HIGHLIGHTS

Keynote Speakers include:

- Hon James R. Ambrose, former Under Secretary of the Army
- Col Robert Mattes, USAF CTO Director, DUSD, AS&C
- Mr. Chris Grassano, Project Manager, Maneuver Ammunition Systems

- The first James R. Ambrose Award, named for former Under Secretary of the Army, will be presented on Tuesday morning, in addition to the George Chinn and Carlos Hathcock Awards

- The Firing Demonstration will be held on Wednesday evening at Tac Pro Shooting Center

MAY 19-22, 2008
WWW.NDIA.ORG/MEETINGS/8610

INTERNATIONAL INFANTRY & JOINT SERVICES
SMALL ARMS SYSTEMS SYMPOSIUM, EXHIBITION & FIRING DEMONSTRATION

“Enhancing Small Arms Effectiveness in Current and Future Operations”
OBJECTIVE

Facing terrorist forces from MOUT to the open battlefield, American forces – both military and law enforcement alike – require the best equipment available. Only through the efforts of government and industry working together on a wide range of technology focus areas will the tools necessary to support our soldiers, sailors, airmen and marines now and in the future be realized. These focus areas range from incremental enhancements to fielded legacy small arms systems to enabling technologies, such as fire control improvements, use of robotics and digitization of small arms systems on the battlefield, to name a few. This symposium seeks to bring together government and industry, manufacturers and users to support this objective for the military and law enforcement communities.

AMBROSE AWARD

The Ambrose Award was established and is presented periodically to recognize an Industrial Firm which, in the opinion of the Small Arms Division Executive Board, has made outstanding contributions to the field of small arms systems. An outstanding contribution is characterized by exemplary commitment and contribution to the Armed Forces by delivering superior materiel that meets required operational capabilities and supports a high level of force readiness in the conduct of warfighting activities or homeland defense. Such contributions may be shown through a record of continual demonstration of emerging technologies, development of products and systems, establishment of enhanced production capabilities and integration of innovative weapons systems and supporting products and services required by the DoD and Allied countries. Such contributions would be easily recognized as “excellence” in industry leadership and responsiveness in cases where national security priorities require attention to meet urgent needs in either peace or war time.

This award is named in honor of former Under Secretary of the Army, James R. Ambrose, because of his recognition of the value and contribution of industry in meeting the needs of our national defense. This was made unmistakably clear during his tenure from 1981-1988 as Under Secretary of the Army during the Presidency of Ronald Reagan. He was a major force in the post Vietnam modernization of all small arms weaponry where new and improved versions of the M16, M249 and M9 were purchased in large quantities as a result of industry competitions. Secretary Ambrose was a strong supporter of investing in the Future Rifle Program, later known as the Advanced Combat Rifle (ACR) Program. His emphasis on the need for competition could not be clearer here, as there were as many as six contractor systems in various phases of the program and 4 firms ultimately participated in the 9-month long ACR Field Experiment, the premier rifle evaluation of all time. For his support of small arms development and procurement and his strong emphasis and actions in involving industry at every step of the way, the NDIA Small Arms Division believes it entirely appropriate to name this award in his honor.

ATTIRE

Appropriate dress for this symposium is business casual for civilians and Class B uniform or uniform of the day for military personnel.

ID BADGES

During symposium registration and check-in, each attendee will be issued an identification badge. Badges must be worn at all symposium functions.

PROCEEDINGS

Proceedings will be available on the web through the Defense Technical Information Center (DTIC) one to two weeks after the symposium. You will receive notification via e-mail once the proceedings are available to download/print/view.

CONTACTS

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PREVIOUS RECIPIENTS

**CHINN AWARD**

Thomas E. Cosgrove, 1988
James Ackley, 1989
John S. Wood, Jr., 1990
Roderic A. Spies, 1991
Edward C. Ezell, 1993
Richard R. Unterkofler, 1995
C. Reed Knight, Jr., 1996
Robert A. Trifiletta, 1997
George E. Kontis, 1998
Vernon E. Shisler, 1999
Salvatore A. Fanelli, 2000
L. James Sullivan, 2001
Ernst Mauch, 2002
Phil Baker, 2003
Georges Chauveheid, 2003
Ronnie Barrett, 2004
Richard Audette, 2005
Richard Swan, 2006
William Dittrich, 2007

**HATHCOCK AWARD**

Charles B. Mawhinney, 2000
William Bartholomew, 2001
Jim Owens, 2000
Larry Vickers, 2003
Steve Holland, 2004
Christopher Mitternight, 2005
Allen Boothby, 2006
American Snipers Organization, 2007

**CHINN AWARD**

The Chinn Award is presented annually to honor a government or industry individual who, in the opinion of the Small Arms Division Executive Board, has made significant contributions to the field of small arms and/or infantry weapons systems. A significant contribution is considered to be a creative invention, new design or innovative concept in small arms weapons, ammunition or ancillary equipment that provides an advancement in the state-of-the-art or capability enhancement that clearly benefits the warfighting or general military capability of the U.S. The Chinn Award may also be conferred as recognition to an individual who has performed sustained superior service in a career field of science, engineering, test and evaluation, manufacturing program management, academic study and research, publishing or maintenance relating to military small arms or infantry weapons.

The Chinn Award is named in honor of Lieutenant Colonel George M. Chinn, USMC, a career Marine who dedicated his life to the study, development and refinement of machine gun mechanisms. LtCol Chinn is remembered for his work as a gun designer and for having compiled a five volume reference work entitled, “The Machine Gun.”

**HATHCOCK AWARD**

The Hathcock Award is presented to recognize an individual who, in the opinion of the Small Arms Division Executive Board, has made significant contributions in operational employment and tactics of small arms weapons systems which have impacted the readiness and capabilities of the U.S. military or law enforcement. A significant contribution is considered to be a superior performance of duties in an operational environment or the development of tactics or training.

The Hathcock Award is named in honor of Gunnery Sergeant Carlos N. Hathcock, II, USMC, a career Marine who dedicated his life to the service of this country in both the military and law enforcement communities. He was honest, tactful, considerate, courageous, quietly proud and determined in all things and all places from the range to the battlefield. “The Gunny” not only distinguished himself in combat as a scout-sniper, but also as a competitive marksman and trainer. In his capacity as a trainer, he not only significantly impacted the current United States Marine Corps Scout-Sniper Program, but also influenced the sniper programs of the other military services and similar law enforcement programs nationwide.
MONDAY, MAY 19, 2008

9:00 AM - 6:30 PM  Registration Open – *International Ballroom Foyer*

5:00 PM - 6:30 PM  Welcome Reception – *Regency Ballroom*

TUESDAY, MAY 20, 2008

7:00 AM - 6:30 PM  Registration Open – *International Ballroom Foyer*

7:00 AM - 7:50 AM  Continental Breakfast in Exhibit Hall – *Regency Ballroom*

SESSION I CHAIR

COL Karl Scott Flynn, USA, Chairman, JSSAST

AWARDS PRESENTATION

Join your colleagues to honor the Chinn, Hathcock and Ambrose award winners on Tuesday morning.

Hon James R. Ambrose, former Under Secretary of the Army, will be in attendance to present the first James R. Ambrose Award.
11:30 AM  Luncheon – *Gold & Parisian*

12:20 PM  Hiram Maxim and His Machinegun: A Great Force Harnessed to a Useful Purpose
- Dr. Stephen Small, JSSAP, U.S. Army, ARDEC

12:40 PM  PM Soldier Weapons
- Mr. Richard Audette, Deputy, PM Soldier Weapons
- LTC Timothy Chyma, USA, PM Individual Weapons
- LTC Michael Ascura, USA, PM Crew Served Weapons

1:10 PM  Session II: Small Arms Ammunition and Technology
Lethal Limited Range Harbor Security Ammunition
- Mr. Stephen McFarlane, U.S. Army, ARDEC
Effects of Small Caliber Ammunition through Intermediate Barriers
- Mr. Jeremy Lucid, U.S. Army, ARDEC
After Barrier Effectiveness of Small Caliber Ammunition
- Mr. Mark Minisi, U.S. Army, ARDEC
Lightweight Small Caliber Ammunition Update
- Mr. George Feghali, General Dynamics OTS, Canada
Development of a Viable Alternate Accuracy Requirement for 7.62mm Sniper
- Mr. Eli Golden, U.S. Army, ARDEC
- Mrs. Susan Polinski, U.S. Army, ARDEC
.50 Caliber Short Range Training Ammunition
- Mr. John MacDougall, General Dynamics OTS, Canada
Environmentally Friendly Primers for Small Caliber Ammunition
- Dr. Rao Yalamanchili, U.S. Army, REDCOM ARDEC

2:40 PM  Session III: Advancements in 40mm Munitions (Low and High Velocity); Presentations by 40mm Technology Insertion Team
M385A1 Composite Projectile Feasibility Study
- Mr. Christopher Summa
Development of M16A2 Pivoting Coupling
- Mr. Matthew Millar
Electronics and Sensors in 40mm Low Velocity Grenade Ammo
- Mr. Jason Wasserman
Productibility Improvements of 40mm High and Low Velocity Liners
- Mr. Adam Sorchini
Center of Mass Changes During Arming of 40mm Fuzes
- Mr. Adam Jacob
40mm Day/Night Practice Cartridge for MK13/XM320/M203 Grenade Launchers
- Mr. Peter Martin for Mr. Fred Fitzsimmons
- Mr. James Grassi
- Ms. Melissa Wanner

3:30 PM  Break in Exhibit Hall – *Regency Ballroom*

5:00 PM - 6:30 PM  Reception in Exhibit Hall – *Regency Ballroom*
WEDNESDAY, MAY 21, 2008

7:00 AM - 1:30 PM  Exhibit Hall Open – Regency Ballroom
7:00 AM - 2:30 PM  Registration Open – International Ballroom Foyer
7:00 AM - 7:45 AM  Continental Breakfast in Exhibit Hall – Regency Ballroom
7:45 AM  Welcome and Administrative Announcements – International Ballroom
  ▶ Mr. Sam Campagna, Director, Operations, NDIA
  ▶ Mr. Brian Berger, Chairman, Small Arms Committee; Vice President and General Manager, General Dynamics OTS Simunition Operations
7:50 AM  Keynote Address
  ▶ Col Robert Mattes, USAF, CTO Director, DUSD, AS&C
8:10 AM  Session IV: JSSAP
  ▶ Lightweight Small Arms Technologies Update
    ▶ Ms. Kori Spiegel, U.S. Army, ARDEC
  ▶ The Ultimate Caliber: Myth or Reality?
    ▶ Mr. Shawn Spickert-Fulton, U.S. Army, ARDEC
8:50 AM  Infantry Studies and Simulations
  ▶ Mr. Alexander Lee, U.S. Army, ARDEC
9:10 AM  Joint Service Small Arms Program Applied Research Initiatives
  ▶ Mr. John Edwards, U.S. Army, ARDEC
9:30 AM  JSSAP’s Future Small Arms Technology Plan: The Fusion of Science and Science Fiction
  ▶ Mr. Joel Goldman, Chief, JSSAP, U.S. Army, ARDEC
9:50 AM  Break in Exhibit Hall – Regency Ballroom
10:20 AM  Session V: NATO
  ▶ NATO Land Capabilities Group (LCG) 1: Dismounted Soldier
    ▶ LTC Mike Bodner, DND Canada, Chairman, NATO LCG 1, Directorate of Land Requirements (DLR)
10:30 AM  NATO Research and Technology Organization Update
  ▶ Mr. Mark Richter, U.S. Marine Corps Systems Command, Quantico
10:45 AM  NATO Infantry Weapons Standardization
  ▶ Mr. Per Arvidsson, FMV, Sweden
11:00 AM  Topical Group 3: Non-Lethal Capabilities Update
  ▶ Ms. Liliana McShea, U.S. Army, ARDEC
  ▶ Mr. Jim Schatz, Jr., Time for a Change Team
  ▶ Dr. Gary Roberts, DDS
12:20 PM  Luncheon – Gold & Parisian
1:30 PM  Exhibit Hall Closes
SESSION VII CHAIR
Mr. David Broden, Broden Resource Solutions, LLC

SESSION VIII CHAIR
Mr. Sal Fanelli, U.S. Marine Corps Infantry Weapons

SESSION IX CHAIR
Ms. Liliana McShea, U.S. Army, ARDEC

THURSDAY, MAY 22, 2008

1:30 PM Session VII: Industry Ammunition Producers and Technology Companies
Mr. Keith Enlow, ATK Lake City
Mr. Steve Torma, General Dynamics OTS
Mr. Bruce Webb, Nammo USA
Mr. Alan Serven, Remington
Mr. Dave Council, Olin
Mr. John MacDougall, General Dynamics OTS, Canada
Mr. Paul Shipley, Textron-AAI
Mr. Nick Malkovich, Mac Ammo
Mr. Sy Wiley, Polytech

2:30 PM Board Buses and Depart for Contractor Firing Demonstration – Tac Pro Shooting Center

4:30 PM Session VIII: Contractor Firing Demonstration

5:30 PM BBQ Dinner Buffet – Tac Pro Shooting Center

7:00 PM Buses Start Returning to Fairmont Hotel
Departures at 7:00 PM, 7:30 PM, 8:00 PM and 8:30 PM

7:30 AM - 4:00 PM Registration Open – International Ballroom Foyer

7:30 AM - 8:20 AM Continental Breakfast – International Ballroom Foyer

8:20 AM Welcome and Administrative Announcements – International Ballroom
Mr. Sam Campagna, Director, Operations, NDIA
Mr. Brian Berger, Chairman, Small Arms Committee; Vice President and General Manager, General Dynamics OTS Simunition Operations

8:30 AM Keynote Address
Mr. Chris Grassano, Project Manager, Maneuver Ammunition Systems

9:00 AM National Small Arms Center Update
Mr. Frank Puzycki, U.S. Army, ARDEC

9:30 AM Session IX: Testing, Training and Simulation

9:30 AM Technical Evaluation, Operational Evaluation, Lessons Learned in Small Arms Procurement
Mr. Joseph Abram, NAVSEA, Crane

9:50 AM Suppressing Sacred Cows
Mr. Graham Evenden, System Design Evaluation, Ltd.

10:10 AM NDIA Strategic Initiatives
Mr. David Broden, Chairman, Armaments Division; Broden Resource Solutions, LLC

10:30 AM Break – International Ballroom Foyer
10:50 AM  Session X: Less Lethal Systems and Technology

10:50 AM  Session Overview, JNLWD

11:00 AM  Human Effects and Effectiveness, HECOE

11:20 AM  Mission Payload Module, NL Weapon System, MCSC

11:40 AM  Improved Flash Bang Grenade, SOCOM

12:00 PM  Taser International

12:20 PM  Beretta/Defense Technologies

12:30 PM  Luncheon – Venitian

1:30 PM  Session XI: Weapons

1:30 PM  Canadian Proposed Small Arms Demonstration Project
  ▶ Mr. Gilles Pageau, Directorate Soldier System Program Management 10-4

1:50 PM  Advanced Thermal Management of Automatic Rifles
  ▶ Ms. Laurie Florio, U.S. Army, ARDEC

2:30 PM  Break – International Ballroom Foyer

  ▶ LtCol Michael Hartman, IDF Israel, North East Technologies, Ltd.

3:00 PM  Experimental Performance Analysis on Recoil Pad for Reducing Firing Shock Force
  ▶ Dr. Joon-Ho Lee, Agency for Defense Development, Korea

3:20 PM  Development of a Non-Lethal 12ga. Shotgun System for Use with the EM113REV
  ▶ Mr. Kevin Adams, U.S. Army, ARDEC ATF

3:40 PM  Session XII: Fire Control

3:40 PM  Fire Control Units for Thermal Weapon Sights
  ▶ Mr. Alexander Kuhrt, Helmut Schmidt University, Germany

4:00 PM  Aimpoint BR8: A Fire Control System for Small Arms
  ▶ Mr. Lennart Ljungfelt, Aimpoint, Inc.

4:20 PM  Real Time Tire Control Solution for Individual and Crew-Served Direct Firing Infantry Weapons: Algorithm and Implementation
  ▶ Mr. Alexander Kuhrt, Helmut Schmidt University, Germany

4:40 PM  Closing Remarks
  Conference Concludes

Thank you for your participation!
Please return your survey to the NDIA Staff.
EXHIBIT FLOOR PLAN

FIRING DEMONSTRATION COMPANIES

- Aimpoint, Inc. – weapon optics
- Ashbury International Group, Inc. – small arms, assault rifles, accessories
- ATK – multi shot weapon systems
- Colt Defense, LLC – assault rifles
- Command Arms – small arms accessories
- Engel Ballistics Research – specialty and subsonic ammunition
- FNH USA, LLC – infantry weapons
- GLOCK – handguns
- Inland Technologies, Inc. – weapons cleaning system
- La Rue Tactical – portable targeting system
- Less-Lethal – less-lethal devices
- Long Mountain Outfitters – foreign weapons, mounts, accessories
- Mac Ammo – small arms ammunition
- Magpul Inds. Corporation – small arms, assault rifles, accessories
- Metal Storm, Inc. – multi shot weapon systems
- MILKOR USA – M32 Grenade Launcher
- NeTech – infantry assault rifles
- NLight/Laser Devices – optical distractor
- Pierce Targets – portable targeting system
- Remington Arms – sniper rifle systems
- Smith & Wesson – handguns
- Tally/Nammo – shoulder launched ordnance
- Trijicon, Inc. – weapon optics
- TSSI – weapon optics
- Wilcox Industries – night vision equipment

AAI Corporation – 501
Aimpoint, Inc. – 106
Anniston Army Depot – 202
ARDEC Picatinny Arsenal – 102
Ashbury International Group, Inc. – 601
Barrett Firearms Manufacturing, Inc. – 311
Colt Defense, LLC – 401
Combined Systems, Inc. – 302
Command Arms Accessories/Fobus – 104
Eagle Industries Unlimited, Inc. – 406
ELCAN Optical Technologies – 410
Enidine, Inc. – 305
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GEMTECH – 506
General Dynamics-ATP – 101
General Dynamics-OTS – 201
GLOCK, Inc. – 505
IML Corp. – 112
Inland Technology, Inc. – 204
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JMTC-RIA – 312
Joint Non-Lethal Weapons Directorate – 402
Joint Service Small Arms Program – 111
Knight’s Armament Company – 301
L-3 EOTECH – 413
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Laser Devices, Inc. – 613
LaserMax, Inc. – 214
Leatherman Tool Group, Inc. – 414
Long Mountain Outfitters, LLC – 511
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Marine Corps Logistics Command – 611
Martin Electronics, Inc. – 513
MAST Technologies, Inc. – 317
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MILKOR USA, Inc. – 404
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OLIN Winchester – 409
Orison Marketing, LLC – 319
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Savit Corporation – 405
Smith & Wesson – 609
Streamlight, Inc. – 306
Tactical & Survival Specialties, Inc. – 314
TASER International – 514
Thales Communications, Inc. – 206
The Beta Company – 212
Thor Defense, Inc. – 418
Trijicon, Inc. – 503
U.S. Army Aberdeen Test Center – 309
U.S. Ordnance – 211
Vectronix, Inc. – 509
VingTech Corp. – 210
Wilcox Industries – 411
Williams Software Associates Corp. – 417
ATK

ATK is a premier aerospace and defense company with $4.1 billion in annual sales, over 17,000 employees and operations in 21 states.

ATK Armament Systems Group is the world’s largest manufacturer of small and medium-caliber ammunition. Our military and commercial ammunition product portfolio spans a broad range, from 5.56mm through .50 caliber for use in handguns, shotguns and rifles. We also manufacture 20mm, 25mm and 30mm rounds for air, land and sea platforms, as well as large caliber ammunition for main battle tanks. We are developing enhanced tactical ammunition including air bursting munitions, next-generation energetics and advanced propellants that will increase performance and lethality.

ATK is also the world’s top producer of Bushmaster medium-caliber chain gun systems for ground combat, naval and air armament applications. ATK produces the M242 25mm cannon for the Bradley Fighting Vehicle, the MK44 30/40mm cannon selected by the U.S. Marine Corps’ for the Expeditionary Fighting Vehicle and the 30mm M230 cannon for the AH-64 Apache and AH-64D Apache Longbow helicopters.

Building on the capabilities of our core ammunition and rocket motor businesses, ATK is developing several breakthrough advanced weapon systems, such as the U.S. Navy’s Advanced Anti-Radiation Guided Missile (AARGM) and the U.S. Army’s Precision Guidance Kit (PGK), Spider munition and Individual Airburst Weapon System (IAWS). Using state-of-the-art guidance, navigation and control systems, targeting systems, high-energy propellants and advanced warheads, ATK is developing weapons that will fly farther, faster and strike targets with unprecedented precision and lethality at affordable procurement cost.

ATK is the world leader in the design, development and production of solid rocket propulsion systems for space, strategic-missile defense and tactical applications. Our tactical rocket motor portfolio includes propulsion systems for air-to-air, air-to-surface, surface-to-air and surface-to-surface missiles. Additional ATK news and information can be found at www.atk.com.

BULLDOG EQUIPMENT

Bulldog Equipment designs and manufactures custom equipment for the U.S. military. Our solutions are based upon the needs of the soldier. Our goal is to offer products that are mission-critical and to assure the customer that we will provide the finest equipment. All of our equipment is made in the USA and constructed with all-American components.

Our vision at Bulldog Equipment is to ensure the highest standards of safety and reliability while enhancing the soldiers’ performance.

For more information, please visit www.bulldogequipment.us.