



### 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.*

## USAF Lt Gen Norton Schwartz to Address Annual Programs Review

**U**SAF Lieutenant General Norton Schwartz, Director for Operations (J-3), the Joint Staff, and Tom Burbage, Lockheed Martin's Executive Vice President and General Manager of the Joint Strike Fighter Program, are included in a slate of dynamic speakers planning to participate in the Precision Strike Association's Annual Programs Review scheduled for April 20-21, 2004.

Lt Gen Schwartz and Mr. Burbage will share the podium with some of the most authoritative individuals in government and industry that have been invited to participate in the two-day, in-depth program focused on *Partnership, Integration & Interoperability—Creating Meaningful Precision Capability*.

Taking place at the Defense Acquisition University in Scott Hall's Howell Auditorium, PSA has invited experts from each of our military services, industry professionals, and decision makers including: Michael Wynne, the Acting Under Secretary of Defense (AT&L), Secretary of the Navy Gordon England,

and Harry Schulte, Raytheon's Vice President for Strike Systems.

Lt Gen Schwartz was recently in the limelight, briefing the Pentagon press corps on possibly the largest rotation of military forces in U.S. history. The director of operations for the Joint Staff outlined how thousands of troops would relieve units that have been in Iraq and

Afghanistan for as long as a year. Schwartz said the rotation would involve all varieties of active duty and reserve combat and support forces.

Before becoming the principal advisor to the Chairman of the Joint Chiefs of Staff for current and future operations, Schwartz served as the

commander of Alaskan Command and as the deputy commander-in-chief, U.S. Special Operations Command (USSOCOM).

Tom Burbage, on the other hand, spearheads the Lockheed Martin Aeronautics Company Joint Strike Fighter Team as the company's Executive Vice President and General Manager of JSF. ■



USAF Lt Gen Schwartz

### IN THIS ISSUE

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# Chairman's Column

On behalf of the association I would like to thank Ginny Sniegon, Captain Jim Hart, Dick Rumpf, Bob Houser, Paul Greenberg and Dawn Campbell for orchestrating a superb Winter Roundtable. I have read through the attendees' comments and appreciated every one of them. They were positive, constructive and certainly offered a well done for this event. We even had a few Kudos on how well we handled a few scheduling glitches. I would say that they were handled with precision and accuracy.

For those that did attend the event I hope you left with an appreciation for the impact precision strike has and can make in the future. Clearly the guests we had as speakers were tuned to that fact. However, there is certainly plenty of activity that must continue within the precision strike community. We must continue to encourage a mutual understanding between industry, political, government and public leaders to help solidify a sound path for the future. This also includes continuing to advocate and promote an awareness of a strong defense capability that incorporates and capitalizes on precision strike systems. The Winter Roundtable was just one more step in making progress.

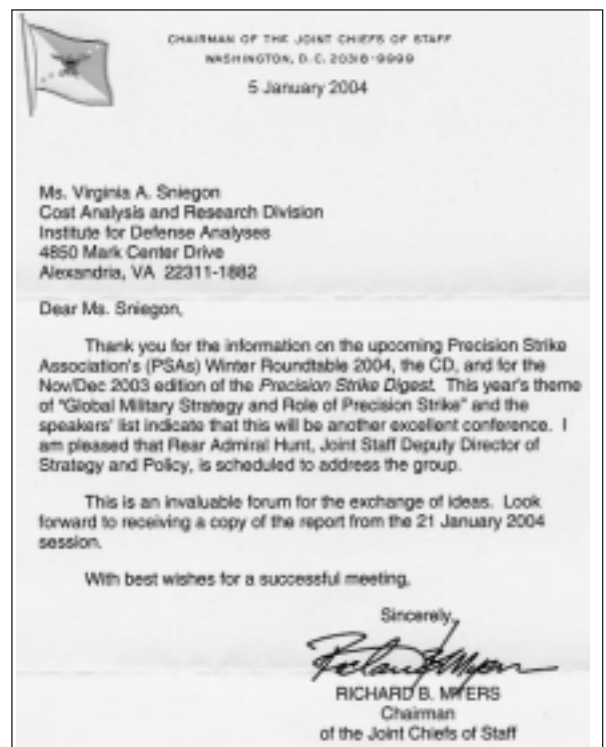
One more item from the Winter Roundtable. Congratulations to the recipients of the William J. Perry Award. Well done to the Boeing, Air Force and Navy JDAM team!

Would you like to become more involved in making progress in the above?

We are about to develop the slate for the election of members to our Board Of Directors. Our nominating committee is headed up by George McVeigh (703-697-2440). If you would like to run for election please let George or me know as soon as possible. We will finalize the slate and send ballots out to all members of the association by the end of March. The members elect their Board of Directors. Come on in, the water is fine and we need people who want to be engaged in making progress.

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

Wayne F. Savage  
 Chairman of the Board  
 Precision Strike Association



# Winter Roundtable 2004 Wrapup: Global Military Strategy and Role of Precision Strike

**T**he Precision Strike Association held its Winter Roundtable on January 21, 2004 at the Crystal City Marriott, Arlington, Virginia.

Wayne Savage (PSA's Chairman of the Board) and Ginny Sniegon (PSA's Programs Chair) welcomed the nearly 200 senior DoD and U.S. military officials and industry representatives to the popular unclassified forum. Since it is essential that members of the precision strike community have a keen understanding of the role of defining precision strike strategies in the current wartime environment, Winter Roundtable was designed to provide the precision strike community an opportunity to become better informed about current national defense policies, strategy, and national security issues for precision engagement.

The Roundtable's theme "Global Military Strategy and Role of Precision Strike" afforded numerous leadership speakers the opportunity to talk about the role of defining precision strike strategies in the current wartime environment. The perspectives and perceptions of numerous superb presenters were relevant, dynamic, refreshing, and significant in gaining greater insight into the expectations and challenges we are faced with in the precision strike arena. Further, congratulatory remarks about the recipients of this year's William J. Perry Award as well as accolades about our association were appreciated.

The forum's exceptionally talented and informed leadership speakers provided a wealth of knowledge

about the strategic direction for precision strike. The slate of dynamic speakers included officials from the Office of the Secretary of Defense, Military Departments, the U.S. Coast Guard, a U.S. senator and professional staffers who offered a congressional perspective on defense matters.

Meanwhile, PSA took time out to bestow the William J. Perry Award for significant contributions to precision strike systems to the Joint Direct Attack Munition (JDAM) Program Team. Dr. Perry calls the Winter Roundtable "a showcase event that highlights government policy and interest in precision engagement. Keep up your magnificent efforts to inform and educate government and industry about evolving innovations in precision engagement."

"We have come a long way to confirm the value of precision engagement in our concepts of operation. The Precision Strike Association is a critical component in this process. Keep up the good work," added Perry.

Elaine Bunn, director of the Future Strategic Concepts Program, Institute for National Strategic Studies, National Defense University, led the day's slate of speakers, addressing the concept of preemptive action.

She said Bush's policy to prevent rogue states and their terrorist clients from threatening or using weapons of mass destruction (WMD) against the USA and its allies "has been hailed as a valuable concept whose time has come, but has also been condemned as a dangerous precedent that could damage

American interests, making the USA a feared outlaw."

Bunn said "there is a lot of misunderstanding and confusion on the Bush administration's concept of preemption. Some of this confusion is probably self-inflicted. Some is circumstantial and some is, I think, willful misreading. In any event, very little has been done to clarify the issues and choices policymakers face when considering preemption's limits."



U.S. Senator Jim Talent—R-Missouri

U.S. Senator Jim Talent (R-Missouri), who is chairman of the Senate Armed Services seapower subcommittee, said defense spending must

go up "to make up for the procurement holiday the USA took in the 1990s because of the so-called peace dividend." He said "it's hard to see, what in this 'New World' makes it OK to have inventories that are this old," pointing out that the average age of USAF aircraft is nearly 22 years old.

Senator Talent also favors additional research and development funding. "We have to get the R&D budgets up. You can't deprive yourself of seed corn and expect the crops to be there. R&D must go up in terms of priorities," he concluded. Talent thanked the precision strike community for having delivered the 'smart' weapons that have "revolutionized warfare."

USN RDML Richard W. Hunt, deputy director for strategy & policy,

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Wrapup, Continued from page 3

The Joint Staff (J-5), said priorities of the National Military Strategy are to win the war on terrorism, enhance joint warfighting and transform the force.

He believes the USA is deficient in its capabilities to detect and identify weapons of mass destruction. Hunt also believes the nation needs to maintain a global strike capability to back up in-development ballistic missile defenses.

He said Operation Iraqi Freedom "has set a new standard. Precision has changed the course of warfare. The American public expects us to utilize precision capabilities in future engagements. That changes the dynamics regarding procurement and operations."

Stephen M. Younger, director of the Defense Threat Reduction Agency, discussed the strategy for development of global strike technology, updating the audience on DTRA's ongoing efforts to produce the capabilities required to counter weapons of mass destruction.

He said those projects have produced "an exciting time for precision strike," but said more human intelligence is needed to supplement overhead imagery. "You can't tell an adversary's intent from space," Younger has learned.

USAF General Michael Moseley, vice chief of staff, also believes that the USA must maintain its global strike capabilities. He said the Air Force has been reviewing its global strike needs, both near term and into the future. For now, the



General Michael Moseley, USAF Vice Chief of Staff U.S. Air Force

Air Force will focus on enhancing its existing bomber force. He also said that battle damage assessment remains problematic as does time critical targeting.

Moseley believes "global strike, with reach, precision and persistence, will remain relevant to our future military strategy. But there will be uphill battles, technological and funding challenges and some disappointment."

USN RDML (Sel) Joseph F. Kilkenny, head of the Aircraft Carrier/Strike/Expeditionary Aviation Programs, CNO Staff, offered a status report on Sea Power 21, the Navy's transformation roadmap, which includes the CVN-21 aircraft carrier, the Boeing F/A-18E/F Super Hornet and EA-18G electronic warfare variant, the Raytheon Tactical Tomahawk cruise missile, the Lockheed Martin Joint Air-to-Surface Standoff Missile and the Small Diameter Bomb. He said the Navy has formed task forces to review all of its sensor programs and its time critical strike requirements.

The high-point of Winter Roundtable 2004 was the presentation of PSA's eighth annual William J. Perry Award to the JDAM Program Team. The award recognizes leadership or technical achievement that results in significant contributions to the development, introduction, or support of precision strike systems.

Dr. Perry sent his regrets for not being able to attend this year's Winter Roundtable. In a letter read by Wayne Savage at the luncheon presentation, Dr. Perry said the JDAM program is "not only a great success in acquisition reform, but also continues to bring a significant and affordable precision engagement capability to the brave men and women of our military who protect our interests and freedoms on the frontlines around the globe."

"The JDAM team from The Boeing Company, the Air Force, and the Navy delivered the best and exceeded our warfighters' expectations. My personal thanks for a job well done!"

According to the citation, the JDAM project has made "outstanding contributions to the operational concept of precision engagement and the furtherance of precision strike systems."

"The JDAM program has outperformed every expectation in its pursuit to provide the warfighter with the most cost and operationally effective weapon possible. The weapon has been instrumental in transforming warfare engagement from multiple sorties generated against a single target to a number of targets assigned to a single sortie."

"The JDAM program has raised the standard for all other precision weapons systems, and has demonstrated industry-military teamed leadership and driven expectation for significant accuracy improvements for the arsenal of U.S. weapons on tomorrow's battlefields," the citation concludes.

OSD's Diane Wright, the director for air warfare, said "JDAM is the yardstick for best practices in a number of areas, providing the warfighter with better accuracy than promised, from a wide variety of delivery platforms, and with costs well below what we had anticipated... We'll sleep better knowing you guys are on our side."

Dr. Richard T. Roca, director of The Johns Hopkins University's Applied Physics Laboratory, a past winner of the Perry Award, thanked Boeing for "this wonderful accomplishment."

Boeing's Richard Heerdt said the JDAM effort "demonstrates what can be accomplished when a team



comes together for a common goal... JDAM has much to be proud of."

USAF Lt Col Scott Owens, the Air Force JDAM program manager, "acknowledged those whose shoulders upon we stand. We are bearing fruit because of the work of those who came before us... We have been told that if it is good, it can't be cheap. But this weapon can claim to be good, quick and cheap."



CAPT David Dunaway, USN —Program Manager, PMA 201-Conventional Strike Weapons, Richard Heerdt—JDAM Program Manager-The Boeing Company, Lt Col Scott Owens, USAF—AAC/YU

U.S. Navy Captain David Dunaway said: "Government time—the time it takes an aviator to go in, and spend in—is much less with JDAM. Government time has gone down by an order of magnitude because of JDAM. Every aviator appreciates that."

Named after the former U.S. defense chief and precision strike weapons advocate, others to have received the prestigious Perry Award include: Dr. Perry, the first recipient (1977); former Vice President Dan Quayle (1998); RADM Walter M. Locke, USN (Ret.) (1999); The Johns Hopkins University, Applied Physics Laboratory (2000); the NAVSTAR Global Positioning System Joint Program Office (2001); Rep. James V. Hansen (R-UT) (2002); and Terry Little, a well-respected acquisition reform pioneer (2003).

Those attending the afternoon session heard first from William Marck and Tom MacKenzie, professional staffers on the House and Senate Armed Services

Committees, respectively, who presented the view from Capitol Hill regarding defense matters. Among other things, MacKenzie said OSD needs to firm up its requirements for the Raytheon Tactical Control System. Marck used his time to discuss the budget crunch and 'Buy America' issues.

U.S. Army General Kevin P. Byrnes, commanding general, U.S. Army Training and Doctrine Command, laid out the Army Vision for the future and the ongoing transformation efforts. He described a future operating environment in which soldiers will have to deal with urban warfare, WMD and 360 degree threats across the battlespace, including home soil.

Wrapping things up for the day was USCG RADM Patrick M. Stillman, who is in charge of the largest acquisition in the history of the Coast Guard. The 30-year, \$17 billion project, officially designated Integrated Deepwater System ((IDS), is being managed by Integrated Coast Guard Systems (ICGS), a joint venture established by Lockheed Martin and Northrop Grumman.



B-52 makes a point with JDAM



General Kevin P. Byrnes, USA—Commanding General, U.S. Army Training and Doctrine Command

In terms of surface and air platforms, Deepwater involves the acquisition of up to 91 ships, 35 fixed-wing aircraft, 34 helicopters, 69 unmanned aerial vehicles and the upgrade of 49 existing cutters and 93 helicopters.

In a spirited presentation, RADM Stillman said he is putting a lot of trust in IDS to successfully carry out this complex assignment. "Performance-based acquisition is here to stay... I am humble enough to recognize that I have neither the expertise nor the infrastructure to be the systems integrator for Deepwater. I am paying Lockheed Martin and Northrop Grumman a lot of money to rise to the challenge. As a result, they are responsible for performing this enterprise." ■

Precision Strike Association is pleased to recognize the following Winter Roundtable Sponsors:





8th Annual William J. Perry Award  
presented to

JDAM TEAM  
U.S. Air Force, U.S. Navy  
and  
The Boeing Company



Wayne Savage—PSA Chairman of Board, and William J. Perry Award recipient Richard Heerdt—JDAM Program Manager-The Boeing Company

PSA

Speakers  
and  
distinguished  
guests  
from  
PSA  
Winter  
Roundtable

January 21, 2004

Crystal City  
Marriott



Elaine Bunn—Distinguished Fellow & Director of Future Strategic Concepts Program, Institute for National Strategic Studies, National Defense University



RDML Richard W. Hunt, USN Deputy Director for Strategy & Policy, The Joint Staff (J-5)



RDML (Sel) Joseph F. Kilkenny, USN—Head, Aircraft Carrier/Strike/-Expeditionary Aviation Programs, CNO Staff



Honorable Stephen M. Younger—Director, Defense Threat Reduction Agency



Dr. Rick Roca—Director, John Hopkins University/-Applied Science Laboratory



Mrs. Diane Wright—Deputy Director, Air Warfare, OUSD/AT&L/DS



Thomas MacKenzie—Senate Armed Services Committee, William Marck—House Armed Services Committee, and Dick Rumpf—PSA Congressional Chair



Dick Rumpf—PSA Congressional Chair, RADM Patrick M. Stillman, USCG—PEO Integrated Deepwater System, U.S. Coast Guard



Wayne Savage—PSA Chairman of Board, Ginny Sniegion—PSA Programs Chair, CDR John Bennett—Defense Acquisition University

## PSA talks to the US Navy's Keith Sanders

**D**avid K. (Keith) Sanders assumed the leadership responsibilities for his current position, deputy program executive officer for strike weapons, in February 2003. In this role, he helps manage the acquisition and life cycle support of major strike weapons programs, including the Tomahawk Cruise Missile, Joint Standoff Weapon (JSOW), Advanced Anti-Radiation Guided Missile (AARGM), (High-Speed Anti-Radiation Missile (HARM), Standoff Land Attack Missile-Extended Range (SLAM-ER) and Harpoon.

He began his career with the Navy in 1971, working at the Naval Weapons Support Center, Crane, Indiana through 1983, when he moved to the Naval Air Systems Command's Air Armament Division.

In 1989, he joined the Conventional Strike Weapons Program Office where seven years later he was selected as the deputy program manager for conventional strike weapons, a position he held until becoming the deputy PEO for strike weapons.

**Q:** You said recently that "precision strike has arrived. We're seeing dominant, decisive, lethal and timely application of offensive power to achieve coalition warfare objectives." Have you overstated your case?

**A:** Members of the Precision Strike Association understand the magnitude of what it takes to make all this happen, from the technical end all the way through to the operational aspects. PSA members clearly

have that appreciation, and they have the will and dogged determination to bring the many parts together that it takes to make that kill chain happen.

**Q:** Is your assessment backed up by the actual performance of US military strike weapons in Operation Enduring Freedom and Operation Iraqi Freedom?



Keith Sanders

**A:** Very much so. The planning for precision strikes was of a magnitude that has never happened before. There were more than 1,000 Tomahawk cruise missile launches. Those precision strikes were executed almost perfectly over the course of OIF. They happened in a flexible way. It was done pretty much per the plan from the beginning to the end. We also used unmanned aerial vehicles (UAVs) and national intelligence means. Those things came into play ahead of time and during OIF in re-strike operations. We were able to make quick command decisions, and adjust our plans.

**Q:** Are you personally gratified that the weapons you helped developed have been used successfully in actual combat?

**A:** It is satisfying to see that those things that you helped contributed were able to achieve what we felt they could achieve. A large part of creating new capabilities is not only having the technical means to pull it off, but also having the operators understand how to take advantage of those capabilities, and then seeing

them used in ways that could not have been done a decade ago or even five years ago.

**Q:** Were there any technical glitches with the weapons used by the US Navy in OIF?

**A:** We haven't discovered what I would call systemic problems with any of our precision strike weapons. There were a few incidents that made the news, but they were things that will not require us to make basic changes in the design, in our approach.

**Q:** Are you referring to the Tomahawk missiles which failed to reach their targets?

**A:** Clearly, there is evidence in a few incidents where Tomahawks did not perform as expected. We're still studying it. Whether we find out what happened in those cases, is a matter of opinion. There were unusual circumstances we hadn't seen previously.

**Q:** Does the U.S. need hypersonic strike missiles for use against time-sensitive targets and hard and deeply buried targets?

**A:** The term 'hypersonic' represents a speed that I believe is faster than what is 'optimum.' when you go hypersonic, you need to solve many technological problems. If you go slower—high supersonic—which I favor, then the technical issues are less of a problem. It's more a matter of engineering. We believe that high supersonic missile technology is available and can be turned into a real weapon system in a reasonable amount of time.

**Q:** Will we see such a development in the near term?

**A:** There are a number of ways to work this research... We are searching for and encouraging a serious effort to create a weapon that would operate in the high supersonic realm. Such a development depends on an identifiable operational requirement, which doesn't exist... We are trying to get everyone to agree that such a project is do-able, affordable, and of military value.

**Q:** UAVs are now being tested as precision strike weapons platforms. Should the unmanned sensor platform be turned into a combat aircraft?

**A:** I believe it makes sense. There are many roles that UAVs can fill. I don't believe that it would be appropriate to use UAVs for every strike mission, but unmanned vehicles could handle many of them, especially the high risk missions and the ones that require long-term persistence, but immediate or short-time reaction.

**Q:** How does one safely put weapons on pilotless aircraft?

**A:** We talk about that subject frequently. It is not a topic with unanimous agreement at this stage of the game. Currently, unmanned military operations are covered by the same rules of engagement, the same operating standards that we use with manned vehicles. The decision to engage, use lethal force, is made at a certain level within the command structure. That approach works for now, but it's a slow process. In the future one would expect a move towards automated decisions so we can speed up the timeline with man

still in the loop, but perhaps representing more of a planning function versus an execution function.

**Q:** How do you see precision strike weapons evolving?

**A:** We believe that such weapons will evolve into higher speed devices, to reduce the timeline for the strike portion of the kill chain. I also believe that data links will become the norm with such weapons. This is because future weapons will be able to engage over longer distances, and in shorter times. With increased information availability, we will need to adjust the mission during flight. With



F/A18 on the attack

moving targets, data links can be 'convenient' and reduce collateral damage. Data links could either divert the weapon or inert the weapon, providing an extra margin of safety. Meanwhile, there will be more weapons with autonomous target recognition (ATR) capabilities. But operators will continue to authorize an actual attack. I don't think that will ever change. I don't think any of us have that much trust in machines.

**Q:** How important is AARGM to the USN?

**A:** This is the latest improvement to AGM-88 HARM. AARGM makes all the difference in the world in being able to focus on specific emitters, and counter the tactics being used. We believe we'll be able to kill targets in great numbers since AARGM works even if emitters are shut down.

**Q:** And the Joint Common Missile?

**A:** The JCM will provide extra range, more lethality and all-weather capability for both rotary wing and fixed wing aircraft. It also reduces logistics requirements by reducing the number of missiles in inventory. JCM will replace the Hellfire, Maverick and TOW missiles. It will have multi-mode seekers. JCM is an extremely important program for the Navy.

**Q:** What remains to be done to making weapons more precise?

**A:** I believe that being 'more precise' should not be the focus. What is truly important in my mind is being able to connect the weapon back to the targeting elements and centers in an automated way so that we are able to reduce the timeline for time critical strikes. That connection process is technically do-able, but it hasn't been done. That's the portion of the overall military problem with precision weapons that still has a good amount of work required. We hope to make time critical strikes a real possibility. Yes, we can improve the 'precision' but I don't think there's a need to improve the precision in most cases. The biggest need in my mind is shrinking the timeline. ■



## Barr Associates, Inc.

**B**arr Associates was founded in 1971 as a filter source for astronomers and analytical chemists. Our sole motivation was, and still is, to deliver project success to the user with innovative filter solutions. We have supported DoD legacy systems for more than 20 years. Our product types exhibit high wavelength precision and spectral stability in extreme temperature migration, moisture and exposure to harsh environments of land, sea, and space. Products and services are provided as follows:

**Market:** Applications are organized by industry served, including Commercial, Scientific and our Defense group, which is described below:

Strategic Defense Features engineering intensive, long term projects supporting space-based sensor platforms and directed high energy programs such as the Airborne Laser (ABL); also manages government-funded R&D for Rugate Filter Technology contracted by the Air Force Research Laboratory.

Tactical Defense supports ongoing contractor production schedules including Paveway, SFW (Sensor Fused Weapon) and collaborates on next generation targeting, counter-measure, night vision, threat warning and weapon systems. The priority is meeting production with cost effective, repeatable and reproducible filter designs.

**Products:** Our product offering is managed by Barr's senior technical staff, working in concert with the application team.

OEM (Original Equipment Manufacturer) New product development requires technical expertise, rapid prototyping and production



BARR Associates on exhibit

ramp up. OEM offers all Barr's resources and technical know-how as an extension of your project team, motivated by market demands for manufacturability, cost control, and quality.

Custom Filter Answers the call when compromise in performance is not an option and the filter must be delivered, with specialization on non-repetitive, high precision designs. Programs supported are: large area narrowband and UV ultra-narrowband for NASA, and sub angstrom narrowbands and dual bandpass filters.



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Rugate Technology Rugate filters overcome the problem of rejecting small wavelength ranges while maintaining large regions of transparency. Band gaps vary from 10 nm (nanometer) to 2500nm, and as many as five tailored notches are realized on a single device. Wavelength range 0.270 $\mu$ -10.6 $\mu$ , on substrates 0.1mm to 300mm dia.. Also available are linear variable filters, featuring centerwavelengths which continuously change along filter length.

Filter Array Multispectral analysis is facilitated with these devices. Each band is produced, downsized, then reassembled to an array of optically isolated channels. Options include: feature size 80 microns, (+/- 5 microns), 18+ bands per device, wavelengths 0.2 $\mu$  - 14.0 $\mu$ , bond line 4-5 microns. Current production is several hundred arrays/month and scalable. Filter patterns are also available with feature size less than 25 microns

For further information, contact us at tel (978) 692-7513, fax (978) 692-7443, barr@barrassociates.com www.barrassociates.com

PSA seeks similar Company and Product Profiles from member companies. Please contact info@precisionstrike.org for more information

## News Briefs

### Lockheed Martin on Multi-warhead Interceptor

The Pentagon's Missile Defense Agency on Jan. 7 awarded Lockheed Martin a contract worth as much as \$768 million to develop a multiple warhead ballistic missile defense interceptor. It would complement, if not eventually replace, the current single kill vehicle made by Raytheon. The idea is to destroy multiple ballistic missile warheads with a single launch. ■

### JDAM is Shared

Boeing has won a \$215 million USAF contract to integrate its Joint Direct Attack Munition (JDAM) weapon system on military aircraft sold to foreign countries. The award

covers installation of Boeing's 'smart bomb' kits on exported tactical military aircraft. The USAF did not say which countries are slated to receive the JDAM kit, which utilizes the Global Positioning System to convert gravity bombs into precision strike weapons. ■

### More JSOWs

Raytheon on Jan. 5 received a \$140 million USAF contract for production of the Joint Standoff Weapon (JSOW) for the U.S. Navy and U.S. Air Force. The award covers 546 JSOW-As for the USN and USAF and 97 of the "C" model JSOW for the Navy. ■

### USAF Restocks Maverick Missile

The USAF is replenishing its supply of Raytheon AGM-65H/K Maverick air-to-ground missiles,

exercising the Lot 5 production contract. The \$50 million option includes more than 1,000 tactical guidance and control sections, 35 training guidance and control sections, pilot and maintenance training and updates to the AGM-65H/K operations supplement. Maverick was used successfully in Operation Iraqi Freedom, the first taste of combat for the new AGM-65H/K. The contract upgrades older TV Mavericks to the new H/K version. ■

### ATK Develops Laser-Guided Mortar

Alliant Techsystems has been chosen by the U.S. Army to develop and produce the XM395 Precision Guided Mortar Munition (PGMM), with ATK predicting total sales of more than \$500 million for the smart mortar round. It was the second major win for ATK last year, with the firm in June receiving \$223 million from the U.S. Navy for the Advanced Anti-Radiation Guided Missile (AARGM), the successor to the High-Speed Anti-Radiation Missile (HARM). The PGMM flies ballistically to a laser-designated target, maneuvers in flight, and delivers its warhead for maximum effectiveness while minimizing collateral damage. ■

### TacTom Controller Approved

Lockheed Martin's Tactical Tomahawk Weapons Control System (TTWCS) has been approved for initial fielding, allowing the U.S. Navy to redirect the advanced naval cruise missile to new targets while in flight. Navy warships will use TTWCS to plan and execute Tomahawk cruise missile strikes with the currently fielded Block III missiles and the Block IV Tactical Tomahawk that are to be deployed later this year. ■

## PEOPLE

RADM John V. Chenevey (see photo) retired from the U.S. Navy in early December after 36 years of service. In his last tour of duty, Chenevey served as program executive officer for strike weapons and unmanned aviation, a job he assumed in 1999. Navy Rear Adm. (lower half) Timothy L. Heely has been assigned as his replacement. No report date has been announced.



RADM Chenevey

Stephen Younger has resigned as director of the Defense Threat Reduction Agency, effective Feb. 27, returning to Los Alamos National Laboratory as a senior fellow. No successor has been announced.

Lester L. Lyles is now a General Dynamics director, having retired from the USAF as a general and commander of the AF Material Command. Raytheon Missile Systems has named Harry Schulte as vice president for strike programs, having retired late last year as the acquisition executive and senior procurement executive for the U.S. Special Operations Command.

VADM Walter B. Massenburg received this third star when he assumed command of the Naval Air Systems Command on Dec. 1. Brig. Gen. Michael E. Ennis, the USMC's director of intelligence, becomes director of operations, Defense Intelligence Agency. The USN's Albert M. Calland III will be promoted to vice admiral with assignment as associate director of Central Intelligence for Military Support.



It has been a privilege and an honor to be associated with such a wonderful and interesting group of people. I am proud to have been a part of the tremendous growth of PSA over the past 10 years. While I relish this opportunity to spend more time with my family, I will certainly miss interacting with all of you. In the future I hope our paths will cross, either personally or professionally. I wish you success. Leslie Mueller

Pictured from the Left: Paul Greenberg, Dawn Campbell, Leslie Mueller (PSA's former Administrator), and Wayne Savage

## Annual Programs Review

THEME:  
Partnership, Integration & Interoperability  
—Creating Meaningful Precision Capability—

April 20-21, 2004

Precision Strike Association is bringing together some of the most authoritative individuals in government and industry to discuss these timely issues. PSA has invited experts from each of our military services, industry professionals, and decision makers including: Honorable Michael W. Wynne—Acting Under Secretary of Defense for Acquisition, Technology, and Logistics; Honorable Gordon England—Secretary of the Navy; and Dr. Kori Schake—Director, Defense Strategy & Requirements, National Security Council, The White House.

**Speakers confirmed include:**

- Lt Gen Norton Schwartz, USAF-Director for Operations (J-3), The Joint Staff
- Harry Schulte, VP Strike Systems, Raytheon Missile Systems Company
- Brig Gen James B. Smith, USAF (Retired) Vice President, Precision Engagement, Raytheon Company
- Brig Gen Randy Bigum, USAF (Retired), Vice President, Strike Weapons, Lockheed Martin
- Jim Kuzmick, President, Whitney, Bradley & Brown, Inc.

Scott Hall, Howell Auditorium  
Defense Acquisition University  
Ft. Belvoir, Virginia

For more information or to register:  
2111 Wilson Blvd. Suite 400, Arlington, VA 22201-3061  
703-247-2590 Fax: 703-522-1885  
Email: [info@precisionstrike.org](mailto:info@precisionstrike.org) [www.precisionstrike.org](http://www.precisionstrike.org)

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- BAE SYSTEMS RO Defence
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CALENDAR OF EVENTS

**Annual Programs Review**

– Event #4PPR

Date: April 20-21, 2004

Location: Scott Hall, Howell Auditorium, Defense Acquisition University, Fort Belvoir, VA

**Summer PEO Forum**

– Event #4NEW

Date: July 7-8, 2004

Location: Huntsville, AL

**Precision Strike Technology Symposium**

– Event #5PST

Date: October 12-14, 2004

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

For more information on these events, please contact the PSA office directly.  
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*In the next Issue*

*More details on PSA's Annual Programs Review*

# Membership Application – Precision Strike Association

I hereby apply for membership in the Precision Strike Association. My understanding is this entitles me to invitations to appropriate Association activities, the bimonthly newsletter and other benefits.

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