

# 52nd ANNUAL FUZE CONFERENCE

*“Smart Fuzing – Adding Intelligence to Fuzing Solutions”*

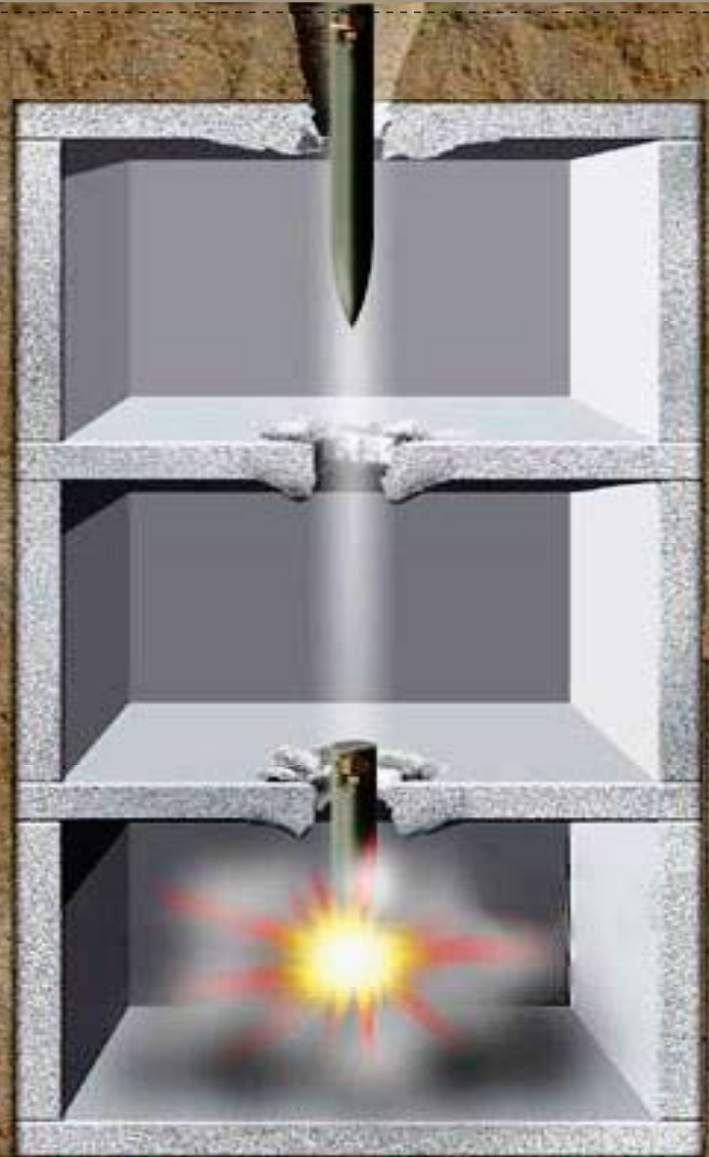
## REVISED AGENDA

### PLAN TO ATTEND.....

- Participate in technical presentations on the latest advances in fuzing
- Learn about emerging trends in fuze technology
- Network with other professionals who share your interests

### SHOWCASE YOUR COMPANY.....

- Represent your company before a broad base of potential customers and partners
- Maximize your company's visibility through sponsorship opportunities



**May 13 - 15, 2008**

[www.ndia.org/meetings/8560](http://www.ndia.org/meetings/8560)

**Sparks, NV**

# AGENDA

## TUESDAY, MAY 13, 2008

3:00 pm - Onsite Registration  
6:30 pm

5:00 pm - Opening Reception  
6:30 pm

## WEDNESDAY, MAY 14, 2008

### GENERAL SESSION

#### Session I

7:00 am - Onsite Registration/Continental Breakfast

8:00 am Introduction/Administrative Remarks,  
Mr. David Lawson, Chair, Fuze Division, KDI  
Precision Products, Inc

8:05 am NDIA Opening Remarks, MG Paul Greenberg,  
USA (Ret), Vice President Emeritus,  
Operations, NDIA, Executive Director  
Precision Strike Association

8:10 am Keynote - Rear Admiral Mark Emerson,  
Commander, Naval Strike and Air Warfare  
Center

#### Session II

**CHAIR: BARRY NEYER**

**ASSISTANT: TELLY MANOLATOS**

8:40 am DTRA, Dr. Robert Hastie

9:00 am ARDEC Overview, COL Scott Flynn

9:20 am AMRDEC Overview, Mr. Gene Henderson

9:40 am BREAK

10:00 am Navy Overview, Dr. Robert Gates

10:30 am Air Force S&T Strategy, Mr. Tim Tobik

10:50 am Air Force Acquisition Strategy, Mr.  
Christopher Clay

11:10 am Fuze IPT Perspective, Mr. Chuck Kelly

Noon Lunch

## WEDNESDAY,

Open Sessions

Session IIIA

**CHAIR: TIM BONBRAKE**

**ASSISTANT: ERIC ROACH**

1:00 pm EOD Experience in Operation Iraqi Freedom,  
Ms. Melissa Milani

1:20 pm Requirements for Joint EOD Approval of  
Ordnance and Weapon Systems, Ms. Melissa  
Milani

1:40 pm A Modular Open System Architecture (MOSA)  
for Fuze Development, Mr. Matthew Bridge

2:00 pm New Changes to MIL-STD-331, Progressive  
Arming and Primary Explosive Component  
Safety Testing, Mr. Brian Will

2:20 pm A Robust One-Shot Switch for High Power  
Pulse Applications, Dr. Thomas Baginski

2:40 pm Common Methodology for Calculating Fuze  
Reliability, Mr. Avi Nusimow

3:00 pm BREAK

3:20 pm Void Sensing Fuze, Mr. Dale Spencer

3:40 pm Hard Target Fuzing Solutions, Mr. Max Perrin

4:00 pm Signal Processing Means for Detecting and  
Discriminating Between Structural  
Configurations and Geological Gradients  
Encountered by Kinetic Energy Penetrating  
Projectiles, Mr. Ronald Lundgren

4:20 pm Multipurpose ISD Design for AIM-9X/RAM,  
Mr. Mark Miller

4:40 pm SBF- Smart Barometric Fuze, Mr. Igal Tidhar

5:00 pm Practical Aspects of MIL-DTL-23659  
Appendix A Initiator Testing, Dr. Barry Neyer

5:30pm - GRAND RECEPTION  
7:00pm

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**MAY 14, 2008**

US Only Sessions  
Session IIIB

**CHAIR: LAWRENCE FAN**  
**ASSISTANT: ED COOPER**

1:00 pm	TBD
1:20 pm	TBD
1:40 pm	TBD
2:00 pm	A Passive, Friction-Based System for Fuze Shock Absorption and Jerk Reduction, Dr. Laurence Keeffe
2:20 pm	Understanding the Dynamics of Penetrating Weapons: Modal Response and Multiaxial Shock Testing, Dr. Jason Foley
2:40 pm	US Navy Fuze and Initiation System Technical Review Panel: Duties, Responsibilities, and Processes, Mr. John Kandell
3:00 pm	BREAK
3:20 pm	Proximity Fuze Regression Testing, Mr. John Langan
3:40 pm	MEMS Mechanical Safety and Arming Device for Low-Zone through High-Zone Large-Caliber Artillery Application, Mr. Charles Robinson
4:00 pm	Navy MEMS Micro-Detonator Based Safe Arm, Dr. Daniel Jean
4:20 pm	Realization of MEMS-Based Micro-G Switch for Launch and Target- Impact Sensing, Mr. Gabriel Smith
4:40 pm	MEMS-Compatible Processing of Energetic Materials, Mr. Alexander Tappan
5:00 pm	MEMS Safe and Arm Mechanism Update, Mr. Dale Spencer
5:30pm 7:00pm	GRAND RECEPTION

Open Sessions  
Session IVA

**CHAIR: CURTIS POWELL**  
**ASSISTANT: SCOTT POMEROY**

7:00 am -	Onsite Registration/Continental Breakfast
8:00 am	Problems and Possibilities with Advances in Fuzing, Mr. Henrik Sjoblom
8:20 am	Electronic Fuze Device & ESA, Mr. Oran Zeldin
8:40 am	Electronic Fuzes's Remote Setting System for Chambered Tank Ammunitions, Mr. Stephan Dietrich
9:00 am	Common Fuzing for HYDRA 70 Warheads, Mr. Robin Klein
9:20 am	Enhanced Portable Inductive Artillery Fuze Setter (EPIAFS) for Excalibur, Mr. Thomas Walker
9:40 am	M72 Dual Mode Fuze and Fuze Setting Concept, Mr. Christian Johnsen
10:00 am	Break
10:20 am	PAC-3 Safe Arm Fuze, Mr. Steven Ma
10:40 am	New Generation Artillery Proximity Sensor, Application to Naval Fuzes, Mr. Max Perrin
11:00 am	Signal Processing for accurate Distance Estimation in a Low-cost, Continuous Unmodulated Wave Doppler Proximity Fuze for Mortar Bombs, Mr. Nicusor Birsan and Dr. Gheorghe Iubu
11:20 am	Test Results and Alternate Packaging of a Damped PR MEMS Accelerometer, Mr. Robert Sill
11:40 am	Alternate Architectures from PGK Derived Components, Mr. Chris Geswender
12:00 pm	Lunch

US Only Sessions  
Session IVB

**CHAIR: MICHAEL CONNOLLY**  
**ASSISTANT: FRED PIERING**

7:00 am -	Onsite Registration/Continental Breakfast
8:00 am	Development of the Long Range Land Attack Projectile Height Burst Sensor, Mr. James Lundt
8:20 am	TBD
8:40 am	Target Discrimination Circuits for BDM, Mr. Lloyd Khuc
9:00 am	Enabling Technologies for Miniature Firing Systems, Mr. Chuck Treu
9:20 am	Robust Intelligent Void and Layer (RIVAL) Fuze Progress, Mr. Jefferson Oliver
9:40 am	Urban Fuze Air-to-Surface Technology (Urban FAST), Dr. Rustin Allred
10:00 am	Break
10:20 am	Electronic Time Fuze for Mortars – Increased Fuze Intelligence through Embedded Data Retention, Mr. Steve Thomas
10:40 am	Post-Impact Capabilities of a Hard Target Defeat Fuze, Mr. Tom Larson
11:00 am	Common Smart Submunition (CSS) Electronic Safe and Arm Device (ESAD), Mr. James Lucas
11:20 am	Excalibur Electronic Safe and Arm Device (ESAD), Mr. Albert DeSantis
11:40 am	Intelligent Fuzing, Mr. Laurie Turner
12:00 pm	Lunch

Open Sessions

Session VA

**CHAIR: LEN FRIEDMAN**  
**ASSISTANT: DAVE LAWSON**

- 1:00 pm TBD
- 1:20 pm Safe-Escape Analysis System Safety Engineering Study, Mr. David Hall
- 1:40 pm Weapons Curvilinear Trajectory and Smart Fuze Calculations Suitable for Hard Target Defeat Modeling, Mr. Jean Sibeaud
- 2:00 pm Fuze Survivability/MOUT Testing at AMRDEC/RTTC Rocket on a Rope (ROAR) Test Facility, Mr. Don Limbaugh
- 2:20 pm Explosive Ordnance Disposal (EOD) and its Influence on Your Fuze Program, Mr. Al Hayes
- 2:40 pm Fuze Safety in Accordance with STANAG as Basis for Modular and Universal Fuze Design, Mr. Karl Kautzsch
- 3:00 pm BREAK
- 3:20 pm Fuzing Timelines for Current and Future Air Launched Weapons, Mr. Frank Robbins
- 3:40 pm GIF & the Electronic Test Fuze, Mr. Hamish Malin
- 4:00 pm Precision Guidance Kit for 155mm Artillery Projectiles, Mr. Peter Burke
- 4:20 pm A Development Platform for a Microchip EFI, Mr. Wim Prinse
- 4:40 pm Electrical Characterization of a Semi Conducting Bridge Initiator with and without Pyrotechnic Mixture, Mr. Richard Bouma
- 5:00 pm Replacing the M213 Detonator Explosives, Mr. Gartung Cheng
- 5:20 pm Conference Adjourned

US Only Sessions  
 Session VB

**CHAIR: TOM BAGINSKI**  
**ASSISTANT: KEN KELLY**

- 1:00 pm Multi-Platform Safety and Arming for the Common Very Lightweight Torpedo, Mr. Lawrence Fan
- 1:20 pm Automated Assembly of the M228 Hand Grenade Practice Fuze, Mr. Bryan Hare
- 1:40 pm In-Bore Velocity Estimation for Large Caliber Smooth Bore Weapon Systems, Mr. Edward Cooper
- 2:00 pm Use of High Speed Velocimetry for Initiation Component Characterization, Mr. Ed Wild
- 2:20 pm Shock Transfer Characterization of a Miniature Exploding Foil Initiator, Dr. David Lambert
- 2:40 pm A New Class of Initiator for Ignition Applications, Mr. George Hennings
- 3:00 pm BREAK
- 3:20 pm US Army Qualification of RSI-007, Dr. Brian Fuchs
- 3:40 pm Final Qualification Results for EDF-11 Explosive Ink, Ms. Amy Wilson
- 4:00 pm Re-crystallization of Cyanuric Triazide – Green Primary Explosive, Ms. Neha Mehta
- 4:20 pm Development of a PVDF Based Power Scavenging System for Fuze Applications, Dr. Philip Reiner

**Open Sessions - The following Presentations are open to all attendees**

- 4:40 pm Novel Munitions Power Systems, Ms. Karen Amabile
- 5:00 pm Piezoelectric Setback Generators for Powering Smart Fuzes, Dr. Alfredo Carazo
- 5:20 pm Conference Adjourned





ATK is a leading manufacturer of the fuzes U.S. and allied forces rely on today. The company is also pioneering the development of advanced fuze technology for tomorrow. ATK has delivered over 100,000 DSU-33 Proximity Sensors for weapons such as the Joint Direct Attack Munition (JDAM), and general purpose bombs. The company's Multi-Option Fuze for Artillery (MOFA) adds new flexibility to 105mm and 155mm artillery systems, and its Electronic Time Fuze for Mortars gives 60mm, 81mm, and 120mm shells improved timing accuracy and enhanced safety.

ATK's Precision Guidance Kit (PGK), currently in development, affordably transforms existing 155mm artillery rounds into GPS-guided, one shot, one kill weapon systems, and its Hard Target Void-Sensing Fuze will enable precision bombs with penetrating warheads to detonate at precise points inside buried or reinforced concrete targets. The company is an industry leader in the development of advanced precision projectiles for naval and land forces applications.

ATK is the nation's largest producer of military small and medium-caliber ammunition, propellant and energetics, and Bushmaster chain gun systems. The company is also a leading manufacturer of 105mm and 155mm ammunition, airburst munition technology, and intelligent perimeter protection systems.

ATK is the world leader in solid propulsion systems and is the prime contractor on the first stage of NASA's shuttle-replacing Ares I vehicle. The company's booster motors provide much of the thrust for Delta-family of launch vehicles. In addition, ATK manufactures all three stages of the Minuteman III and Trident II missile systems. ATK is also a leading provider of components and subsystems for today's large satellites and it is pioneering the development of small constellations of satellites for tomorrow.



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**KDI Precision Products, Inc.**

KDI is globally recognized and respected as the premier source for reliable and affordable fuzing and proximity sensor products. This includes: artillery fuzes - M739A1/M762 and 767/M782 (MOFA) and Excalibur, Missile & Rocket fuzing - GMLRS, ATACMS, AIM-9X and NLOS-LS and bomb fuzes - FMU-139C/B, FMU-143B/B, SDB and JASSM.

L-3 Communications/KDI Precision Products, Inc.

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NAVAIR provides advanced warfare technologies through the efforts of a seamless, integrated, worldwide network of aviation technology experts. From aircraft and weapons development to carrier launch and recovery; from sensors to real-time communications to precision targeting; from aircraft and weapons sustainment to state-of-the-art training; NAVAIR provides dominant combat effects and matchless capabilities to the American warfighter.

At one NAVAIR division, our team members bring their expertise to our mission in one of the finest research, development, acquisition, test and evaluation centers in the world -- the Naval Air Warfare Center, Weapons Division (NAWCWD) located at China Lake and Point Mugu, California.

Our mission at NAWCWD is to support and provide our Armed Forces with effective and affordable integrated warfare systems and life-cycle support to ensure battlespace dominance.

NAWCWD has world class facilities for developing the next generation of technology solutions with enormous expanses of unencroached land, sea, and airspace. Our engineers, scientists, specialists and technicians are making a difference in just about every major scientific and technological area from developing the first air-to-air guided missile in combat (Sidewinder), to helping design the 2004 Mars Lander, and developing the first real-time night display of targets, plastic bonded explosives, and U.S. aircraft rockets.