career Naval Aviator, the Institute has both Amanda Hansen and John Jannazo as instructors. Hansen teaches meteorol-

ogy, while Jannazo, an Okaloosa County Commissioner, developed the first course for Uninhabited Aerial Vehicles for high school students as part of CHOICE last year.

Mark your calendars now to attend, Tuesday, April 14, 2009 at the NWFSC-UWF Campus in Fort Walton Beach. Start time is 7:30 a.m.



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Reminders:

- The presentation from the March meeting is available at www.tecmen.org.
- The next TeCMEN meeting is Tuesday, April 14, 7:30 a.m., at the NWFSC-UWF Campus in Fort Walton Beach.
- The May TeCMEN meeting will be held Tuesday, May 5, (**NOTE DATE CHANGE**) and will feature David Scott, Senior Vice President, Business Development for InDyne. **The venue for this meeting has changed to the Learning Resources Center, Northwest Florida State College, Niceville Campus.** Start time remains the same, 7:30 a.m.

Technology Coast Manufacturing & Engineering Network (TeCMEN) is comprised of EDC-member companies promoting growth and advancement within Okaloosa's technology-based business community through the association, collaboration, and contract-teaming of its manufacturing, engineering, technology and defense industry clusters. Using a collaborative concept, these companies join together to compete for and complete both defense-contracting and other substantial business opportunities that are too expansive for a single business to undertake.

TeCMEN member companies represent every major manufacturing and engineering discipline required to support requirements of both the military missions and the civilian community including:

- *Aerospace & Aviation*
- *Information Technology*
- *Micro-Electronics*
- *Biometric Technology*
- *Precision Machining & Metal Fabrication*

Assisting in the EDC's commitment are Okaloosa's learning institutions Northwest Florida State College, the University of West Florida, and the University of Florida Research & Engineering Education Facility.



For more information on TeCMEN,
contact Jeff Fanto at jeff@florida-edc.org

An inside look at General Dynamics-Niceville given to TeCMEN

instrumented diagnostic dynamic testing.

GD-OTS also is involved in Insensitive Munition Design which involves explosive selection, shock mitigation for impact threats, pressure release venting and thermal insulation. They also employ state-of-art simulation using finite element analysis along

with the OTI Hull Hydrocode. Additionally, they perform verification by using fast heating tests, slow heating tests, and a bullet impact test. This modeling and simulation provides the ability to gauge weapons effectiveness in terms of lethality and vulnerability as well as fragmentation using the Joint Military

Effectiveness Manuals criteria. They also perform structural and thermal analysis plus finite element analysis, the recognized industry leader in payload section design and payload ejection systems for air delivered munitions. They offer complete, modular weapon payload systems to support a variety of weapons and platforms.

GD-OTS also designs and produces payload section and ejection systems for the Joint Standoff Weapon (JSOW). They also produce the BLU-122/B Penetrator. As the "business" end of the GBU-28 C/B weapon, it provides enhanced performance against hard and deeply buried targets. They also provide the U.S. Air Force and the U.S. Navy with various configurations of similarly constructed 500-pound, 1000-pound and 2000-pound Mk 80 Series Bomb Bodies for both tactical and training applications.

For more information on General Dynamics, Ordnance and Tactical Systems, go to www.gd-ots.com.

Coming events at the EDC

- "Vision of Progress" TV show for April features Jack Azzaretto, PhD - Vice Provost and Dean, University of West Florida, Emerald Coast and Melissa Neal, PhD - Associate Director, Haas Center for Business Research and Economic Development, Emerald Coast - University of West Florida. Tune into Cox Channel 6 Wednesdays at 6:00 p.m., Thursdays at 7:00 p.m. and Fridays at 10:30 a.m.
- The next iTen Wired Summit is scheduled for April 2, 2009 from 9 a.m. to 2 p.m. at the Home-wood Suites, 29474 North Main Street, Daphne AL. Register on line at www.itenwired.com.