

# 46<sup>TH</sup> ANNUAL GUN & MISSILE SYSTEMS CONFERENCE & EXHIBITION

**“Shaping Weapon Systems for Rapid Deployment: Development, Interoperability & Flexible Response”**



AUGUST 29 -  
SEPTEMBER 1, 2011

HYATT REGENCY MIAMI ▶ MIAMI, FLORIDA

[WWW.NDIA.ORG/MEETINGS/1590](http://WWW.NDIA.ORG/MEETINGS/1590)

EVENT #1590

**Conference Chair:**

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## ANNOUNCEMENT

The 46th Annual NDIA Armament Systems: Gun and Missile Conference and Exhibition will be held August 29-September 1, 2011 in Miami, Florida. The conference will address the theme, "Shaping Weapon Systems for Rapid Deployment: Development, Interoperability & Flexible Response." The conference will provide a forum for discussing methods to enhance defense-related capabilities, not only through available technology, but also through development of personnel. A broad range of topics related to design and development of technology and training, and development of people in the gun and missile system industry will be presented.

The full scope of gun and missile tactical weaponry and related components will be discussed including: direct/indirect/precision fire systems, tactical rockets and missiles, energetics, effectiveness, modeling and simulation, platform integration and emerging technologies. Representatives of the U.S. and International defense communities including both government and industry members are invited to participate.

## SESSION CHAIRS

**Indirect Fires:**

- ▶ Mr. John Altrichter, *BAE Systems*; Mr. Scott Martin, *Raytheon*

**Modeling & Simulation I - Design**

- ▶ Mr. Jeff Siewert, *Arrow Tech*; Ms. Shellie Clift, *NSWC-Dahlgren*

**Emerging Technologies - Systems:**

- ▶ Mr. Mark Serben, *U.S. Army ARDEC*; Mr. Joe Buzzett, *GD-OTS*

**Modeling & Simulation II - Test Methods:**

- ▶ Mr. Jeff Siewert, *Arrow Tech*

**Requirements and Program Trends:**

- ▶ Mr. Steve French, *BAE Systems*; Mr. Jay Brannam, *ATK*

**Tactical Rockets and Missiles:**

- ▶ Mr. Ed DePasqual, *Nammo Talley*; Mr. John Bednarz, *Raytheon*

**Energetics I:**

- ▶ Mr. Matt Solverson, *GD-OTS*; Mr. Ric Mutascio, *Esterline Defense Technologies*

**Emerging Technologies - Materials & Processes:**

- ▶ Mr. Bob Glantz, *ATK*; Mr. Jeff Caratelli, *Alcoa*

**Energetics II:**

- ▶ Mr. Matt Solverson, *GD-OTS*; Mr. Ric Mutascio, *Esterline Defense Technologies*

**Modeling & Simulation III - Systems & Manufacturing**

- ▶ Mr. Jeff Siewert, *Arrow Tech*; Mr. Steve Piper, *Piper Pacific*

**Direct Fires I:**

- ▶ Mr. Tony Gabriele, *Benet Labs*; Mr. Doug Wong, *PM-MAS*

**Non-Traditional I:**

- ▶ Mr. Scott Martin, *Raytheon*; Mr. Dave Panhorst, *U.S. Army ARDEC*

**Precision Weapons:**

- ▶ Mr. Bill Beard, *LMMFC*; Mr. Rollie Dohrn, *ATK*

**Non-Traditional II:**

- ▶ Mr. Scott Martin, *Raytheon*; Mr. Dave Panhorst, *U.S. Army ARDEC*

**Emerging Technologies - Ammunition:**

- ▶ Mr. Mark Serben, *U.S. Army ARDEC*; Mr. Joe Buzzett, *GD-OTS*

**Platform & Weapon System Integration:**

- ▶ Mr. Rob Brewer, *NAVAIR*; Mr. Greg Hill, *Meggitt Defense Systems*

**Direct Fires II:**

- ▶ Mr. Tony Gabriele, *Benet*; Mr. Doug Wong, *PM-MAS*

**Armament Subsystems:**

- ▶ Mr. Steve Kelley, *BAE Systems*; Mr. Greg Hill, *Meggitt Defense Systems*

**Poster Sessions:**

- ▶ Mr. Rob Brewer, *NAVAIR*



# ATTENDEE INFORMATION

## REGISTRATION

CONFERENCE REGISTRATION FEES	EARLY (ON/BEFORE 2/19)	REGULAR (2/20-8/19)	LATE (AFTER 8/19)
GOVERNMENT/ ACADEMIA/ALLIED GOV.	\$720	\$800	\$880
INDUSTRY NDIA MEMBER	\$820	\$900	\$990
INDUSTRY NON-NDIA MEMBER	\$900	\$990	\$1,090

Register online at the event website: [www.ndia.org/meetings/1590](http://www.ndia.org/meetings/1590)

### Mail Registration To:

NDIA - Event #1590  
2111 Wilson Boulevard, Suite 400  
Arlington, VA 22201

### Fax Registration to: (703) 522-1885

Please do not fax or mail any registration forms after August 19, 2011

**Cancellation Policy:** All cancellations on or before August 19, 2011 will receive a refund minus a cancellation fee of \$75. Refunds will not be given for cancellations after August 19, 2011. Please be sure you are registering with the correct credit card or form of payment, as a \$25 fee will be applied to registrations switching credit cards or forms of payment. Substitutions welcome in lieu of cancellations! Please make your cancellation or substitution in writing to Allison Doherty at [adoherty@ndia.org](mailto:adoherty@ndia.org).

## HOTEL INFORMATION

A block of rooms has been reserved at the Hyatt Regency Miami. In order to ensure the discounted rate, you must make your reservations early and ask for the National Defense Industrial Association (NDIA) room block. Rooms will not be held after Saturday, March 19, 2011 and may sell out before then. Rates are also subject to change after this date.

Hyatt Regency Miami  
400 SE Second Avenue  
Miami, Florida 33131

To make your reservation, please call the hotel directly at (305) 358-1234.

- ▶ Industry Rate - \$149 (single/double)
- ▶ Government Rate\* - \$104 (single/double) or the prevailing government per diem

Note: The government per diem rate is available only to active duty or civilian government employees. ID will be required upon check-in.

Any active U.S. Military attendee with ID and travel order will be tax exempt (subject to state's regulation of tax exemption). Any U.S. Government employee paying with U.S. Government check or credit card will be tax exempt (with supporting documentation as required by some states). Check with the hotel for specific state and local requirements when booking hotel reservations.

## ATTIRE

During conference registration and check in, each participant will be issued an identification badge. Please be prepared to present picture ID. Badges must be worn at all conference functions. Appropriate dress for this conference is business casual for civilians and Class B uniform or uniform of the day for military.

## SPECIAL NEEDS

NDIA supports the Americans with Disabilities Act of 1990. Attendees with special needs should contact Ms. Allison Doherty, Meeting Planner, NDIA, at [adoherty@ndia.org](mailto:adoherty@ndia.org).

## TRAVEL INFORMATION

### From Miami International Airport (8 miles)

Take 836 East, go through tolls and stay to right side. Take I-95 South Exit - Downtown. Once on I-95, stay in left hand lane and take Exit 2A / Biscayne Boulevard. Stay in right hand lane at the end of the ramp, the hotel will be on your immediate right side.

### Super Shuttle service from Miami International Airport:

(fees apply): 24 hour service to hotel. \$18.00 per person. The Super Shuttle station is located at the Van/Limo booth directly outside of the lower level baggage claim area near curbside pick-up.

**Taxi from Miami International Airport:** Approximately \$20.00-\$25.00 one-way.

## PARKING

Valet parking charges: 0-2 hours \$10.00, 2-3 hours \$12.00, 3-4 hours \$16.00, 4-5 hours \$20.00, overnight \$30.00. Valet parking charges include in and out privileges. No vans, trucks or large vehicles.

Self parking: \$12.75 with a validation sticker provided by the front desk staff upon request for the discounted rate. Self parking is in a garage with no in/out privilege.

# MONDAY, AUGUST 29, 2011

10:00 AM - 3:00 PM EXHIBITOR MOVE-IN — RIVERFRONT HALL

12:00 PM - 5:00 PM REGISTRATION — LOWER PROMENADE

2:00 PM - 4:00 PM TUTORIALS

2:00 PM - 3:00 PM	<b>TUTORIAL A - TUTTLE</b> <b>“Legislative Update”</b> Mr. Pete Steffes, <i>Vice President, Government Policy, NDIA</i>
3:00 PM - 4:00 PM	<b>TUTORIAL B - TUTTLE</b> <b>“Ready or not? Using Readiness Levels to Reduce Risk on the Path to Production”</b> Mr. Dan Chien, <i>Vice President, Engineering, General Dynamics Armament and Technical Products</i>

5:00 PM - 6:00 PM WELCOME RECEPTION IN EXHIBIT HALL

# TUESDAY, AUGUST 30, 2011

7:00 AM - 5:00 PM REGISTRATION — LOWER PROMENADE

7:00 AM - 8:00 AM CONTINENTAL BREAKFAST — REGENCY BALLROOM PREFUNCTION

8:00 AM - 8:15 AM WELCOME REMARKS & CONFERENCE OVERVIEW — TUTTLE/MONROE BALLROOM

- ▶ Mr. Sam Campagna, *Assistant Vice President, Operations, NDIA*
- ▶ Mr. Jim Talley, *NDIA Conference Chair; General Dynamics Armament and Technical Products, Inc.*
- ▶ Mr. Steve French, *NDIA Gun & Missile Committee Chair; BAE Systems*

8:15 AM - 8:30 AM DIVISION UPDATE/2012 JOINT ARMAMENTS SYMPOSIUM

- ▶ Mr. Dave Broden, *NDIA Armaments Division Chair; Broden Resource Solutions*

8:30 AM - 9:00 AM KEYNOTE ADDRESS:  
**“Air and Missile Defense Overview”**

- ▶ BG Ole Knudson, USA, *Program Executive Officer, Missile and Space, U.S. Army*

9:00 AM - 9:30 AM KEYNOTE ADDRESS:  
**“Close Air Support and Joint Operations”**

- ▶ Mr. Andrew K. Balding, *Associate, Booz Allen Hamilton*

9:30 AM - 10:00 AM KEYNOTE ADDRESS:  
**“The Role of the Government Laboratory in Shaping Weapon Systems Development; An ARDEC Perspective”**

- ▶ Mr. Anthony J. Sebasto, *Senior Associate for Munitions, U.S. Army ARDEC*

10:00 AM - 6:30 PM EXHIBIT HALL OPEN - RIVERFRONT HALL

10:00 AM - 10:35 AM BREAK IN EXHIBIT HALL

10:35 AM - 12:15 PM

CONCURRENT SESSIONS

	<b>MONROE INDIRECT FIRES</b>	<b>TUTTLE MODELING &amp; SIMULATION I - DESIGN</b>
10:35 AM - 10:55 AM	11503 - <b>An Analysis of the Indirect Fires Portfolio of Munitions</b> Mr. Jim Rodrigue, <i>Raytheon Land Combat</i>	11791 - <b>Gun Launch Dynamics Modeling—Benchmarking the State of the Art</b> Mr. Rollie Dohrn, <i>ATK, Plymouth</i>
10:55 AM - 11:15 AM	11830 - <b>Development of an Extended Range, Large Caliber, Modular Payload Projectile</b> Mr. Pierre-Antoine Rainville, <i>GD-OTS, Canada</i>	<b>Guided Projectile Simulation</b> Mr. Jeff Siewert, <i>Arrow Tech</i>
11:15 AM - 11:35 AM	11528 - <b>XM1128 155mm Insensitive Munition (IM) High Explosive (HE) Extended Range Artillery Projectile</b> Mr. Ductri Nguyen, <i>U.S. Army ARDEC</i>	11774 - <b>Gun Launch Dynamics and Aeroballistic Analysis via Onboard Laser Diode</b> Mr. Rollie Dohrn, <i>ATK, Plymouth</i>
11:35 AM - 11:55 AM	11463 - <b>155mm HE Projectile Qualification Program</b> Mr. Charlie Patel, <i>U.S. Army ARDEC</i>	<b>GD-OTS/Nammo 25 mm JSF Combat Ammunition</b> Mr. Zack Kemp, <i>GD-OTS</i>
11:55 AM - 12:15 PM	11511 - <b>Technologies Utilizing the M483 Carrier</b> Mr. George Kurzik, <i>GD-OTS, Red Lion</i>	11824 - <b>Design, Analysis and Weight Optimization Techniques for Joint Strike Fighter Missionized Gun Pod Support Equipment</b> Mr. Gary Miller, <i>GD-ATP</i>

12:15 PM - 1:30 PM

LUNCHEON SPEAKER

**“Changes in the World of ITAR”**

- ▶ Mr. Larry Christensen, *Miller Chevalier Chartered*

1:30 PM - 2:50 PM

CONCURRENT SESSIONS

	<b>MONROE EMERGING TECHNOLOGIES: SYSTEMS</b>	<b>TUTTLE MODELING &amp; SIMULATION II: TEST METHODS</b>
1:30 PM - 1:50 PM		11692 - <b>AFRL Munitions Directorate Fuze Experimentation Research Activities</b> Mr. Scott Turner, <i>AF Munitions Directorate, Eglin AFB</i>







1:50 PM - 2:10 PM	11586 - <b>Introduction of Wireless and MEMs based Devices into Fire Control Systems</b> Mr. Ralph Tillinghast, <i>U.S. Army ARDEC</i>	11838 - <b>A Method for Assessing the Effects of Overpressure from Small/Medium Caliber Weapons Fire</b> Mr. Steven Backer, <i>NSWC-Crane</i>
2:10 PM - 2:30 PM	11641 - <b>Extended Area Protection and Survivability Program (EAPS)</b> Mr. Manfredi Luciano, <i>U.S. Army ARDEC</i>	11793 - <b>The Challenge of Environmental Testing of the Expeditionary Fighting Vehicle Ammunition Feed System Separate from the Expeditionary Fighting Vehicle</b> Mr. Ron Hopkins, <i>GDATP</i>
2:30 PM - 2:50 PM	11720 - <b>Development of the Interceptor System for the Extended Area Protection &amp; Survivability (EAPS)</b> Mr. E. Mitchell Danielson, <i>ATK, Plymouth</i>	11668 - <b>Design and Fabrication of a Novel High-g Soft Recovery System for 155mm Precision Munitions and Components</b> Mr. Greg Hader, <i>U.S. Army ARDEC</i>

2:50 PM - 3:30 PM

**BREAK IN EXHIBIT HALL**

3:30 PM - 5:10 PM

**CONCURRENT SESSIONS**

	<b>MONROE REQUIREMENTS &amp; PROGRAM TRENDS</b>	<b>TUTTLE TACTICAL ROCKETS &amp; MISSILES</b>
3:30 PM - 3:50 PM	11786 - <b>Naval Forces Capabilities Gap Against Swarm Attacks</b> Mr. Andrew Bradick, <i>Rheinmetall</i>	11808 - <b>Design Synthesis for Large Shaped Charges: From Requirements to Qualification</b> Mr. Jason Shire, <i>Raytheon</i>
3:50 PM - 4:10 PM	11861 - <b>U.S. Forces Light and Medium Mortar Ammunition Insensitive Munitions Path</b> Mr. Nick Baldwin, <i>U.S. Army RDECOM-ARDEC</i>	11842 - <b>Advanced Aluminum Alloys Enabling High Performance Missile Components</b> Mr. Travis Schmidt, <i>Alcoa</i>
4:10 PM - 4:30 PM	11863 - <b>IM Compliance for Mortar Illumination Cartridges</b> Mr. Thomas Peter, <i>U.S. Army RDECOM-ARDEC</i>	11802 - <b>Use of COTS O-rings as a Pyrotechnic Safety Barrier in a Rocket Motor Ignition Safety Device</b> Mr. Brian Erickson, <i>ATK, Plymouth</i>
4:30 PM - 4:50 PM	11482 - <b>Precision Guided Indirect Munitions — Operational Evolution</b> Mr. Justin Skaret, <i>Raytheon Missile Systems</i>	11756 - <b>Hellfire Integrated Blast Fragmentation Sleeve Multipurpose Warhead</b> Mr. Jonathan Thomas, <i>GD-OTS</i>
4:50 PM - 5:10 PM	11792 - <b>Enhancing Convoy Security by Means of Rapid Deployable Weapons</b> Mr. Gerrie Van der Merwe, <i>BAE Land Systems, South Africa</i>	

5:10 PM - 6:30 PM

**RECEPTION IN EXHIBIT HALL**

# WEDNESDAY, AUGUST 31, 2011

7:00 AM - 5:00 PM REGISTRATION

7:00 AM - 8:10 AM CONTINENTAL BREAKFAST

8:10 AM - 9:30 AM CONCURRENT SESSIONS

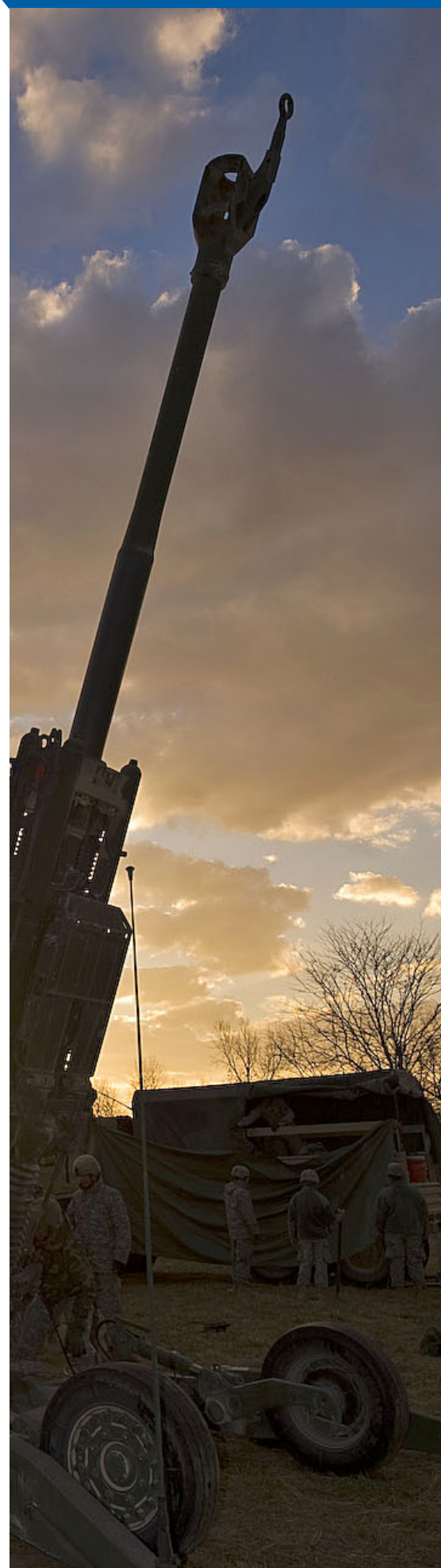
	<b>MONROE ENERGETICS I</b>	<b>TUTTLE EMERGING TECHNOLOGIES: MATERIALS &amp; PROCESSES</b>
8:10 AM - 8:30 AM	11822 - <b>Novel ARDEC Igniters for Gun Systems</b> Dr. Eugene Rozumov, <i>U.S. Army ARDEC</i>	11813 - <b>Potting of Electronic Components for High-G Gun Environments</b> Dr. Peter Vo, <i>Raytheon Missile Systems</i>
8:30 AM - 8:50 AM	11787 - <b>The Effects of Igniter Design on the Interior Ballistic Performance of Deterrent Coated Propellants</b> Dr. Thelma Manning, <i>U.S. Army RDECOM-ARDEC</i>	11829 - <b>Investment Cast Titanium in Gun and Missile Systems</b> Mr. Chris Jensen, <i>Alcoa Howmet</i>
8:50 AM - 9:10 AM	11590 - <b>Foamed Celluloid Technology</b> Mr. Mohammed Elalem, <i>U.S. Army ARDEC</i>	11583 - <b>New PVD Processes for Durable Pollution-Free Ordnance</b> Dr. Sabrina Lee, <i>U.S. Army ARDEC</i>
9:10 AM - 9:30 AM		12179 - <b>The "Perfect" Time for an Upgrade to US Propellant</b> Ms. Kelly Moran, <i>ATK, Radford</i>

9:30 AM - 3:30 PM EXHIBIT HALL OPEN

9:30 AM - 10:15 AM BREAK IN EXHIBIT HALL

10:15 AM - 11:55 AM CONCURRENT SESSIONS

	<b>MONROE ENERGETICS II</b>	<b>TUTTLE MODELING &amp; SIMULATION III: SYSTEMS &amp; MANUFACTURING</b>
10:15 AM - 10:35 AM	11867 - <b>IM in the Field— Experience of Reduced Sensitivity Mortar Cartridges to Actual Combat Threat Stimuli</b> Ms. Pamela Ferlazzo, <i>U.S. Army RDECOM-ARDEC</i>	11648 - <b>System Analysis with Integrated Modeling and Optimization</b> Mr. Philip Brislin, <i>U.S. Army ARDEC RDAR-MEM-L</i>



## THE TRIFILETTI AWARD

The Trifiletti Award is presented by the NDIA Gun & Missile Executive Committee to recognize and honor an individual who has made a significant contribution benefiting the warfighter, thus strengthening national defense. This contribution can be in the areas of the advancement of technology, systems, system integration or to someone who through his/her work provided unique leadership resulting in changes and progress in the community.

The award is named in honor of Mr. Robert Trifiletti who made significant contributions to the advancement of technology, and by whose leadership many other accomplishments benefiting the warfighter came to fruition. The award is open to anyone in the gun and ammunition or rocket and missile community.

## MILITARY OPERATIONS AWARD

The Military Operations Award is presented to recognize an individual, crew or unit who in the opinion of the NDIA Gun & Missile Executive Committee has made significant contributions in operational employment, tactics or combat applications of guns and ammunition and/or rockets and missiles which have impacted the readiness, capabilities or results of U.S. military activity. A significant contribution is considered to be superior performance in an operational environment, development of tactics, training or leadership.

10:35 AM - 10:55 AM	11537 - <b>Development and Manufacture of an Insensitive Composition B Replacement Explosive IMX-104 for Mortar Applications</b> Mr. Virgil Fung, <i>BAE Systems Ordnance Systems Inc.</i>	11502 - <b>A Virtual Learning Environment for Precision Indirect Fires</b> Mr. Jon Peoble, <i>Raytheon</i>
10:55 AM - 11:15 AM	11832 - <b>Development and Characterization of IM Gun Propellant for the 120mm Tank System</b> Mr. Duncan Park, <i>U.S. Army RDECOM-ARDEC</i>	11779 - <b>Next Generation Manufacturing &amp; Modeling Technology</b> Mr. David Smith, <i>U.S. Army Benet Laboratories</i>
11:15 AM - 11:35 AM	11821 - <b>The Advance Case System (ACS) Program for 120mm Tank Training Ammo-Phase 2</b> Mr. Jeff Berg, <i>ATK, Plymouth</i>	
11:35 AM - 11:55 AM	11761 - <b>High Explosives Charges for Insensitive Artillery and Mortar Ammunitions: Performances, Technology, Producibility, Affordability</b> Dr. Bernard Zeller, <i>SNPE</i>	

11:55 AM - 1:15 PM

AWARDS LUNCH

1:15 AM - 2:35 PM

CONCURRENT SESSIONS

	<b>MONROE DIRECT FIRES I</b>	<b>TUTTLE NON-TRADITIONAL WEAPONS I</b>
1:15 PM - 1:35 PM	11747 - <b>Direct Fires &amp; Precision Weapons for Rapid Deployment at the Modern Battlefield</b> Mr. Danny Schirding, <i>Israel Military Industries, Ltd.</i>	11840 - <b>Development of a Large Caliber Naval EM Railgun</b> Mr. Roger Ellis, <i>Office of Naval Research</i>
1:35 PM - 1:55 PM	11725 - <b>Medium Calibre Goes in a New Direction</b> Mr. David Leslie, <i>BAE Systems Global Combat Systems</i>	11841 - <b>Electromagnetic Railgun, a Multi-Mission Weapon System</b> Mr. Alan Kull, <i>General Atomics</i>
1:55 PM - 2:15 PM	11572 - <b>The Development and Testing of the Improved Kinetic Energy Electronic Time (IKE-ET) Round</b> Mr. Geoffrey Bland, <i>NSWC-Dahlgren</i>	11828 - <b>Scalable Gen-Set for Directed Energy Weapons: Resolving the Power Problem</b> Mr. Bryan Bockmon, <i>Rocky Mountain Scientific Laboratory</i>
2:15 PM - 2:35 PM	11809 - <b>Composite Sabot Technology for the 105mm Rifled Tank Gun System</b> Mr. Velan Mudaliar, <i>U.S. Army RDECOM-ARDEC</i>	



2:35 PM - 2:55 PM

BREAK IN EXHIBIT HALL

3:00 PM - 7:00 PM

EXHIBIT HALL CLOSES & EXHIBITOR MOVE OUT

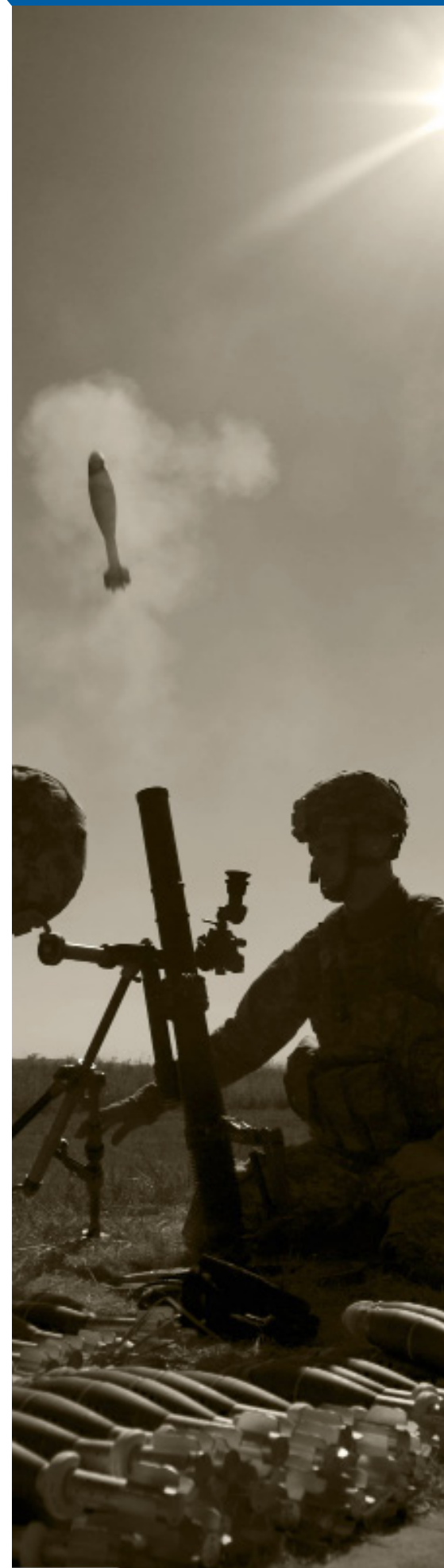
2:55 PM - 4:55 PM

CONCURRENT SESSIONS

	<b>MONROE PRECISION WEAPONS</b>	<b>TUTTLE NON-TRADITIONAL WEAPONS II</b>
2:55 PM - 3:15 PM	11810 - <b>Inherent Reliability and Affordability of Ballistic Solutions and Their Operational Benefits</b> Mr. Larry Linde, <i>ATK, Plymouth</i>	11805 - <b>Electronic Ballistics Systems: A Scalable Integrated Weapons Systems with Applications Footprint for Fixed and Mobile Platforms and Delivery of Same Caliber Lethal and Non-Lethal Munitions or Payloads</b> Mr. George Orrison, <i>Metal Storm Inc.</i>
3:15 PM - 3:35 PM	11719 - <b>Common GPS: Development of the Subsystem Specification and ICD for the Common GPS Subsystem for the Family of Precision Guided Projectiles</b> Dr. Karl Flueckiger, <i>Draper Laboratory</i>	11509 - <b>Aggressor Suppression via the Use of Non-Lethal Projectiles and Launcher Systems</b> Mr. Dan Hartman, <i>GD-OTS</i>
3:35 PM - 3:55 PM	11635 - <b>Very Affordable Precision Projectile (VAPP) System and Flight Experiments</b> Mr. Christopher Stout, <i>U.S. Army ARDEC</i>	11697 - <b>Netted Smart Precision Engagement Autonomous Rounds (NetSpears) for Navy and Army Weapons</b> Mr. Allan Vanuga, <i>Raytheon Missile Systems</i>
3:55 PM - 4:15 PM	11459 - <b>Evolution of the EXCALIBUR Guided Projectile</b> Mr. Chris Geswender, <i>Raytheon Missile Systems</i>	11781 - <b>Gun-Launched Aerial Precision Munition</b> Mr. Jay Canela & Mr. Lloyd Khuc, <i>U.S. Army RDECOM-ARDEC</i>
4:15 PM - 4:35 PM	11526 - <b>Precision Urban Mortar Attack (PUMA)</b> Mr. Luke Steelman, <i>NSWC-Dahlgren</i>	11525 - <b>Cannon Cluster Munition Replacement for 155mm Artillery Systems</b> Mr. Ryan Gorman, <i>U.S. Army ARDEC</i>
4:35 PM - 4:55 PM	11788 - <b>Leveraging Proven Systems to Develop a Guided Mortar for APMI</b> Mr. Nicholas Ward, <i>ATK, Plymouth</i>	11644 - <b>Determination of the Shelf Life of MEMS Navigation-Grade Sensors through Use of Accelerated Aging Principles</b> Mr. James Sarruda, <i>U.S. Army ARDEC</i>

4:55 PM

ADJOURN



# THURSDAY, SEPTEMBER 1, 2011

7:00 AM - 12:00 PM

REGISTRATION

7:00 AM - 8:00 AM

CONTINENTAL BREAKFAST

8:00 AM - 10:00 AM

CONCURRENT SESSIONS

	<b>MONROE EMERGING TECHNOLOGIES: AMMUNITION</b>	<b>TUTTLE PLATFORM &amp; WEAPON SYSTEM INTEGRATION</b>
8:00 AM - 8:20 AM	11581 - <b>Precision Air Dropped Guided Munition (PADGM) System</b> Mr. Asad Khan, <i>U.S. Army ARDEC</i>	11681 - <b>Next-Gen Fire Control: Free Software &amp; Video Game Math</b> Mr. Marc Santoro, <i>NSWC-Dahlgren</i>
8:20 AM - 8:40 AM	11759 - <b>Scalable Airburst Fuze Technology—Shaping the Future</b> Mr. Paul Reynolds, <i>GD-OTS, Marion</i>	11777 - <b>Development of a Moveable Weapon Mount System for the CH47 Helicopter</b> Mr. Adam Jacob, <i>U.S. Army ARDEC</i>
8:40 AM - 9:00 AM	11790 - <b>LW25 Programmable Air Burst Munitions</b> Mr. Donovan Gloude, <i>ATK, Plymouth</i>	11584 - <b>Rapid Integration of the M197 onto the MH-60S</b> Mr. Joseph Burkart, <i>NSWC-Crane</i>
9:00 AM - 9:20 AM		11660 - <b>Gun Weapon System (GWS) MK 48 for USCG Legends Class Cutters</b> Ms. Kaye Aswegan, <i>NSWC-Dahlgren</i>
9:20 AM - 9:40 AM	11784 - <b>Non-Traditional Impact Detection Using Triboluminescence</b> Mr. William Hollerman, <i>University of Louisiana at Lafayette</i>	1869 - <b>Digitized M119A2 105mm Howitzer</b> Mr. John Allen, <i>U.S. Army ARDEC</i>

9:40 AM - 10:00 AM

BREAK



NAVY

10:00 AM - 12:20 PM

CONCURRENT SESSIONS

	<b>MONROE DIRECT FIRES II</b>	<b>TUTTLE ARMAMENT SUBSYSTEMS</b>
<b>10:00 AM - 10:20 AM</b>	11611 - <b>USMC EFV Program Cartridge Qualification and Integration Program Status</b> Maj Ian McDuffie, USMC, <i>PM AAA</i>	11799 - <b>Developing Reliable Software in a Rapid Deployment Product</b> Mr. Steve Gunderson, <i>ATK, Plymouth</i>
<b>10:20 AM - 10:40 AM</b>		11775 - <b>Development of a Field Inspection Vehicle Designed to Autonomously Analyze Large-Bore Tubes for Fatigue and Wear</b> Mr. Cory Mettler, <i>American Science &amp; Technology</i>
<b>10:40 AM - 11:00 AM</b>	11615 - <b>30mm MK317 TPDS-T Cartridge Development and Qualification</b> Mr. James McConkie, <i>ND5, Office of the Program Manager</i>	11823 - <b>M197 Weapon Command and Control System for the MH-60S</b> Mr. William Reed, <i>U.S. Navy</i>
<b>11:00 AM - 11:20 AM</b>	11839 - <b>Rheinmetall 30mm x 173 Weapon Systems: Two Guns, Two Solutions</b> Mr. Stephan Kerk, <i>Rheinmetall Waffe Munition</i>	11804 - <b>Pivoting Coupling—Army's Greatest Invention</b> Mr. Steve Kotefski, <i>Savit Corporation</i>
<b>11:20 AM - 11:40 AM</b>	11837 - <b>The Rheinmetall 30mm x 173 Ammunition Family: Lethality and Urban Effectiveness</b> Mr. Stephan Kerk, <i>Rheinmetall Waffe Munition</i>	
<b>11:40 AM - 12:00 PM</b>	11758 - <b>30mm x 173 Ammunition Suite—The Appropriate Response for Any Target</b> Mr. Rick Wright, <i>GD-OTS</i>	
<b>12:00 PM - 12:20 PM</b>	11800 - <b>LW30 Target Practice-Traced (TP-T) Ammunition</b> Mr. Kyle Nerison, <i>ATK, Plymouth</i>	

**PROCEEDINGS**

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12:20 PM

CONFERENCE ADJOURNS



<b>ABSTRACT ID</b>	<b>ABSTRACT TITLE</b>	<b>ADDITIONAL AUTHORS</b>
11463	IM testing and Initiation Trials of the IMX-101 Explosive in the M795 projectile	Mr. Philip Samuels, Mr. Anthony Di Stasio, Mr. Ductri Nquyen
11482	Precision Guided Indirect Munitions – Operational Evolution	Mr. Conan Davis
11502	A Virtual Learning Environment for Precision Indirect Fires	Mr. Jim Rodrigue
11503	An Analysis of the Indirect Fires Portfolio of Munitions	Mr. Jon Peoble
11506	Advanced Cannon Bore Cleaning System	Mr. Jonghyun Shim, Mr. Seil Jeon
11509	Aggressor Suppression via the Use of Non-Lethal Projectiles and Launcher Systems	Mr. Dan Hartman, Mr. Steve Broussard
11528	XM1128 155mm Insensitive Munition (IM) High Explosive (HE) Extended Range Artillery Projectile	Mr. John Magrogan
11537	Development and Manufacture of an Insensitive Composition B Replacement Explosive IMX-104 for Mortar Applications	Mr. Brian Alexander, Mr. Mike Ervin, Mr. Philip Samuels, Mr. Charlie Patel
11572	The Development and Testing of the Improved Kinetic Energy Electronic Time (IKE-ET) Round	Mr. James Barnes, Mr. Todd Cloutier
11581	Precision Air Dropped Guided Munition (PADGM) System	Mr. Marc Ritt
11583	New PVD Processes for Durable Pollution-Free Ordnance Based on Ionized PVD Technology	Mr. Dan Schmitt, Mr. Fang Yee, Mr. Mick Cipollo
11586	Introduction of Wireless and MEMs Based Devices into Fire Control Systems	Mr. Michael Wright
11609	30MMX173 310 MOD 0 PABM-T Cartridge Qualification Program	Mr. Jay Fitzsimmons
11644	Determination of the Shelf Life of MEMS Navigation-Grade Sensors Through Use of Accelerated Aging Principles	Mr. Scott Gift
11657	Modeling of the Autofrettage Processes of a Gun Barrel	Mr. Sudhir Puttagunta, Mr. Chandra Penumarthu
11668	Design and Fabrication of a Novel High-g Soft Recovery System for 155mm Precision Munitions and Components	Mr. Nigel Gray, Mr. Brian DeFranco, Mr. Donald Carlucci
11670	Versatile Electromagnetic Mortar Launcher for the JLTV-B	Mr. Ronald Kaye, Mr. Steven Dron
11681	Next-Gen Fire Control: Free Software & Video Game Math	Mr. Anthony D'Alessandro
11692	AFRL Munitions Directorate Fuze Experimentation Research Activities	Mr. James Cross, Mr. Don Clabaugh
11697	Netted Smart Precision Engagement Autonomous Rounds (NetSpears) for Navy and Army Weapons	Mr. Sam Ghaleb, Mr. Mark Elkanick
11719	Common GPS: Development of the Subsystem Specification and ICD for the Common GPS Subsystem for the family of Precision Guided Projectiles	Mr. Paul Manz, Mr. Brian London Mr. Tim Easterly
11761	High Explosives Charges for Insensitive Artillery and Mortar Ammunitions: Performances, Technology, Producibility, Affordability	Mr. Jacques Cardin, Mr. Pierre Vignaud
11775	Development of a Field Inspection Vehicle Designed to Autonomously Analyze Large-Bore Tubes for Fatigue and Wear	Mr. John Duffy, Mr. Jesse VanOverbeke, Dr. Fereidoon Delfanian
11781	Gun-Launched Aerial Precision Munition	Mr. Daniel Vo, Mr. Hjalmar Canela, Mr. Lloyd Khuc
11784	Non-Traditional Impact Detection Using Triboluminescence	Dr. Shawn Goedeke, Mr. Ross Fontenot, Mrs. Kamala Bhat, Mr. Brady Broussard
11787	The Effects of Igniter Design on the Interior Ballistic Performance of Deterrent Coated Propellants	Dr. Eugene Rozumov, Mr. Carlton Adam, Mr. Duncan Park, Dr. Joseph Laquidara
11790	LW25 Programmable Air Burst Munitions	Mr. Erik Elmer
11791	Gun Launch Dynamics Modeling – Benchmarking the State of the Art	Dr. Donald Carlucci, Dr. James Newill
11802	Use of COTS O-rings as a Pyrotechnic Safety Barrier in a Rocket Motor Ignition Safety Device	Mr. Tom Larson

11807	Using JLOC (GPS Jammer Detection and Location System) to Improve the Effectiveness of Mission Planning for GPS Guided Weapons and to Support Flexible Response	Mr. Rick Edwards
11809	Composite Sabot Technology for the 105MM Rifled Tank Gun System	Mr. Saif Musalli, Dr. William Drysdale, Mr. Michael Minnicino
11811	Cartridge Case Venting Technologies, 25mm M910 Ctg Test Vehicle	Mr. Philip Abbate
11814	Structural Integrity Evaluation of Composite Cylinders	Mr. Ajay Srinivasa, Dr. Fereidoon Delfanian
11819	30mm Target Practice Discarding Sabot, Traced (TPDS-T) Ammunition Development	Mr. Don Gloude
11822	Novel ARDEC Igniters for Gun Systems	Dr. Thelma Manning, Dr. Joseph Laquidara, Mr. Duncan Park, Dr. Kimberly Chung
11823	M197 Weapon Command and Control System for the MH-60S	Mr. Alan Ford, Mr. John Proctor
11828	Scalable Gen-Set for Directed Energy Weapons: Resolving the Power Problem	Mr. Travis Swanson
11829	Investment Cast Titanium in Gun and Missile Systems	Mr. Eric Foos, Mr. David Lee
11832	Development and Characterization of IM Gun Propellant for the 120mm Tank System	Mr. Sam Moy, Dr. Thelma Manning Mr. Donald Chiu, Dr. Eugene Rozumov
11837	The Rheinmetall 30mm x 173 Ammunition Family: Lethality and Urban Effectiveness	Mr. Brian Sullivan
11839	Rheinmetall 30mm x 173 Weapon Systems: Two Guns, Two Solutions	Mr. Brian Sullivan
11840	Development of a Large Caliber Naval EM Railgun	Mr. Ryan Hoffman
11841	Electromagnetic Railgun, A Multi-Mission Weapon System (Non-Traditional Armaments Category)	Mr. Thomas Hurn
11842	Advanced Aluminum Alloys Enabling High Performance Missile Components	Mr. Les Yocum, Mr. Dustin Bush, Mr. Jeff Caratelli
11861	US Forces Light and Medium Mortar Ammunition Insensitive Munitions Path	Mr. Roger Wong, Mr. John Niles, Mr. William Kuhnle, Mr. Rei Martinez
11863	IM Compliance for Mortar Illumination Cartridges	Mr. Eli Martinez, Mr. John Niles, Mr. Sal Ghazi, Mr. Jeffrey Smith
11867	IM in the Field – Experience of Reduced Sensitivity Mortar Cartridges to Actual Combat Threat Stimuli	Mr. Roger Wong, Mr. John Niles, Mr. William Kuhnle, Mr. Jeffrey Smith
11869	Digitized M119A2 105mm Howitzer	Mr. Ray Espinosa, Mr. Jose Santiago, Mr. Norm Lionetti
11877	Acoustic Emissions Measured on the Outer Portion of a Composite Barrel	Ms. Rushie Ghimire

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**Tuesday, August 30, 2011**

10:00 AM - 5:00 PM (Breaks in Exhibit Hall)

**Tuesday Night Reception**

5:00 PM - 6:30 PM Reception in Exhibit Hall)

**Wednesday, August 31, 2011**

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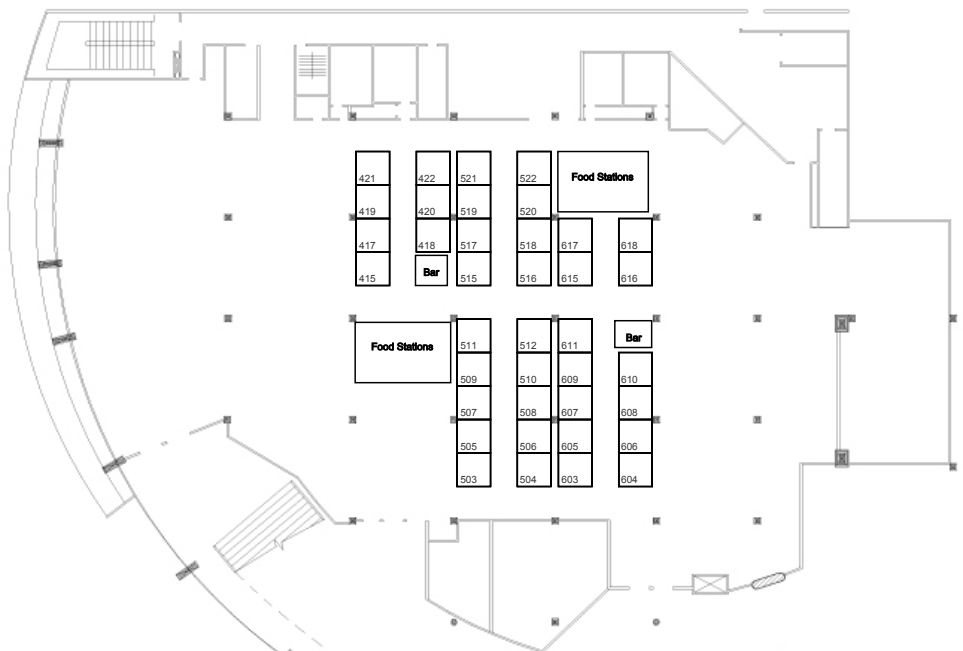
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