

The  
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# recision Strike Digest

May/June  
2004  
Vol.17, No.2

"Dedicated to advancing the art and science of precision engagement concepts and technology"



**PRECISION STRIKE  
ASSOCIATION**

Affiliate, National Defense  
Industrial Association

## VISION STATEMENT

*We aspire to be the premier association dedicated to advancing the art and science of precision engagement concepts and technology.*

*To accomplish this, we will promote the development of systems and procedures in order to locate, fix, track, target, and attack fixed, moving, and relocatable targets.*

*We recognize that battlespace management, the network within which it functions, and the adjunct command and control requirements are crucial to success of the battlefield.*

*PSA has a global perspective and welcomes international participation.*

## Summer Forum to include PEO, Tactical Missiles

**T**he Precision Strike Association will host their Summer PEO Forum on 7-8 July in Huntsville, AL. With the theme *Balancing Precision Strike for the Joint Force Commander Across Asymmetric Battlefields*, the unclassified forum will focus on evolving requirements and challenges for force application against asymmetric threats. (more detail can be found on page 11).

A key contributor and host of this year's forum will include U.S. Army Brigadier General Mike Cannon, the program executive officer for tactical missiles. The PEO, Tactical Missiles reports directly to the Army Acquisition Executive and is the centralized manager overseeing 30 weapons programs.

BG Mike Cannon entered the Army upon graduation from Texas A&M University in 1976. He completed the Armor Officer Basic Course and the Armor Officer Advanced Course, undertaking various armor positions in the United States and Germany.

BG Cannon completed a Masters of Science in Industrial Engineering at Texas A&M University in 1986 and was assigned to the U.S. Army Troop Support Command in St. Louis, Missouri.

Upon completion of Command and General Staff College in 1989, BG Cannon was assigned to Ft. Bliss, TX

where he served as secretary of the joint staff in Joint Task Force Six and as the deputy operations officer for the 3<sup>rd</sup> Armored Cavalry Regiment.



BG Mike Cannon

In 1992, BG Cannon was assigned as the assistant project manager for the Abrams Tank System with responsibilities for the M1A2 Upgrade Program and the follow-on development program. In 1995, BG Cannon was selected as the product manager, Wolverine Heavy Assault Bridge. He served in that capacity until 1997 when he left to attend the Industrial College of the Armed Forces.

In July 1998, BG Cannon assumed the responsibilities of project manager, Force Projection Enabling Systems. Upon completion of his tour in June 2001, BG Cannon was assigned to Headquarters, Army Materiel Command as the deputy G-3 for future operations.

In August 2002, he became the assistant deputy for systems management in the Office of the Assistant Secretary of the Army (Acquisition, Logistics and Technology). In January 2004, BG Cannon took over as the program executive officer for tactical missiles.

Mark your calendars now and plan to join your colleagues at this unique PSA event. ■

## IN THIS ISSUE

Precision Strike Summer PEO Forum Preview .....1

APR Wrapup .....3

Leadership Profile .....8

# Chairman's Column



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### We've Come A Long Way

I would like to thank all of those who attended the Annual Programs Review (APR) 20-21 April 2004 at Fort Belvoir, VA. I believe it was a superb event in spite of the gate problems. We assure you that it will work better next year.

I would also like to thank the great team that put this event together. We had top-notch speakers as always. Kudos go to Ginny Sniegion, PSA programs chair, Andy McHugh, APR event chair, Bill Dalecky, PSA vice-chairman, MG Paul L. Greenberg, USA (Ret), PSA's executive director, and Dawn Campbell, PSA executive administrative assistant. Let's not forget the Technical Chairs: RADM (Sel) Jim Hart, USN, COL Lance Moore, USA, CAPT Deke Philman, USN, Maj Chad Stevenson, USAF, Paul Hitchcock, MBDA Missile Systems, and Bob Houser, Boeing.

I certainly believe the APR highlighted many new challenges that we all can begin to work on.

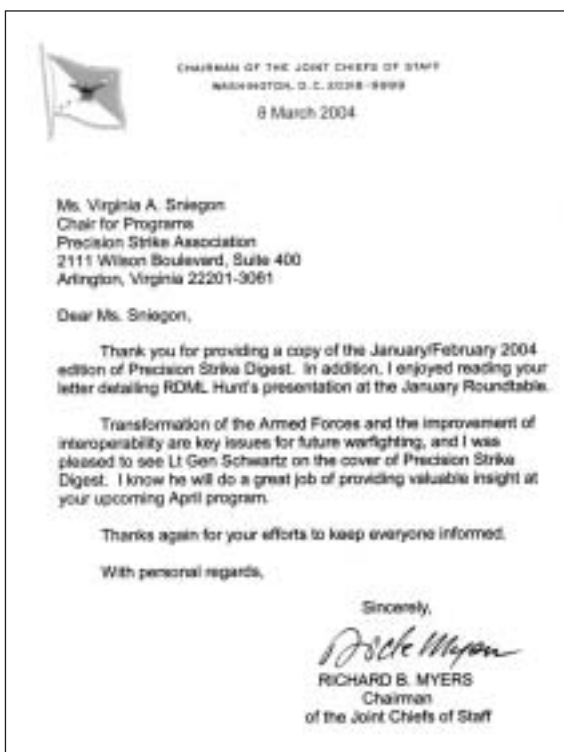
As good as our program was at feeding the mind, we wouldn't have succeeded without feeding the stomachs during the breaks and reception provided by La Belle Cuisine.

As part of the APR, we conducted our Annual Meeting and announced the new membership of your Board of Directors. Please join me in welcoming our new board members: Tony Ammendolia, Aerojet Research Corporation; Tim Beard, BAE Systems Mission; LTC Kenneth Britt, USA; CDR Cathal S. O'Connor, USN; Col John Croghan, USAF; RADM John V. Chenevey, USN (retired); Maureen Koerwer, EDO Corporation; JT Morris,

Whitney, Bradley & Brown, Inc. Also, a special thank you to several board members who are repeat performers: Bill Dalecky, Smith Aerospace; Doug Detwiler, Deputy Program Manager for PMA-280; COL Lance Moore, USA. I am sure you will all be pleased with this group of volunteers that governs the Precision Strike Association.

That's the view from Wayne's World... ■

Wayne F. Savage  
Chairman of the Board  
Precision Strike Association



# Annual Programs Review Roundup

The Precision Strike Association (PSA) held its 2004 Annual Programs Review (APR) on 20-21 April at the Defense Acquisition University (DAU) in Scott Hall's Howell Auditorium, Fort Belvoir, VA.

Dave Fitch, Dean of DAU's Defense Systems Management College, welcomed the participants to the highly successful two-day event. APR Event Chair Andy McHugh said "coming into the Annual Programs Review we felt that we had assembled some of the precision strike world's most dynamic speakers and most compelling topics. I believe our experience over the course of APR '04 proved this to be true."

This year's APR theme *Partnership, Integration & Interoperability (PI&I)—Creating Meaningful Precision Capability* provided all of the attendees a very interesting precision capabilities perspective from industry, the Office of the Secretary of Defense, the Services and the warfighters. Attendees also heard from our allies on their efforts in precision engagement.

Leading off the first day of the APR was RADM Timothy L. Heely, USN, who recently took over as PEO for Strike Weapons and Unmanned Aviation. RADM Heely said the Navy continues to be committed to Sea Power 21 and continues to place tremendous value on the ability of naval forces to project decisive, joint power. But in addition to strike, emphasis on information gathering and management are key. He discussed the need for integrating sensors to penetrate all types of cover and weather—assembling vast amounts of information. "The task is crystal clear—we must continuously seek improvements and accelerate our advantages—becoming smaller and smarter—equip and enable our sailors without spending unnecessary manpower dollars—promote healthy competition amongst our people and reward innovation and efficiency as we find the resources to create the Navy of the future," Heely stated.

He thanked the defense industry for providing the 'smart' weapons. "We continue to be a nation at war. The overall strategic objective remains the same—win the global war on terrorism. The importance of your work is very clear and is felt every day by the thousands of fighting men and women serving in hostile enemy territory. I applaud you and thank you for your diligence and dedication."

Attendees were then treated to a keynote address from Ronald M. Sega, OSD's Director for Defense Research and Engineering. Dr. Sega's remarks provided the participants with a better understanding of the expectations and challenges facing the Defense Department as we continue to reshape the future battlefield in the precision strike arena to achieve the President's national security objectives and priorities. Dr. Sega highlighted systems and capabilities-driven transformation initiatives to develop high-speed propulsion technologies for military applications. He emphasized the value of speed for time critical targets. Dr. Sega stated that the propulsion technologies the department is pursuing in two research and development efforts under the National Aerospace Initiative (NAI) could power future space access vehicles and long-range strike platforms, among other applications. Sega said that preliminary data gathered during the 10-second flight of the X-43A vehicle indicates that it entered a climb and accelerated during the hypersonic portion of powered flight. Further, he cited the joint Air Force/DARPA Force



Honorable Ronald M. Sega

Application and Launch from the Continental United States program, known as FALCON, as a hypersonic program that will use next-generation propulsion tech-

nologies. Additionally, surveillance and knowledge systems for enabling integrated C4ISR Energy and Power Technologies are other transformation initiatives being pursued.

Dr. Sega noted that a robust, integrated, capabilities-based research and engineering program provides for greater transformational options. He also noted that a highly skilled science and engineering workforce is critical for transformation and national security.

Next, USAF Major Gen Jack Hudson, PEO and Program Director for Joint Strike Fighter (JSF) Program, and Tom Burbage, Lockheed Martin's Executive Vice President and General Manager of the JSF Team, offered an update on F-35 development efforts. Maj Gen Hudson said the goal is to "develop and produce an affordable next generation strike fighter weapons systems and sustain it worldwide. The F-35 JSF is expeditionary. It will be the world's most versatile fighter." Facing a critical Defense Acquisition Board review in June, the development team received good news recently when the team of Pratt & Whitney (P&W), Rolls-Royce and Hamilton Standard successfully initiated testing of the prototype engine (FX641) for the short-takeoff and vertical-landing (STOVL) variant of the JSF. The test engine was delivered ahead of schedule to P&W's facilities in West Palm Beach, FL. The JSF's F135 is an evolution of P&W's F119 engine, which powers the F/A-22 Raptor.

Then, USAF Brig Gen Jim Smith, Raytheon's VP for Precision Engagement, discussed precision engagement improvements. He emphasized the importance of the warfighter's perspective and noted how essential it is to be interoperable. Jim Smith also focused on understanding the emerging warfighter's role by reviewing joint doctrine that looks a generation ahead.

As part of an industry panel that dis-

See Wrapup, Continued on page 4

Wrapup, Continued from page 3

cussed the success of industry/government partnerships, Boeing's Mike Marks, VP & GM, USAF Fighter & Bomber Programs & Weapons, said "the Joint Direct Attack Munitions (JDAM) performance in combat has been a very good metric of how well acquisition reform is working. . . We need to extend the factors exercised on JDAM on all future programs no matter what military service is involved."

The first day's luncheon speaker was Bruce Bade, OSD's AT&L Director for Pacific Armaments Cooperation, who offered his perspectives on international cooperation, the current environment, opportunities and challenges. Mr. Bade said the Pentagon is "adapting to the increasingly global nature of the supply chain—opening up new possibilities for international cooperation." Further, he stated "As we transform our forces and equipment, and our allies do the same, we need closer cooperation in the development stages of acquisition pro-



F-35 Joint Strike Fighter

grams. Otherwise, we take different paths that result in incompatible equipment."

Air Commodore J.J. Witts, Air Attache for the British Embassy, and Air Commodore Ian Scott, Chief of Staff, Headquarters Air Command, Australian Embassy, kicked off the afternoon session by offering a synopsis of their respective nation's involvement in Operation Iraqi Freedom. J. J. Witts was particularly proud of the performance of MBDA's new Storm Shadow missile—27 of which were expended in OIF. "They were an unprecedented success—we're quite a fan." Ian Scott said

"Operation Falconer was a big effort for us. We hadn't sent fighters off to war as an organized unit since Korea. But in the end, we are pretty proud of what we did."

Next, Kevin Sheehan, Lockheed Martin's Director for Strike Weapons, discussed a proposed advanced concept technology demonstration (ACTD) involving the addition of data links to various weapons including Boeing's Small Diameter Bomb (SDB) and Lockheed Martin's Joint Air-to-Surface Standoff Missile (JASSM) and Wind Corrected Munitions Dispenser (WCMD). If funded, the Weapon Data Link Network (WDLN) ACTD would start in FY 2005. Mr. Sheehan also revealed Lockheed's ongoing work on a Surveilling Miniature Attack Cruise Missile (SMACM)—a smaller in width but longer Low Cost Autonomous Attack System (LOCASS) that would fit on bomb racks. With additional fuel, a ladar and data link, it could provide the USAF with a new standoff, loitering precision strike weapon.

Briefings on the use of precision strike weapons in OEF and OIF were presented next. OPNAV's Captain Kevin Albright and the Army's 3<sup>rd</sup> Infantry Division Artillery Commander Colonel Thomas Torrance spotlighted pertinent precision engagement activities. Albright noted that precision weapons are where they need to be with our level of threat. But, he also stated that there are "holes" out there that need to be fixed. Colonel Torrance recapped the successful Joint Fires scenarios in Karbala during the late March through early April timeframe.

The first day's concluding briefing in Scott Hall was presented by Greg Hulcher from OSD's AT&L Defense Systems office. Greg stated that the Cold War's strategic triad with three nuclear legs—ICBMs, SLBMs

and Bomber Force—has been replaced by a New Triad involving strike capabilities (both nuclear and conventional), defenses and responsive infrastructure.

"For all the richness and variety of capabilities represented in the New Triad, which has the job of maintaining strategic deterrence and dealing with hardened targets, precision strike is indeed the hallmark of what we have

been able to plan for in the future," he remarked.

PSA's Annual Meeting & Reception, that included great food, fine wine and special remarks, closed out the first day's activities.



Kevin Sheehan

Judy Stokley who is the USAF's Air Armament Center Deputy for Acquisition discussed her organization's development of a Universal Armament Interface (UAI). "We think we can go forward and develop a set of standards and interfaces that will change the way we integrate weapons on airplanes today."

The USAF would also like to see a global grid where information can be passed from weapons to aircraft to command and control facilities. A weapons data link would be a key part of the global information grid where information would change hands using a common architecture and common language those involved would understand. After a weapon is released, it could be

re-targeted to send back information to the grid about the area it sees, providing intelligence and verifying its location just before hitting the target. It might also send back battle-damage assessments (BDA) of other targets before it explodes.



Storm Shadow

PSA's second day Review opened with a lively DOD/Industry panel moderated by the Boeing Company's Bob Houser. Panel members Jack Zavin from OSD's ASD (NII) and the Boeing Company's Carl Avila focused on the benefits of common architecture for precision guided weapons. They provided insights on achieving information interoperability, net-centric operations, warfare, and data strategy, as well as data link solutions.

The remainder of the day focused on sessions related to a review of current and future precision strike weapons systems presented by PSA's military technical chairs from the Military Departments. These sessions represent a fundamental element of the Precision Strike Annual Programs Review and are very popular with the participants. USAF Major Chad Stevenson kicked off the session by presenting four speakers who addressed Global Strike Capabilities. Presenters included the JDAM briefer, Lt Col Scott Owens (AC/YU); JASSM PM, Dale Bridges; SDB briefer, Major Dave Morgan (SAF/AQPW); and WCMD PM, Lt Col Eric Burns. Presentations of the JDAM, JASSM, SDB, and WCMD weapons systems covered requirements, capabilities, test and evaluation, growth focus, pre-planned targeting, and weapons loadout.

This year's Sea Strike Capabilities panel, chaired by USN CAPT Deke Philman, focused on weapons capability improvements that the U.S. Navy is pursuing in the precision strike arena. Panel members—Captains Dave Dunaway (PMA-201), Chuck Wright (OSD/DOT&E), Bob Novak (PMA-280), Mark Converse (PMA-242), and LtCol Chris St. George (OPNAV N78)—talked about weapons systems doctrine, mission capability, adequate testing, and target alignment. The focus was on jointness and coming up with the right mix of weapons systems. Concerns related to the war on terrorism (especially the inability to get timely feedback) also were discussed, as well as perspectives on the desire for more



USAF Lt Gen Norton Schwartz addresses the luncheon crowd on the second day of the APR 2004

smaller precision weapons and the need to get better information electronically from ground to air.

During a lively luncheon break, USAF Lt Gen Norton Schwartz, Director for Operations, the Joint Staff (J-3), offered his perspectives on precision strike. He believes precision strike is not just about accuracy. "As J-3, I have seen first hand the results and the effectiveness of our very considerable arsenal of precision strike weaponry..." But, Lt Gen Schwartz challenged the precision strike community to broaden our definition of precision strike to fully explore the capabilities of kinetic and non-kinetic weapons and our capability to deliver precision effects. Lt Gen Schwartz said "the evolving concept of net-centric warfare will be a critical enabler in this notion of precision effects." He noted that the turn-around time for BDA needed to be accelerated—"this will profoundly enhance combat effectiveness."

The afternoon session was chaired by Colonel Lance Moore USA who outlined the Army's Objective Force Capabilities. Topics addressed included Precision Cannon/Mortar Munitions briefed by COL Nate Sledge (Combat Ammunition Systems PM); PEO Soldier Systems presented by COL John Norwood (PM) and COL David Cowan (Ret); Aerial Common Sensor briefed

by Richard Scorio; and Future Combat Systems update on NLOS Cannon presented by Major Darby McNulty (APM); and Network Fires C4ISR briefed by Major David Bassett (APM). They discussed future precision strike scenarios including the challenges of achieving lethality for a smaller, lighter, and more agile force. Capabilities needed for joint operations, including interoperability, were highlighted.

In closing, the APR Event Chair, Lockheed Martin's Andy McHugh, extended many thanks to our dynamic slate of enthusiastic and knowledgeable presenters, as well as to all the government and industry participants for their fine contributions to the success of the 2004 Precision Strike Annual Programs Review.

Precision Strike Association  
would like to thank

**Raytheon**

**LOCKHEED MARTIN** 

for sponsoring the Annual  
Programs Review





- 1 Dave Fitch—Dean, Defense Systems Management College, DAU
- 2 Tom Burbage, Executive VP & GM of the Joint Strike Fighter Team, Lockheed Martin; Wayne Savage, PSA Chairman—Maj Gen Jack Hudson, USAF, PEO and Program Director—Joint Strike Fighter Program; Ginny Sniegon, PSA Programs Chair; RADM Timothy L. Heely, USN; Andy McHugh, PSA Event Chair
- 3 Keynote Address given by: Honorable Ronald M. Sega Director, Defense Research and Engineering
- 4 Brig Gen James B. Smith, USAF (Ret)-Vice President, Precision Engagement, Raytheon Co.
- 5 Maj Stephen Waller, USAF Program Manager, DARPA
- 6 Opening Remarks given by: RADM Timothy L. Heely, USN PEO for Strike Weapons and Unmanned Aviation
- 7 Jim Kuzmick-President, Whitney, Bradley & Brown, Inc; Brig Gen Randy Bigum, USAF (Ret)-VP Strike Weapons, Lockheed Martin; Lillian Vayhinger-Deputy for the Strike Product line Raytheon Missile Systems Company; Mike Marks—Vice President & General Manager, USAF Fighter & Bomber Programs & Weapons Programs, The Boeing Company; Andy McHugh, PSA Event Chair
- 8 Air Commodore J. J. Witts—Air Attache for the British Embassy; Paul Hitchcock, PSA Session Chair; MG Paul Greenberg, USA (Ret), PSA Executive Director; Air Commodore Ian K. Scott, AM Chief of Staff, Headquarters Air Command, Australian Embassy
- 9 Bruce Bade-Director, Pacific Armaments Cooperation in the Office of the Under Secretary of Defense (AT&L)
- 10 Lt Col Scott Owens, USAF-AC/YU, Eglin AFB; Major Dave “Smash” Morgan, USAF-SAF/AQPW; Lt Col Eric Burns, USAF-WCMD PM; Dale Bridges Program Manager for JASSM; Major Chad Stevenson, USAF-PSA Session Chair
- 11 Colonel Thomas Torrance, USA - 3rd Infantry Division Artillery Commander; Captain Deke Philman, PSA Session Chair, Captain Kevin Albright, USN-Head, Integrated Readiness Branch, CNO OPNAV 430
- 12 Kevin Sheehan-Director, Strike Weapons, Lockheed Martin Missiles and Fire Control
- 13 Captain Chuck “Snapper” Wright, USN-OSD/DOT&E; LtCol Chris “Saint” St. George, USMC-OPNAV N78; Captain Mark “Stick” Converse, USN-PMA-242; Captain Dave “Decoy” Dunaway, USN-PMA-201; Captain Bob Novak, USN-PMA-280; Captain Deke Philman, U.S. Navy, PSA Session Chair
- 14 Special Remarks at the evening reception given by: Judy A. Stokley-Deputy for Acquisition, Air Armament Center
- 15 Bob Houser-PSA Moderator
- 16 Jack Zavín—Chief of Information and Interoperability, ASD (Networks and Information Integration)
- 17 Greg Hulcher—Assistant Director, Concepts & Plans, Office of the PDUSD(AT&L), Defense Systems
- 18 Colonel Lance Moore, U.S. Army, PSA Session Chair; Colonel Nate Sledge, USA-PM, Combat Ammunition Systems; Colonel John Norwood, USA-PM, Soldier Equipment; Major Darby McNulty, USA-APM NLOS Cannon & Mortar Future Combat Systems; Maj David Bassett, USA-APM, UA Network System Integration
- 19 Carl Avila—Director, Advanced Tactical Missile System, The Boeing Company
- 20 COL David M. Cowan, USA (Ret)-Chief of Operations Rapid Fielding Initiative
- 21 Richard Sciría – Aerial Common Sensors Program

## Leadership Profile: RADM Timothy Heely, USN

**R**ADM Timothy L. Heely recently took over as program executive officer for strike weapons and unmanned aviation (PEO(W)), succeeding RADM John V. Chenevey who retired from the USN in early December after 36 years of service.

The PEO(W) located at Patuxent River NAS, MD, is responsible for providing naval and joint commanders a decisive warfare advantage for weapons, weapons systems and unmanned aviation products. Key programs include the Tomahawk Cruise Missile, Standoff Land Attack Missile-Expanded Response, Joint Standoff Weapon, High-Speed Anti-Radiation Missile and Advanced Anti-Radiation Guided Missile, Pioneer Unmanned Aerial Vehicle and Fire Scout UAV.

Prior to taking over his new responsibilities, Heely served as assis-

tant commander for systems and engineering, Naval Air Systems Command (NAVAIR), and commander, Naval Air Warfare Center, Aircraft Division, Patuxent River, MD.

RADM Heely is a native of Belleville, IL, who graduated from the U.S. Naval Academy in 1975 with a Bachelors of Science degree in American Political Systems. He received his wings two years later and flew the A-7E Corsair II. He earned a Masters of Science degree in Aeronautical Engineering from the Naval Postgraduate School, Monterey, CA.

RADM Heely first served in an acquisition role as the deputy class desk officer on the A-12 program.

From there he returned to the Fleet, flying the F/A-18C Hornet. He was then assigned to the Bureau of Naval Personnel before shifting to NAVAIR and the F/A-18 program office.

In February 1997, RADM Heely became the program manager, Naval Undergraduate Jet Flight Training Systems. Three years later, he was selected as commander, Naval Air Warfare Center, Aircraft Div. and assumed the additional duties as the assistant commander for systems and engineering.

RADM Heely has logged over 3,500 flight hours, 850 arrestments and flew combat missions over Kuwait and Iraq during the Gulf War. ■



RADM Timothy Heely, USN

## News Briefs

### Boeing UCAV Aces Weapons Test

The military recently moved one step closer towards proving the viability of a dedicated unmanned combat air vehicle (UCAV) when a Boeing X-45A demonstrator successfully released an inert GPS-guided Small Smart Bomb, hitting a ground target recently at the Naval Air Warfare Center Weapons Division Range, China Lake, CA.

During the test, an operator authorized release, and when the aircraft determined it was within range, the Joint Unmanned Combat Air Systems (J-UCAS) X-45A technol-



X-45A UCAV

ogy demonstrator dropped the guided 250-pound weapon from its internal weapons bay at 35,000 ft. and 0.67 Mach (approximately 442 mph).

The aircraft autonomously performed all maneuvers, bay door operations, and weapon-away release sequences under human operator supervision. ■

### 'Working Holiday' for Minot B-52 Crews

About 300 people from various specialties assigned to Minot AFB, ND, spent part of last winter at Andersen AFB, Guam supporting six of the 5th Bomb Wing's B-52 Stratofortress bombers.

They are the first rotation to deploy to the region following the decision to station a bomber force on Guam, part of U.S. Pacific Command's ongoing force posture adjustment. Officials said the continuous bomber presence is aimed at enhancing regional security, demonstrating the United States' commitment to the Western Pacific, and providing training opportunities that

See News Briefs, Continued on page 9



News Briefs, Continued from page 8

integrate bombers into joint and coalition forces in the Pacific.

Some of the airmen were just glad to get away from the freezing temperature at Minot and enjoy the



B-52 bomber preparations

tropical climate. "Although it can get very hot at times, working in this heat beats being on the flightline when the temperature dips below zero," said one airman. ■

### Boeing Spears Harpoon Work

Boeing has been awarded a \$20 million contract to provide Harpoon Block II missile retrofit kits for the Australian Defence Force. The kit provides a new guidance control unit flight computer, a new guidance section shell and a GPS antenna. The kit makes the weapon more accurate and useable for coastal target suppression. ■

### Team SLAMRAAM

The U.S. Army has awarded Raytheon a \$127 million contract for work on the Surface Launched Advanced Medium Range Air-to-Air Missile (SLAMRAAM). The weapon includes AMRAAM missiles and an integrated fire control station mounted on a Humvee. The effort to develop a joint common launcher and a common command

and control capability merges the USMC Complementary Low Altitude Weapon System and the Common Aviation Command and Control System programs. ■

### JDAM Contracts

The Pentagon has awarded Boeing a \$642 million contract for production of more than 32,000 Joint Direct Attack Munition (JDAM) Lot 8 guidance kits for the USAF

and USN. A second contract, worth \$215 million, provides for future integration of JDAM on various foreign military sales aircraft. ■

### NetFires in the Money

NetFires, a limited liability company established by Lockheed Martin and Raytheon, has received a \$1.1 billion contract for System Design and Development (SDD) for

See News Briefs, Continued on page 10

## PEOPLE

U.S. Navy Captain James M. Hart has been nominated for appointment to the rank of rear admiral (lower half). Hart is currently serving as deputy for naval aviation and tactical air systems to the Deputy Director, Defense Systems, Air Warfare, Office of the Under Secretary of Defense. He also serves on the Board of Directors of the Precision Strike Association.

Dov S. Zakheim resigned in April as the under secretary of defense (comptroller). He has been appointed to the board of directors of IDT Telecom. Tina W. Jonas has been nominated as his replacement. She has served as the FBI's chief financial officer since September 2002. Before that, she was the deputy undersecretary of defense for financial management.

The nomination of Secretary of the Air Force James Roche to be secretary of the army has been withdrawn. He was named in July 2003 for the senior Army post, but the Senate Armed Services Committee failed to report on the nomination to the full Senate for a vote.

Cryptek, Inc. has appointed John P. Stenbit, a former assistant secretary of defense for networks and information integration, to its board of advisors. Retired USAF Lt. Gen. Leslie F. Kenne has been elected to the Board of Directors of Harris Corp. and appointed to EDO's Board of Directors.

MG John F. Michitsch, (U.S. Army, Ret.) has been appointed executive vice president of AAI Corp., reporting to Frederick M. Strader, AAI's president and chief executive. Michitsch had been vice president for ground, air and unattended systems in Northrop Grumman's Electronic Systems Sector.

BAE Systems North America has appointed John Osterholz as vice president, C4ISR. He joins the firm after 35 years of government service. Wendell D. Bugg has been named director of communications for Northrop Grumman Integrated Systems.

Raytheon has named Thomas A. Kennedy as vice president unmanned and reconnaissance systems in the Space and Airborne Systems business sector. He succeeds Heidi Shyu who recently was named vice president and technical director for Raytheon Space and Airborne Systems. Joseph E. Hart has been named vice president, marketing, aviation and unmanned programs at DRS Technologies.

U.S. Army Brig. Gen. Robert W. Cone, director, Joint Center for Lessons Learned, U.S. Forces Command, is newly assigned as commanding general, National Training Center and Fort Irwin, CA.

News Briefs, Continued from page 9

the Non Line-of-Sight Launch System (NLOS-LS), previously known as NetFires.

The sole-source, six-year SDD contract, includes design and development of the Loitering Attack Missile (LAM), the Precision Attack Missile (PAM) and an autonomous Container Launch Unit (CLU). Raytheon is developing the PAM, while Lockheed Martin is responsible for the LAM. Together they will produce the CLU.

The LAM, with a laser radar (LADAR) seeker with automatic target recognition, will be about 60 inches long and weigh less than 120 pounds. The PAM, with a dual-mode uncooled infrared/semi-active laser seeker, is a low-cost direct attack missile that is also seven inches in diameter and weighs about 117 pounds. ■

### Weapons Testing Enters New Era

Engineers and technicians at Eglin AFB, FL, have ushered in a new weapons testing era by dropping an inert, precision laser-guided bomb from an F-15E Strike Eagle that struck an offshore floating target 21 miles away.

The test was the first in a program to build an offshore scoring system on the Eglin Gulf Test Range, allowing weapons, like the Small Diameter Bomb and the Joint Air-



Weapons Testing at Eglin Gulf Range

to-Surface Standoff Missile, to be tested. Eglin is the only DoD test range with this capability. The program will help the 46th Test Wing to test all weapons systems fully by 2010. The test demonstrated the U.S. military's ability to fully evaluate 21<sup>st</sup> century weapons in open-air testing for the first time. ■

### JASSM-ER Under Development

Lockheed Martin was recently awarded a \$71 million development contract to continue development of an extended range version of the Joint Air-to-Surface Standoff Missile (JASSM). The contract initiates the

second phase of JASSM-ER development, including design and verification testing and culminates with flight testing beginning in mid-2006. JASSM-ER production will commence two years later. JASSM-ER will be a 500 nautical mile plus weapon through use of a new engine and increased fuel load. ■

### PAC-3 Production

Lockheed Martin has received \$505 million for Patriot Advanced Capability-3 (PAC-3) missile and support equipment production. The contract calls for production of 159 PAC-3 missiles, including replacements for 22 PAC-3 missiles expended during Operation Iraqi Freedom. ■

### JSOW/BROACH LRIP

The U.S. Navy has awarded a second low-rate initial production contract to BAE Systems to provide an additional 97 BROACH multi-stage warheads for the Navy's Joint Standoff Weapon Unitary (JSOW-C). In July 2003, the company received a contract for 42 systems. The JSOW-C is the first U.S. weapon to integrate the BROACH warhead. ■

### EDO Awarded Paveway IV Contract

EDO (UK) Ltd. has been awarded a \$12 million contract to supply the weapon-to-pylon interface for the UK's new Paveway IV precision-guided bomb. The contract was awarded by Raytheon, the prime contractor. The Paveway IV is the latest generation of the Paveway family of precision-guided munitions, evolving from Enhanced Paveway, which the RAF has already fielded. ■

See News Briefs, Continued on page 11

## CALENDAR OF EVENTS

### Summer PEO Forum

Date: July 7-8, 2004  
Location: Huntsville, AL

### Precision Strike Technology Symposium

Date: October 12-14, 2004  
Location: The Kossiakoff Conference Center, JHU/APL, Laurel, MD  
See PSA website [www.precisionstrike.org](http://www.precisionstrike.org) for details regarding the Call for Papers

### Winter Roundtable

Date: January 26, 2005  
Location: Crystal City Marriott, Arlington, VA

For more information on these events, please contact the PSA office directly.  
Precision Strike Association, 2111 Wilson Blvd - Suite 400, Arlington, VA 22201-3061  
tel: 703-247-2590 fax: 703-522-1885  
e-mail: [info@precisionstrike.org](mailto:info@precisionstrike.org)  
website: [www.precisionstrike.org](http://www.precisionstrike.org)

July 7-8, 2004

## Precision Strike Summer PEO Forum

Huntsville Marriott  
Huntsville, AL.

Balancing Precision Strike for the Joint Force Commander across Asymmetric Battlefields – is the theme of the Summer Forum sponsored by the Precision Strike Association (PSA). The recently released “Joint Operations Concept” paper re-establishes the fact that US forces must achieve “full spectrum dominance” across the full range of military operations. The concept paper further states that the military must embrace a “joint and expeditionary mind-set...” As such, the Services have made substantial investments of time and resources to focus on how best to conduct operations against the ever-changing face of today's asymmetric threat. This two-day unclassified forum is designed to inform you and your organization with an unparalleled overview of force application concepts in the context of effects-based operations. Further, it is tailored to present you with a look at the relationship of industry/government partnerships, challenge you with what's next for precision engagement, and allow you to network with leaders of government and industry. In particular, the forum will focus on evolving requirements and challenges for effectively managing force application against asymmetric threats across the networked Joint Battlespace.

For further information, exhibitor and sponsorship opportunities, or to register, contact PSA by phone at 703-247-2590, e-mail: [info@precisionstrike.org](mailto:info@precisionstrike.org) or go directly to the website at <http://www.precisionstrike.org>.

News Briefs, Continued from page 10

### F-16 Becomes More Lethal

The “smart weapon” capacity of the Lockheed Martin F-16 has been doubled with the certification of EDO's new BRU-57 multiple weapon rack. It has two stations, each with interfaces for smart weapons, so flight and targeting data

can be transferred to the weapon immediately prior to release. The fighter will now be able to carry four, instead of two, 1,000-pound class smart weapons. The rack will work with the Wind Corrected Munition Dispenser series, the Joint Standoff Weapon and the Joint Direct Attack Munition. ■

*In the next Issue*

*Wrapup on the Precision Strike Summer PEO Forum*

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