

The
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**PRECISION STRIKE
ASSOCIATION**
Affiliate, National Defense
Industrial Association

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

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.*

USMC's Deputy Commandant for Programs and Resources & DARPA's Deputy Director to Keynote PSTS-04

The Precision Strike Technology Symposium (PSTS), designed by defense technology experts to concentrate on futuristic precision strike systems, is now in its 14th year.

Sponsored by the Precision Strike Association (PSA), the upcoming symposium will focus on "Accelerating Joint & Coalition Technology Advances for Precision Strike." PSTS-04 brings together nearly 400 government and industry leaders who are engaged in emerging precision strike technologies and systems in shaping our national defense posture and influencing events around the world.

Participants will hear from USMC LtGen Robert Magnus, deputy commandant for programs & resources, and Dr. Robert Leheny, deputy director of the Defense Advanced Research Projects Agency (DARPA). LtGen Magnus will focus on accelerating technologies to support precision strike for the Marines in Iraq. Dr. Leheny will highlight DARPA's enabling technologies, including network-centric precision engagement, to support the joint warfighter.

These two distinguished defense leaders will join 40 other defense, industry, and international visionaries in addressing this popular three-day forum taking place on October 12-14, 2004 at the Kossiakoff Conference Center, Johns

Hopkins University Applied Physics Laboratory, Laurel, MD.

Other confirmed speakers and topics are reflected on page 11. A highlight of PSTS-04 is the technical sessions that will explore advanced technology innovations that span near to far term horizons in the weapons, C4ISR, targeting and effects disciplines.



LtGen Bob Magnus

LtGen Magnus has served as the U.S. Marine Corps deputy commandant for programs & resources since August 2001. He is highly respected in defense management circles and was a prominent player in the 2001 Quadrennial Defense Review that provides a vision for how our forces will be employed now and into the future.

Dr. Leheny is noted for his keen leadership and strategic vision that propelled advanced technological research and development during his tenure as the director of DARPA's Microsystems Technology Office. Prior to joining DARPA in 1993, Dr. Leheny was an executive director with the Applied Research Laboratory of Bell Communications—now known as Telcordia. ■



Dr. Robert Leheny

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Chairman's Column

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Far Afield

I want to thank everyone who attended and supported the Precision Strike Summer PEO Forum 2004 held 7-8 July in Huntsville AL.

It was our first real venture out of the Washington, DC area, and I am sure all of those involved will tell you it was a venture to an adventure. The agenda was first rate, the facility more than adequate and the evening session at the U.S. Space & Rocket Center was magnificent.

Our attendance was slightly lower than we planned. I believe this was due to the fact we scheduled the forum right after the July 4th holiday. A clear lesson learned for the next go around. Special kudos to Mike Underwood, Paul Greenberg, Dawn Campbell and Ramon Lopez for all their hard work on this one!

Meanwhile, I have just taken on new responsibilities with Raytheon. In June, I moved from our Washington DC office to be the director of the Raytheon Hampton – Norfolk office. The office is centrally located in the area I consider the nucleus of our future military requirements with the Joint Forces Command, Combined Fleet Forces Command, Air Force Air Combat Command and the Army Training and Doctrine Command—all within 15 miles.

It is a great opportunity to look across all services to understand how they are using precision weapons, what they expect and are achieving with the current and near term precision engagement systems and

what they want and anticipate the precision engagement requirements will be in the future. My goal will be to bring these facts and plans forward to the PSA in our venues as soon as possible.

I have only been in place for a few weeks, but I can tell you that they understand what precision strike means today and are counting on improvements. Their ideas on coherent operational pictures, battle-space management, sensor fusion and real time targeting abound. PSA can certainly help across the board.

On the topic of exciting opportunities for challenging improvements where PSA will be actively engaged is our upcoming annual Precision Strike Technology Symposium (PSTS) 2004. Widely accredited as one of the best technology symposiums of its kind, the event committee (Ginny Sniegon, USN Rear Admiral (Sel) Jim Hart, Dr. John Walter, George McVeigh and Harvey Dahljelm) already has confirmed an outstanding slate of speakers and presentations for what is expected to be another superb symposium. Please mark your calendars and plan to be at Kossiakoff Conference Center, Johns Hopkins University Applied Physics Laboratory, Laurel, MD, 12-14 October 2004.

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

Wayne F. Savage
Chairman of the Board
Precision Strike Association

2004 Summer PEO Forum Wrapup

The Precision Strike Association's 2004 Summer PEO Forum, held 7-8 July in Huntsville, AL, was by all accounts a big success and one of the most trouble-free events ever organized by the PSA. Nearly 140 attendees filled the Huntsville Marriott meeting site, and the reaction from those with whom we spoke to during and after the conference was extremely positive.

With the theme *Balancing Precision Strike for the Joint Force Commander across Asymmetric Battlefields*, the two-day unclassified forum focused on the evolving requirements and challenges for force application against asymmetric threats.

The conduct of war for U.S. and allied coalition partners is transforming from platform-centric to network-centric concepts. The precision engagement operational concepts is transforming as well, with some of the toughest issues being how best to conduct precision strikes in the battlespace in a joint and complex environment.

PSA was pleased to have Claude Bolton, the assistant secretary of the army for acquisition, logistics and technology, as the keynote speaker for this event. He was right on target with his presentation, and provided an excellent foundation for the rest of the conference.

Those following Mr. Bolton increased our understanding of the complexities and initiatives being undertaken to more efficiently apply precision strikes in an asymmetric environment, creating the effects sought in the combatant comman-

der's plans. Overall topics and speakers were outstanding and well received. As a result, audience participation during the numerous question and answer sessions was enthusiastic, lively and free flowing. Also helping to promote discussion was the subject matter that was reasonably balanced between technical, policy and service interests.

Topics covered during the forum considered field artillery's evolution and Army tactical rocket and missile programs. Speakers from the U.S. Air Force and U.S. Navy discussed their global and precision strike requirements. The second day covered the Army's precision cannon launched and mortar programs and joint battlespace management command and control.

Meanwhile, the desert buffet and after dinner drinks at the nearby U.S. Space & Rocket Center hit the spot after a long first day, turning out to be one

of the conference highlights. We thank Honeywell for sponsoring an interesting and most enjoyable evening.

PSA Chairman Wayne Savage was unable to attend the 2004 Precision Strike Summer PEO Forum, having just moved to Virginia's Hampton/Norfolk area

to take on a new job with Raytheon. Pinch-hitting for Wayne Savage in welcoming the attendees was Michael Underwood, the event chairman.

He said the event was set up "to better serve the needs of our customers. We took the step to

move PSA's summer event out of the Washington, DC area, and closer to the user community. This led us to Huntsville." The initial 2003 Summer PEO Forum was held at the Patuxent River Naval Air Station, MD. No final determination has been made regarding the 2005 summer event. But creation of the fourth major event is part of the association's effort to broaden the visibility of PSA beyond the Washington Beltway.

Mr. Bolton offered a lively, informal presentation regarding how the U.S. Army is transforming for combat in the 21st Century. He described what is being done "to get the right effects at the right time and in the right place. We need to be able to find targets, including 'fleeting' targets, and precisely put the right amount of 'bang' on it."

Mr. Bolton said transforming the current force while at the same time creating the future force via the Future Combat Systems (FCS) effort is not without difficulty. "We must work on the whole 'chain', including identifying the target, putting fire on the target, understand how much destruction is required, and then start the process again. We don't do that very well," he believes. "In the future, we will be looking closer at the whole chain in a serious light," Bolton added.

Major General David P. Valcourt, USA, chief of field artillery and commanding general of the Field Artillery Center, Fort Sill, OK, described the ongoing transformation of the U.S. Army's indirect fires, discussing the development of a robust mix of fire support systems



Claude Bolton

Wrapup, Continued from page 3

to address the full spectrum of requirements with volume, precision and responsiveness.

He said the goal is to provide destructive, suppressive and protective effects while limiting collateral damage. "When we look at transforming indirect fires, the answer no longer is total number of rounds fired or the number of missions conducted, but what you did. That is the bottom line... For cannons, rockets and missiles, we are looking for both precision capability and more precise area effects."

Brig. General S. Michael Cannon, USA, program executive officer for tactical missiles, supported by Army Col. Earnest Harris, project manager, Precision Fires Rocket & Missile Systems Project Office, and Rod Summers, director of the Non-Line-of-Sight Launch System (NLOS-LS) Task Force, outlined the latest developments regarding the Multiple Launch Rocket System (MLRS), the Army Tactical Missile System (ATACMS), and the key FCS project previously known as NetFires and "missiles in a box."

Col. Harris noted that the Brilliant Antiarmor (BAT) submunition, developed for ATACMS, has been modified for delivery by the RQ-5A Hunter unmanned aerial vehicle. A year ago, the so-called Viper Strike precision munition scored direct hits on nine out of nine targets during flight demonstrations at White Sands Missile Range, NM. He believes that Viper Strike could also arm C-130 turboprops, creating a new higher altitude attack capability.

Summers said the USN and the special operations community may join the NLOS-LS project, creating a joint service program. Backing up

Summers were Raytheon's Glen Sutton and Lockheed Martin's Steve Altman who described accomplishments to date regarding NLOS-LS's Precision Attack Missile (PAM) and Loitering Attack Missile (LAM). In March, NetFires Limited Liability Company (LLC), a partnership of Lockheed Martin and Raytheon, received a \$1.1 billion contract for system development and demonstration.

Following lunch, USAF Major General (Sel) Stephen Goldfein, director of operational requirements, Deputy Chief of Staff for Air & Space Operations, offered a thoughtful presentation addressing the forum's theme. He believes the asymmetric battlefield is difficult to characterize but requires utilization of joint and service-specific fires, kinetic and non-kinetic devices as well as long-range and short-range weapons. "Precision strike used to be laser-guided bombs and JDAM. It now encompasses a wide-range of technologies. Technology has changed, and continues to change, thus impacting the definition of precision," Goldfein adds.

On the second day of the Precision Strike Summer PEO Forum, U.S. Army Colonel Nathaniel H. Sledge, Jr., project manager, Combat Ammunition Systems, David Rigoglioso, and Stephen Percy offered the latest developments regarding the Army's PEO Ammunition organization. They were backed up by industry executives, including ATK Tactical Systems' Mike Chiodo, General Dynamics' Dick Davitt, David Martin of Raytheon and United Defense's James Unterseher.

Col. Sledge listed among the Army's highest priority programs, the XM982 Excalibur extended range fire-and-forget guided projectile, the extended-range XM395 Precision Guided Mortar Munition (PGMM), a laser-guided 120mm mortar round, and the Course Correcting Fuze (CCF). Meanwhile, there is growing interest in non-lethal and force protection initiatives, including a Taser Anti Personnel Munition (TAPM) and a non-lethal, crowd control Overhead Liquid Dispersal System (OLDS). ■



Viper Strike

Warfighters Reach Back to Langley

Each day during Operation Iraqi Freedom, Airman 1st Class Jamie O'Connell would drive home from Langley Air Force Base after fighting the war in Iraq, and with traffic it took her about 15 minutes.

She is an imagery analyst in the Intelligence Squadron, working at Distributed Ground System 1. DSGs provide intelligence, surveillance and reconnaissance, or ISR, "reach-back" capabilities for deployed warfighting commanders.

The 10th and 30th IS form DGS 1, while the 13th and 48th IS, located at Beale AFB, CA, form DGS 2. They share the responsibility of monitoring intelligence data feeds from deployed locations, interpreting them and providing feedback to the warfighters in theater.

O'Connell and her DGS 1 team mates work in trailers designed to deploy to remote locations. They process information gathered by U-2 Dragon Ladies, RQ/MQ-1 Predators, Global Hawks and other intelligence platforms. The trailers now sit in an old aircraft hangar here.

DGS 1 was deployed to Dhahran, Saudi Arabia, when the Khobar Towers were bombed in June 1996. Some of the DGS 1 troops suffered casualties, said Col. Larry Grundhauser, the commander of the 480th Intelligence Group.

While planning for Operation Allied Force in 1999, Air Force leadership realized that communication technology had significantly improved. This, added to the losses suffered by the Dhahran bombing, underscored the need to transform the way intelligence was distributed.

Conducting ISR operations from Langley and Beale AFBs has already proven its worth, according to Col.

Donald Hudson, deputy director of intelligence for Air Combat Command. He estimated the savings in force protection, supply and transportation needs has saved between \$6 million and \$15 million for operations Enduring Freedom and Iraqi Freedom.

Being nearly 7,000 miles away from the action does not stop the DGS crews from fighting the war.



Airman 1st Class Jamie O'Connell, (left) an imagery analyst in the 30th Intelligence Squadron, interprets data from a Predator UAV image feed.

"The crew receives a pre-mission brief, including their objectives and chain of command," said Steve Lafata, the 480th IG technical director. "From that point forward, they are a part of the combined air operations center."

After the briefing, the crew walks from the squadron's office to the hangar, where, depending on the mission, they will spend between six and 12 hours monitoring a live satellite feed or receiving multiple sources of intelligence. The airmen use the CAOC's priority list of targets to guide their work.

"They receive the imagery, find their target and report on that target based on the CFACC's guidance and requirements," Lafata said, "whether

it's (to) confirm or deny the presence of any activity or anything associated with the given target, which could be something like an airfield, compound or convoy. Most of the time that process takes anywhere from five minutes to 20 minutes."

Grundhauser called it persistent ISR that gives the commanders in theater the information faster so

they can make their decisions faster.

The communication technology is state-of-the-art and robust, said William Carlton, the 480th IG systems chief. The information flows on pre-established networks with high bandwidth, which is distributed relative to the mission requirements.

"We didn't lose one mission in OEF or OIF due to a communications system's failure," Grundhauser said.

"During OEF and OIF it was a total force execution," Lafata said. "We had about 140 (Air National) Guard folks activated and employed through the entire process." Rounding out the total-force effort were active-duty airmen like O'Connell.

The importance of their responsibilities is not lost on the airmen assigned to the DGS, even though they fight in a virtual battlefield. "It's nice to live normally but to know that you are helping affect the things that are happening," said O'Connell. ■





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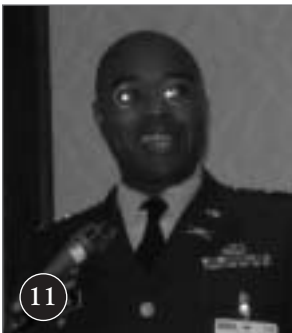
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Summer PEO Forum

- 1 **Maj General David P. Valcourt, USA**—Chief of Field Artillery & Commanding General of the Field Artillery Center, Fort Sill, OK
- 2 **Steve Altman**, Director, Business Development, NetFires LLC, **Glen Sutton**, Program Manager, Precision Attack Missiles Raytheon Missile Systems, **Brig. General S. Michael Cannon, USA**, Program Executive Officer for Tactical Missiles Program, Huntsville, AL, **COL Earnest Harris, USA**, Manager, Precision Fires Rocket & Missile Systems Project Office and **Rod Summers**, Director NLOS-LS Task Force, PEO Tactical Missiles
- 3 **Claude Bolton**, Assistant Secretary of the Army for Acquisition, Logistics and Technology speaks with attendee of Summer PEO Forum
- 4 **Major General (Sel) Stephen Goldfein, USAF**, Director of Operational Requirements, Deputy Chief of Staff for Air & Space Operations
- 5 Desert and 'networking' the U.S. Space & Rocket Center
- 6 **Mike Chiodo**, Vice President Precision Munitions Programs for ATK Tactical System, **David G. Martin**, Vice President, Guided Projectiles Product Line, Raytheon Missile Systems, **Rear Admiral Mark Emerson, USN**, Assistant Deputy Commandant for Aviation Headquarters, USMC, **Maj General (Sel) Stephen Goldfein, USAF**, Director of Operational Requirements, Deputy Chief of Staff for Air & Space Operations, **Major General David P. Valcourt, USA**, Chief of Field Artillery—Commanding General of the Field Artillery Center, Fort Sill, OK
- 7 **COL Earnest Harris, USA**, Project Manager, Precision Fires Rocket & Missile Systems Project Office, **Brig. General S. Michael Cannon, USA**, Program Executive Officer for Tactical Missiles Program, Huntsville, AL, **Rod Summers**, Director NLOS-LS Task Force, PEO Tactical Missiles
- 8 **Mike Chiodo**, Vice President Precision Munitions Programs for ATK Tactical System
- 9 **Dawn Campbell**, PSA Executive Administrative Assistant, and others at U.S. Space & Rocket Center.
- 10 **MG Paul L. Greenberg, USA (Ret)**, (second from left) makes a point over desert
- 11 **COL Nathaniel H. Sledge, Jr., USA**, Project Manager, Combat Ammunition Systems
- 12 **Stephen Percy**, Director, Fuze and Precision Armaments Technology Directorate
- 13 **James Unterseher**, Director of Army Programs, United Defense
- 14 Catching up at the DAU exhibit.
- 15 **Richard Bailey**, Vice President and General Manager, Integrated Defense Advanced Systems, The Boeing Company, and **Frank B. (Ted) Campbell**, Vice President and Managing Director, Command, Control, Communications & Information Operations, Lockheed Martin Integrated Systems and Solutions
- 16 Advanced Optical Systems' exhibit at Summer PEO Forum
- 17 **Dick Davitt**, Vice President and General Manager, Precision Systems (Strategic Business Unit), GD-OTS, at the podium
- 18 Barr Associates, Inc: Innovators in Optical Filter Technology
- 19 Applied Data Trends was 'uniquely responsive' to questions

News Briefs

CKEM Goes to Lockheed Martin

Lockheed Martin has won the competition to produce the U.S. Army's Compact Kinetic Energy Missile (CKEM), the next-generation hypervelocity anti-tank weapon.

The firm is currently working under a \$21 million, 36-month advanced technology demonstration (ATD) program, which was awarded last October. The company will now proceed as the sole contractor on the ATD. Once the ATD is completed in 2006, the CKEM project will enter a two-year system design and development phase.

The missile is 60 inches long and weighs less than 100 pounds, with an extended range for direct fire, line-of-sight engagements.

Lockheed Martin says the CKEM anti-armor weapon will be produced at the firm's Horizon City, TX, plant, which is currently used for final assembly of the ATACMS family of missiles. ■

Navy's Next-Gen EW Aircraft

A new era is naval aviation was launched in July as assembly began for the first EA-18G airborne electronic attack (AEA) aircraft. Based on the Boeing F/A-18 Super Hornet, the EA-18G will replace the EA-6B Prowler.

The EA-18G features an electronic attack suite based on the Northrop Grumman Improved Capability III system. Northrop Grumman expects to deliver the first EA-18G fuselage shipset to Boeing in March 2005 that will become one of two test aircraft produced for the system design and development phase. The EA-18G is expected to enter initial operational capability in 2009. ■

JASSM Production Accelerates

Lockheed Martin has opened a new facility in Troy, AL that will allow the company to expand production to 40 Joint Air-to-Surface Standoff Missiles (JASSM) per month by mid-2005.

The facility expansion allows for full-rate production of missiles in Lots 4 and beyond. The USAF and USN expect to procure over 5,000 JASSMs over the life of the program. ■

Joint Common Missile under Development

Lockheed Martin has started system design and development (SDD) of the Joint Common Missile (JCM), the next-generation air-to-ground missile that will arm U.S. military rotorcraft and fixed-wing tactical aircraft.



Joint Common Missile

The firm can expect to earn \$5 billion with U.S. Army, USN and USMC procurement of 54,000 JCM rounds to replace in-service Hellfire and Maverick missiles. The United Kingdom may also procure JCMs.

Lockheed Martin received an initial contract valued at \$53 million to commence SDD work. SDD includes a 14-month risk reduction phase and a 36-month testing/integration phase to ready the JCM for initial production. The first JCMs are expected to reach the field in 2010. ■

Boeing to Provide USN with New Patrol Aircraft

The U.S. Navy has awarded Boeing an \$4 billion contract for development of the manned aircraft replacement for the aging Lockheed Martin P-3C Orion anti-submarine warfare patrol aircraft.

Boeing says the total USN program is worth \$15 billion over a ten-year production run. It is believed that the USN will buy about 150 Multi-mission Maritime Aircraft (MMA). Analysts say foreign sales of the aircraft would add another \$5 billion to the value of the MMA program. P-3s are operated by a number of nations around the world, and they will also need to be replaced in the coming years.

The MMA will work in conjunction with the USN's Broad Area Maritime Surveillance (BAMS) system, a high altitude, long endurance (HALE) unmanned aerial vehicle. The Navy plans to acquire as many as 50 BAMS aircraft. Contenders for the BAMS system include Northrop Grumman's Global Hawk, the Mariner from General Atomics Aeronautical Systems Inc. and a militarized robotic Gulfstream corporate jet made by General Dynamics.

Boeing will supply a modified version of its 737-800 commercial transport outfitted with an APS-137 maritime surveillance radar and other electronic gear from Raytheon.

Northrop Grumman is providing the electro optical/infrared sensor and IR countermeasures. Smiths Aerospace will supply both the flight management and stores management systems. The MMA aircraft will be powered by twin turbofans provided by CFM International, a joint venture of General Electric and France's Snecma.

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Lockheed Martin had competed a modernized P-3 Orion turboprop with new engines and eight-bladed propellers. ■

USAF MOPs Up

The USAF will begin developing a 30,000-pound bomb designed to destroy deeply buried targets. The Massive Ordnance Penetrator (MOP) would be about one-third heavier than the 21,700-pound Massive Ordnance Air Blast (MOAB) weapon successfully tested last year.

The Air Armaments Center at Eglin AFB, FL, plans to award a technology demonstration contract as early as September. Flight testing could begin in 2006.

The GBU-43/B MOAB weapon, which is 30 feet long and has a diameter of 40.5 inches, was dropped from an MC-130E Combat Talon I turboprop. ■



MOAB

Marines Procure ScanEagle UAV

Boeing recently received a contract from the U.S. Marine Corps for two ScanEagle unmanned aerial vehicle "mobile deployment units" for use with the First Marine Expeditionary Force (I MEF) in Iraq.

ScanEagle is a low-cost, long-endurance fully autonomous UAV developed and built by Boeing and The Insitu Group.

Each ScanEagle mobile deployment unit will consist of several UAVs as well as the computers, communication links and ground equipment necessary to provide intelligence, surveillance and reconnaissance (ISR) support for I MEF during operational missions.

"ScanEagle's ISR capabilities will give the Marines an immediate, clear picture of the battlefield," said Kim Michel, director of Boeing Advanced Unmanned Systems. "Additionally, its communications relay technology will allow Marines on the ground to more easily receive and share information."

ScanEagle is four-feet long and has a 10-foot wingspan. The ScanEagle "A-15" — the company's current model — can remain on station for more than 15 hours. Future planned variants will have an endurance of more than 30 hours. A key design feature of the UAV is its internal avionics bay, which allows seamless integration of new payloads and sensors.

ScanEagle is launched autonomously via a pneumatic wedge catapult launcher and flies pre-programmed or operator-initiated missions. It is

See **News Briefs,** Continued on page 10

PEOPLE

U.S. Army Gen. **George Casey** has replaced U.S. Army Lt. Gen. **Ricardo Sanchez** as the senior U.S. military commander in Iraq. Casey previously served as the Army's vice chief of staff. Sanchez is slated to return to his former assignment as commander of the Army's 5th Corps in Germany.

U.S. Army Lt. Gen. **Bantz J. Craddock**, Defense Secretary Donald Rumsfeld's senior military assistant, will pick up his fourth star when he takes over U.S. Southern Command, replacing U.S. Army Gen. **James T. Hill**. U.S. Army Lt. Gen. **Richard A. Cody** achieves the rank of general with assignment as vice chief of staff. USN RADM **James G. Stavridis** becomes a vice admiral with assignment as senior military assistant to the Secretary of Defense.

USMC General **James E. Cartwright**, relieved retired Admiral **James Ellis** on 9 July 2004 as commander, U.S. Strategic Command. USN Vice Adm. **John B. Nathman** achieves the rank of admiral with assignment as vice chief of naval operations. Navy VADM **Timothy J. Keating** picks up his fourth star and assignment as commander, Northern Command/Commander, North American Aerospace Defense Command.

USMC Lt. Gen. **James T. Conway** becomes the director for operations, J-3, Joint Staff, as USAF Lt. Gen. **Norton Schwartz** becomes director, Joint Staff.

USAF Lt. Gen. (select) **Henry Obering** has taken charge of the Missile Defense Agency, replacing retiring Lt. Gen. **Ronald Kadish**. Obering has been the MDA's No. 2 official for the past year. U.S. Army Maj. Gen. **John W. Holly**, currently program director, Ground-Based Midcourse Defense Joint Program Office will become the Missile Defense Agency's deputy director in November 2004.

USN RADM **James M. Zortman**, received his third star with assignment as commander, Naval Air Force, U.S. Pacific Fleet. Navy RADM (selectee) **Thomas J. Kilcline, Jr.** is being assigned as director, Air Warfare Div., N78, Office of the Chief of Naval Operations.

U.S. Army MG **Joseph L. Bergantz**, program executive officer of army aviation for the past four years, has retired after 33 years in the Army, joining SRS Technologies. USAF Maj. Gen. **Michael W. Wooley** has assumed command of Air Force Special Operations Command, replacing USAF Lt. Gen. **Paul V. Hester** who has assumed command of Pacific Air Forces.

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retrieved using a "Skyhook" system in which the UAV catches a rope hanging from a 50-foot high pole.

ScanEagle, which made its first flight in 2002, most recently participated in the U.S. Joint Forces Command Forward Look exercises. A goal of Forward Look was to demonstrate interoperability and data fusion

among multiple UAVs in operational scenarios.

"ScanEagle proved it has the ability to respond to 'short-fuse' tasking, locate and track large

and small targets despite concealment efforts, transmit real-time data and video to those in the field including other UAVs, and operate under the weather when necessary," said Boeing's Mark LaVille.

ScanEagle was tasked with providing ISR coverage and time-sensitive targeting to a broad network that included UAVs, ground stations, ships at sea and command centers.



ScanEagle UAV

The UAV used its inertially stabilized electro-optical camera and object tracker to locate and/or track targets, including SAM missile launchers, mobile anti-aircraft artillery batteries, communication towers and military convoys. ScanEagle also handed off targets, via the existing command and control network, to other UAVs, thereby demonstrating the value of coordinated sensor capability for dissimilar UAVs. ■

UAV Battlelab Stood Up at New Site

Currently the only U.S. Air Force installation with a fleet of remotely piloted aircraft, Indian Springs Air Force Auxiliary Field, located near Nellis AFB, NV, is now the home of the Unmanned Aerial Vehicle (UAV) Battlelab.

One of six original Air Force battlelabs established in 1997, this battlelab recently moved to Indian Springs from Eglin AFB, FL.

Col. Larry Felder, who commands the unit, believes Indian Springs is an ideal location for the UAV Battlelab. "It is a great place to take UAV Battlelab initiatives into the next decade. The sphere of strategic UAV activity is on the West Coast," he said. The Predators are based at Indian Springs and the Global

Hawks will soon be at Beale AFB, CA. Even though the battlelab core is now on the West Coast, some UAV activities will stay at Eglin.



Arming Predator

Initially aligned under the Air Warfare Center's 53rd Wing, control of the battlelab transferred to the Aerospace Command and Control and Intelligence, Surveillance and Reconnaissance Center at Langley AFB, VA, in March 1999. Control of the battlelab returned to the Air Warfare Center in April 2002 as the UAV mission evolved to include weapons delivery, forward-air control and surface attack.

Meanwhile, UAVs could start playing a more active role in suppression of enemy air defense (SEAD) missions if a UAV Battlelab initiative proves successful.

Testing of the new Joint Multi-platform Weapons Carriage System began at Indian Springs Air Force Auxiliary Field in mid-June. If adopted, the carriage system would allow UAVs to carry high-speed anti-radiation missile (HARM) targeting pods and a variety of weapons.

"Right now, we do SEAD missions with the manned F-16," said Lt. Col. Scott McKinney, who is with the UAV Battlelab. "The goal of the 'Little Weasel' initiative is to provide persistent battlefield suppression, allowing UAVs to become a part of this key Air Force mission." ■

CALENDAR OF EVENTS

Precision Strike Technology Symposium

Date: October 12-14, 2004

Location: The Kossiakoff Conference Center, JHU/APL, Laurel, MD

See PSA website www.precisionstrike.org for details.

Winter Roundtable

Date: January 26, 2005

Location: Crystal City Marriott, Arlington, VA

Annual Programs Review

Date: April 2005

Location: TBD

For more information on these events, and other activities please contact the PSA office directly.

Precision Strike Association, 2111 Wilson Blvd - Suite 400, Arlington, VA 22201-3061

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Mark your calendar! **12-14 OCTOBER 2004**

14th PRECISION STRIKE TECHNOLOGY SYMPOSIUM (PSTS-04)

Kossiakoff Conference Center • The Johns Hopkins University
Applied Physics Laboratory • Laurel, MD

Theme:

Accelerating Joint & Coalition Technology Advances for Precision Strike

Don't miss exciting Keynote & Select Speakers already confirmed including:

- Lt Gen William S. Wallace, USA—CG U.S. Army Combined Arms Center & Ft. Leavenworth
- LtGen Bob Magnus, USMC—Deputy Commandant for Programs & Resources, Hqtrs USMC
- Dr. Robert Leheny—Deputy Director, DARPA
- VADM Tom Wilson, USN (Ret)—Senior Vice President, ATK Precision Systems Group
- Maj Gen James Soligan, USAF—Chief of Staff, USJFCOM
- Brig Gen Kevin Kennedy, USAF—Director, Strike Warfare, USSTRATCOM
- RADM Tim Heely, USN—PEO for Strike Weapons & Unmanned Aviation
- Dr. David Keese—Deputy Director, Aerospace Systems Development Center, Sandia Nat'l Lab
- Charles Holland—DUSD (Science & Technology), DDR&E
- Dr. Spiro Lekoudis—Director, Weapons Systems, DDR&E
- Dr. Lee Willett—Head of Military Capabilities Programme, Royal USI for Defence & SS
- CAPT Chuck Wright, USN—Office of Deputy Director Air Warfare, DOT&E
- Dyke Weatherington—Defense Systems, OUSD(AT&L)
- Calvin Hickey—Future Warfare Systems Office, NGA InnoVision Directorate

Both Classified/Unclassified sessions will address:

- Operation Iraqi Freedom Observations
- Accelerating Precision Strike Technologies—Where are We Spending S&T Funds
- UK Defence White Paper & Royal Navy—Implications for Coalition Operations
- UAV Contributions to Precision Strike—including GLOBAL HAWK and PREDATOR
- DARPA's Enabling Technologies
- Technical Sessions on Weapons, C4ISR, Targeting & Effects
- Threat Assessment Update
- Accelerating Technologies to Support Precision Strike for the Marines in Iraq
- Lessons from the Operational Level of War
- Global Joint & Coalition Advances for Precision Strike
- Warfighting Initiatives & Operational Challenges of Precision Strike
- NGA InnoVision—Laying the Geospatial-Intelligence Foundation for Future Warfare
- Advanced Next Generation Technologies

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