

November 2012/\$5

Journal of the Air Force Association

AIR FORCE

MAGAZINE

Air & Space Conference 2012

Advocating for the Air Force
Green on Blue Scourge
The BMT Assaults

282

ARINC

Take the direct
route to the
paperless cockpit.

Introducing AEROMilBag™ by ARINC.

With ARINC's new military-specific Electronic Flight Bag, users have instant access to DoD charts and approach plates not available on competitive EFB products today. AEROMilBag uses the iPad™ to brilliantly display graphics and real-time flight data, including:

- Enroute Navigation Charts
- Instrument Approach Procedures
- Enroute Weather
- Terminal Area Forecasts
- NOTAMs

With the TechPubs™ companion app, operations and maintenance personnel can also access PDF-based:

- Flight Manuals
- Maintenance Tracking
- In-flight Guides
- Checklists
- Flight Logs

**Contact us today for
more information:**

AEROMilBag_sales@arinc.com

210.841.5717

arinc.com/aeromilbag



Powerful. Paperless. Mobile.

**AS SEEN AT
AFA EXPO 2012**





28



36



About the cover: TSgt. Bartek Bachleda refuels an F-22 Raptor. See "Advocating for the Air Force," p. 28. USAF photo by A1C Kenneth W. Norman.

FEATURES

- 4 **Air Force Association Statement of Policy**
- 28 **Advocating for the Air Force**
By Amy McCullough
DOD, Congress, and the American public don't fully understand airpower's contributions to national defense. This causes numerous problems.
- 36 **Evolving the 21st Century Air Force**
By John A. Tirpak
Enemies adapt. The Air Force must also.
- 44 **Green on Blue Scourge**
By Marc V. Schanz
The Air Force and DOD are struggling to halt a disturbing trend of Afghans killing US troops.
- 48 **Sexual Misconduct at BMT**
By Amy McCullough
The Air Force must reverse a troubling increase in sexual assaults at basic training and elsewhere.
- 51 **The F-35's Race Against Time**
By John A. Tirpak
While the US readies the F-35, Russia and China are developing their own stealth fighters.

Publisher
Craig R. McKinley

Editor in Chief
Adam J. Hebert

Editorial afmag@afa.org

Editor
Suzann Chapman

Executive Editors
Michael C. Sirak
John A. Tirpak

Senior Editors
Amy McCullough
Marc V. Schanz

Associate Editor
Aaron M. U. Church

Contributors
Guy Aceto, Walter J. Boyne, John T. Correll, Robert S. Dudley, Chuck Fazio, Rebecca Grant, Brittany Gray

Production afmag@afa.org

Managing Editor
Juliette Kelsey Chagnon

Assistant Managing Editor
Frances McKenney

Editorial Associate
June Lee

Senior Designer
Heather Lewis

Designer
Darcy N. Lewis

Photo Editor
Zaur Eylanbekov

Production Manager
Eric Chang Lee

Media Research Editor
Chequita Wood

Advertising bturner@afa.org

Director of Advertising
William Turner
1501 Lee Highway
Arlington, Va. 22209-1198
Tel: 703/247-5820
Telefax: 703/247-5855

www.airforce-magazine.com

Air Force Journal of the Air Force Association

MAGAZINE



Air Force Association
1501 Lee Highway • Arlington, VA 22209-1198

Telephone: (703) 247-5800

Toll-free: (800) 727-3337

Press 1 if you know your party's extension.

Press 2 for Membership.

Press 3 for Insurance and other Member Benefit programs.

Or stay on the line for an operator to direct your call.

Fax: (703) 247-5853

Internet: <http://www.afa.org/>

E-Mail Addresses

Field Services..... fldsvcs@afa.org

Government Relations..... grl@afa.org

Industry Relations..... irl@afa.org

Events..... events@afa.org

Membership..... membership@afa.org

Insurance/Member Benefits.....
..... services@afavba.org

Policy & Communications (news media).....
..... polcom@afa.org

CyberPatriot..... info@uscyberpatriot.org

Magazine

Advertising..... blturner@afa.org

AFA National Report..... natrep@afa.org

Editorial Offices..... afmag@afa.org

Letters to Editor Column..... letters@afa.org

Air Force Memorial Foundation.. afmf@afa.org

For individual staff members
first initial, last name, @afa.org
(example: jdoe@afa.org)

AFA's Mission

Our mission is to promote a dominant United States Air Force and a strong national defense and to honor airmen and our Air Force heritage. To accomplish this, we:

Educate the public on the critical need for unmatched aerospace power and a technically superior workforce to ensure US national security.

Advocate for aerospace power and STEM education.

Support the Total Air Force family and promote aerospace education.

BPA Circulation audited by
Business Publication Audit

AIR FORCE Magazine / November 2012



44

55 **New-Look Leadership**
By Rebecca Grant
The days of a monolithic Air Force general officer corps are long gone.



51

60 **The Grenada Adventure**
By John T. Correll
It was a rescue operation, but it also foiled a plan for Cuban-Soviet expansion.

66 **Air Force Association National Convention 2012**
By Aaron M. U. Church
Photos by Chuck Fazio Photography

71 **Air Force Association Top Issues for 2013**

72 **Air Force Association Technology Exposition 2012**
Photos by Guy Aceto
Aerospace technology of the highest order was on display at AFA's annual showcase.



60

78 **Air Force Association National Awards 2012**

DEPARTMENTS

- 8 Letters
- 10 **Washington Watch**
Zero-defect mentality; Protecting taxpayer resources; Maintaining the science and technology base
- 12 **Air Force World**
- 16 **Index to Advertisers**
- 22 **Senior Staff Changes**
- 59 **Verbatim**
- 83 **AFA National Report**
- 87 **Unit Reunions**
- 88 **Airpower Classics: Camel**



72

AIR FORCE Magazine (ISSN 0730-6784) November 2012 (Vol. 95, No. 11) is published monthly by the Air Force Association, 1501 Lee Highway, Arlington, VA 22209-1198. Phone (703) 247-5800. Periodical postage paid at Arlington, Va., and additional mailing offices. **Membership Rate:** \$45 per year; \$110 for three-year membership. **Life Membership (nonrefundable):** \$600 single payment, \$630 extended payments. **Subscription Rate:** \$45 per year; \$29 per year additional for postage to foreign addresses (except Canada and Mexico, which are \$10 per year additional). Regular issues \$5 each. USAF Almanac issue \$8 each. **Change of address** requires four weeks' notice. Please include mailing label. **POSTMASTER:** Send changes of address to Air Force Association, 1501 Lee Highway, Arlington, VA 22209-1198. Publisher assumes no responsibility for unsolicited material. Trademark registered by Air Force Association. Copyright 2012 by Air Force Association.



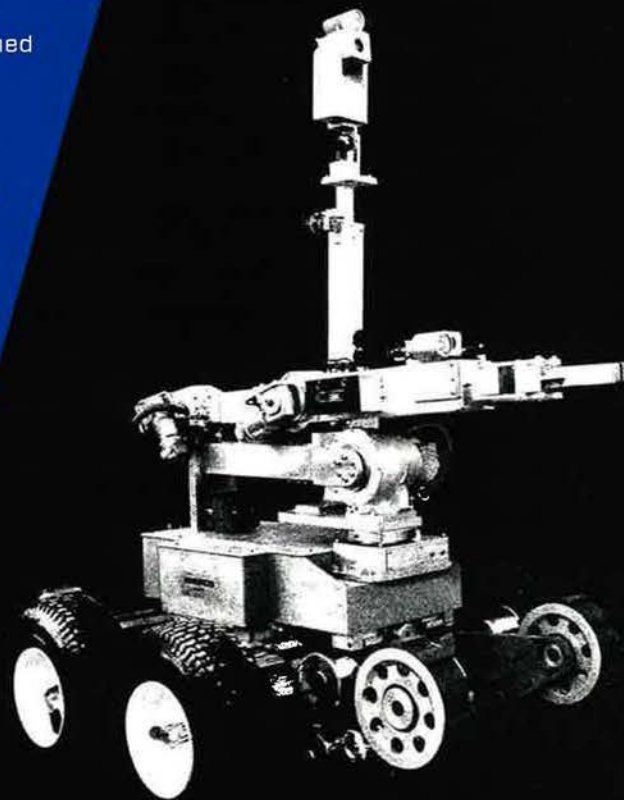
**THE VALUE OF
COMMANDING
UNMANNED
POWER.™**

When you can go where others can't, you gain a powerful advantage. From undersea to outer space, Northrop Grumman is at the forefront of every aspect of unmanned systems. Our advanced platforms and technologies offer customers a wide range of new capabilities—resulting in greater safety, reduced costs, and improved mission effectiveness. *That's why we're the leader in Unmanned Systems.*

THE VALUE OF PERFORMANCE.

NORTHROP GRUMMAN

www.northropgrumman.com/ums



Preserving a National Asset: Air Force Airpower

AMERICANS expect that the nation's armed forces will always deter or, if necessary, defeat adversaries across all domains—air, space, cyber, sea, and land. For decades, Air Force weaponry, expertise, and valor have provided a significant share of the actual power underwriting this security guarantee.

Air Force airpower dominance has been a bargain for the nation. But today, the nation finds itself in a \$16 trillion deficit. As Washington struggles to cope with this historic US debt, the nation has reached a strategic turning point that will shape our defense posture and military options for decades.

The Administration has outlined a new national defense strategy, shaped by rising threats abroad and economic challenges at home. With the new approach, the United States military no longer will be sized, shaped, and trained to conduct long, large-scale, ground-oriented stability operations. We have already withdrawn forces from Iraq and are withdrawing large numbers from Afghanistan. This tracks with the Administration's avowed strategy, which calls for creating smaller, more agile forces better suited to intervention operations in the Asia-Pacific region.

But even with a smaller American military, the US will still need to counter terrorism and irregular military threats, and it must also be able to deter and defeat large-scale, cross-border aggression; maintain a safe, secure, and effective nuclear deterrent; and defend the homeland.

Air Force airpower will shoulder a large share of this new strategy. The Air Force, which comprises the Total Force—Active Duty, Guard, and Reserve components and civilians—stands forth with its speed, unique range, and flexibility to project rapid decisive power. Airpower, with in-flight refueling, can quickly cover long distances—a perfect fit with a strategy emphasizing the Pacific Region and tough challenges in the greater Middle East. However, our nation's economic health endangers our ability to modernize and sustain these capabilities. Hasty or ill-advised decisions made in a time of austerity could dangerously

limit the options of future Commanders in Chief.

Savings are needed, but it is possible to cut our forces too deeply. The Air Force's air and ballistic missile fleets are older and smaller than they have ever been. Every T-38 trainer, KC-135 tanker, and B-52 long-range strike aircraft is old enough to join AARP, and the Air Force aircraft inventory is the smallest it has been in its entire history. The men and women who volunteer to defend this country,

The Air Force Association 2013 Statement of Policy was adopted by the delegates to the AFA National Convention Sept. 16, 2012

in times of war and peace, to engage in conflict and humanitarian efforts, deserve sufficient and reliable equipment to execute the nation's national security strategy.

Without USAF's air dominance, our land and maritime surface forces will be more vulnerable to attack and our enemies will enjoy a sanctuary from such attack.

Without the Air Force's space communications and airborne intelligence, surveillance, and reconnaissance (ISR), other US forces will have great difficulty finding the enemy, much less mounting an effective attack.

Without Air Force transport and refueling aircraft, US forces cannot get to the battle quickly or sustain action for long periods.

The Air Force is a national asset. Its actions serve not only its own operational needs and requirements but those of other armed services and allied forces and civilian communities in times of humanitarian crisis. Our Guard and Reserve components continue to be superb investments, providing critical Air Force capabilities during challenging times.

Since its founding by law as a separate and independent service in 1947, the Air Force has had a clear and singular military role—to be "organized,

trained, and equipped for prompt and sustained offensive and defensive air operations."

The role of Air Force airpower is not solely to serve as support to ground and sea forces; it can be even more valuable to the nation when its capabilities are employed to deter and defend attacks against the United States, maintain regional stability, ensure the success of indigenous forces (such as in Bosnia or Libya), and achieve desired outcomes independently of other force elements (such as in Kosovo). In short, the Air Force provides alternatives to achieve national security objectives with less risk to American life and treasure—the Air Force projects power without the same level of vulnerability as surface forces. Fortunately, as global threats have proliferated, so have the capabilities of the Air Force. Today's Total Force provides:

- Global Vigilance—worldwide military awareness.
- Global Reach—worldwide scope to project military capabilities.
- Global Power—worldwide effects, from rapid mobility to rapid strike.

In military strategy, global awareness, range, and power as appropriate to mission needs are vital. Air, space, and cyber power are fundamental assets for projecting and sustaining US military power abroad in any form.

Four core capabilities define the Air Force:

- Control of air, space, and cyberspace. Before the US military can do anything on the Earth's surface the Air Force must control these domains to assure access and freedom of operation. Air, space, and cyberspace will be increasingly contested as states and non-state actors acquire advanced kinetic and non-kinetic technologies. Jamming, anti-satellite, electromagnetic pulse, cyber attack, and anti-access/area-denial (A2/AD) capabilities are growing. This means we must continue to strengthen our own capabilities in cybersecurity, missile warning, positional navigation and timing, satellite communications, space situational awareness, and space launch.

Without such control, our ability to conduct military operations will be se-



UNCONVENTIONAL. UNDETECTABLE. UNDENIABLE.

F-35 LIGHTNING II

The F-35A Lightning II delivers the 21st century capabilities U.S. and allied forces need. An innovative combination of stealth, speed, and cutting-edge sensors allows it to fly through or slip past advanced air defenses, virtually undetected. Superior battlespace awareness leaves the enemy nowhere to hide. And that gives pilots unprecedented power to engage the target and return home. The F-35A Lightning II. Rising to the challenges of the 21st century. See it in action – F35.com.

THE F-35 LIGHTNING II TEAM

NORTHROP GRUMMAN

BAE SYSTEMS

PRATT & WHITNEY

LOCKHEED MARTIN

F35.COM



verely limited, our joint teammates will be subjected to unacceptable risk, and our strategic choices will be increasingly constrained.

- Provide responsive, persistent, accurate, and predictive ISR. The Air Force's unique air, space, and cyber ISR capabilities provide America an unparalleled decision-making advantage. The Air Force, national leaders, and joint and combined partners depend on Air Force ISR to plan and execute operations.

- Rapidly move people and materiel/cargo. Military operations rely on USAF airlifters and tankers to haul people, fuel, and equipment quickly and precisely around the world. Rapid global mobility underpins US crisis response, long-range strike, joint combat support, humanitarian relief, and global logistics.

- Hold any target at risk. The Air Force possesses unique abilities to achieve precise lethal and non-lethal effects that shape the strategic behavior of others, often at long range and in heavily defended environments. This requires specially trained people, modern systems, and meticulous planning.

Taken together, the nation's air, space, and cyber power—embodied predominantly in the Air Force—are indispensable components of America's military prowess. The Air Force can shape the global environment, deter adversaries, rapidly mobilize and deploy in a changing battlespace, deliver precise combat effects on a global basis, and underwrite the joint force in its many and varied operations.

The Air Force's Airmen and equipment have rarely been under greater stress and strain than today, thanks to more than two decades of sustained combat operations combined with wholly inadequate investment in modern equipment.

In recent years, the Air Force has been engaged in either concurrent or continuously sequential combat operations—in Iraq, Serbia, Kosovo, Afghanistan, Somalia, and Libya—as well as in the decade-plus enforcement of the UN-mandated no-fly-zone over Iraq. Furthermore, numerous difficult and long-running humanitarian operations have added to that stress.

Yet the Air Force continues to shrink. It has fewer personnel than at any time since it became an independent service in 1947. Force structure and inventories of aircraft and spacecraft have fallen to record

low levels. Last year's request for new aircraft was the lowest since 1915. Underinvestment has resulted in fleets of aircraft, ballistic missiles, and satellites in operation well beyond original design expectations.

The Air Force is running out of bandages to cover these cuts. Over the past decade, the service has eliminated multiple layers from its command structures, combined staff offices, retired older aircraft, and reduced training hours, all while continuing to carry out its assigned missions around the world. This comes at a cost:

- The nation's airmen have been run ragged, and essential career fields, such as pararescue, combat control, and explosive ordnance disposal, are

An Air Force cannot be built overnight. It takes years of sustained investment to acquire and train the force to a well-honed cutting edge.

officially categorized as undermanned and stressed.

- Old aircraft take more and more time—and money—to keep ready.

- Readiness indicators of Air Force hardware have fallen throughout the last decade.

- The Air Force fields the oldest aircraft inventory in its history. B-52 long-range strike aircraft and KC-135 tankers are now over 50 years old.

The service is buying few replacements. In fact, the Air Force replacement cycle now stands at 100 years, and if remotely piloted aircraft (RPAs) are removed from the equation, the replacement rate soars to 160 years. Both the Navy and Army have been authorized to acquire more aircraft in the upcoming fiscal year than the Air Force. In fact, the Navy aircraft procurement budget for Fiscal Year 2013 is 53 percent higher than the Air Force's.

At this low rate of modernization, the Air Force the nation has come to rely upon is not sustainable.

The shrinkage has not ended. If Congress permits, the Air Force plans to retire more than 500 aircraft in the coming years and to refurbish F-16s, F-15s, and A-10s until the F-35 comes on line to replace them. Even relatively new Air Force aircraft, like

the stealthy B-2 bomber and the C-17 airlifter, have been in service for over 20 years, making them old by any objective standard.

An Air Force cannot be built overnight. It takes years of sustained investment to acquire and train the force to a well-honed cutting edge. The Administration's new defense strategy makes the nation more dependent on the Air Force than ever before. Yet it is contradicted by budget actions that impose disproportionate cuts on the service. The Air Force's share of the Department of Defense budget fell by nearly 10 percent over the past decade to a record low of 21 percent. While the Army topline budget grew by almost a billion dollars, DOD took a \$5.2 billion cut from FY12 to FY13 with the Air Force absorbing \$4.8 billion of the cut. The new strategic guidance needs to be empowered with a balanced and meaningful reallocation in resources.

The American public expects its Air Force to be the best in the world. We must support the needs of airmen and their families and provide the best equipment possible—in sufficient quality and numbers and at the time needed—to protect our nation.

The nation must have alternatives to achieve national security objectives which leverage the advantages of our technology, limit the need to project vulnerable surface forces, and avoid attrition warfare. Therefore, it must maintain a modern Air Force—and that means sufficient and consistent modernization. Further, if we expect the industrial base to continue to produce the innovative systems that have proved essential to deterring and winning conflicts, we must stabilize the industrial base.

The Air Force Association will continue to promote a dominant United States Air Force and a strong national defense, to honor Airmen and our Air Force heritage, and to meet the pre-eminent tenet in the preamble to our Constitution—"to provide for the common defense." We will educate the public on the need for unmatched air, space, and cyber power. That is our pledge to America. ■

This editorial is extracted from the Air Force Association's full 2013 Statement of Policy, which is available in its entirety at <http://www.afa.org/AboutUs/SOP2013.pdf>

MISSION SUCCESS



Airmen must have the assured operational capabilities to plan and successfully execute any mission. At General Dynamics, we are working to deliver affordable systems and products that enable mission success. To learn more about our broad portfolio, visit

www.gdc4s.com

GENERAL DYNAMICS

A Shell Game

I am replying to the editorial in September [*"Five Months To Heal a Rift,"* p. 6]. The Editor in Chief uses the economic woes of Michigan to show the impact of closing a Guard unit. He uses the Guard A-10 unit at Selfridge as an example and calls their circumstances unique. He later states that the Defense Department is not a "jobs program." As a fellow Michigander, Michigan's economic future will rise or fall regardless of what happens at Selfridge. Using Selfridge's 95-year fighter history as justification doesn't hold water; the Active Duty Air Force left in '71.

I'll provide an example of wasting money through "clueless" planning. I was at Grissom Air Force Base, in north central Indiana, in the first AFRES squadron to receive the A-10 in 1981. Baltimore received the first Guard A-10s at the same time. In BRAC '94, we returned from combat patrols over Bosnia to a squadron that was closed the following month. Grissom Air Force Base became a Reserve base after eliminating a Reserve unit. Does anybody see the problem? In this geographic area after we lost our A-10s, Battle Creek converted to the A-10 then eventually lost them to Selfridge. Fort Wayne has since converted to the A-10 and is now on the chopping block with Selfridge. This "shell game" has all taken place in reasonable proximity to the original A-10 base at Grissom.

Does anybody care about the tremendous waste of money the "protecting jobs" campaign causes? The taxpayer is stuck with the bill again when national security isn't even part of the equation. The Baltimore Guard continues to fly the A-10 after more than 30 years.

Dan Hamill
Dowagiac, Mich.

Can't USAF Learn?

Why does the Air Force have to reinvent the wheel? Reading "What's Next for the AEF" [in the] September *Air Force Magazine* [p. 58] the debate goes on as to how the Air Force deploys units and the frequency. Over the course of our involvement in Iraq and Afghanistan, I've watched the Army National Guard and Army Reserve units from my state get called up. They are called up usually for about 13 months, two of which seem to be for training, and then an 11-month

deployment. They train and deploy as an entire unit.

The Air Force, Air National Guard, and Reserve, over my 27 years of service, trained as a unit and trained to deploy as a unit within weeks if not days of being tasked/called up. From reading *Air Force Magazine*, the Air Force seems to be tasking parts of different units to make up one air expeditionary force. Then it is for 90 days or 180 days or more. Can the Air Force learn from a sister branch instead of reinventing the wheel?

Col. Don Hengesh,
USAF (Ret.)
Petoskey, Mich.

Traynor and Harp

The September magazine profiled the C-5 as the "Airpower Classic"—a good choice [p. 140]. However, the list of "Notables" under "Famous Fliers" is missing the two people I consider the most notable. Captains Dennis Traynor and Tilford Harp were awarded the Air Force Cross for their performance in the controlled crash of the C-5 involved in Operation Baby Lift at the end of the Vietnam War. Their airmanship saved many lives and this feat justified their inclusion in the list. It should be noted that Harp was also awarded the Airman's Medal for repeatedly going into the burning aircraft to bring additional survivors to safety.

CMSgt. David Matthews,
USAF (Ret.)
Fairborn, Ohio

Thank you and other readers for bringing this omission to our attention. Traynor and Harp will be added to the online version of the "Airpower Classics: C-5."—THE EDITORS

Not Exactly. Not Even Close.

I was assigned to the 55th Strategic Reconnaissance Wing for 23 years, including the day that Maj. Willard Palm and his crew were shot down over the Barents Sea. As a navigator in RB-47s and RC-135s, I flew similar surveillance missions for nearly 14 years. In all that time and since, I am well-versed in the history of the 55th SRW.

I have known Bruce Olmstead and John McKone for over 50 years and have heard their personal detailed versions of the fateful incident numerous times.

The information has been available and unclassified for many years.

Col. (Ret.) R. J. Black Schultz is unknown to me in any capacity, nor have I ever heard of him. But I cannot fathom his motives for writing the letter in the September issue [*"Poking the Hornet's Nest,"* p. 8]. His missive is loaded with misinformation (and I'm being restrained with that comment) regarding the Palm shutdown.

Item by item: Palm's mission was the first operational sortie of their deployment to the UK. It was a single-ship flight, not three. No other US aircraft were in the area.

One Soviet fighter (not two) intercepted the RB-47H and made an unprovoked attack in international airspace. Although fire was returned from Palm's RB, no MiG was shot down.

There was no search and rescue by any US or allied forces since none was within range of the area. Russian trawlers recovered the body of Major Palm (who perished from hypothermia, not a gunshot wound) and picked up Olmstead and McKone after about six hours in the water in their survival rafts.

Lastly, there were no flight surgeon crew members on RB-47s. Any number of 55th veterans from that era could have written this rebuttal and maybe many will. Why Colonel Schultz elected to embellish and tarnish that tragic and historic incident is beyond reason.

Lt. Col. Max R. Moore,
USAF (Ret.)
Bellevue, Neb.

Yalta Did Too Matter

John Correll states that Roosevelt disliked "spheres of influence" [*"The Muddled Legend of Yalta,"* September,

Do you have a comment about a current article in the magazine? Write to "Letters," *Air Force Magazine*, 1501 Lee Highway, Arlington, VA 22209-1198. (E-mail: letters@afa.org.) Letters should be concise and timely. We cannot acknowledge receipt of letters. We reserve the right to condense letters. Letters without name and city/base and state are not acceptable. Photographs cannot be used or returned.—THE EDITORS

p. 107]. Really, he only opposed British and French spheres of influence, and thus promoted decolonization and free trade in order to undermine them. In contrast, he declared an American sphere of influence in 1939—the “Pan American Security Zone”—and he was instrumental in creating Soviet spheres of influence in Eastern Europe and the Far East in 1944-45.

Correll believes the Soviets only revealed their demand for a “friendly government” in Poland in April 1945. In fact, Stalin informed Roosevelt’s emissary Joseph Davies of this demand in May 1942. Therefore Soviet actions in Poland in 1945 were no surprise.

Correll contends that Soviet operations had no effect on the outcome of the war with Japan. On the contrary, the Soviet blitzkrieg in Manchuria had a large role in Japan’s decision to surrender.

Correll insists that Yalta “did not make that much difference.” Stalin obviously thought that official British and American recognition of his ill-gotten gains in Eastern Europe “made a difference,” or he wouldn’t have pressured them for this from 1941 onward. Yalta perhaps “confirmed the inevitable” in Europe, but did not do so in Asia. At Yalta, the Americans agreed to transfer one million tons of supplies to the Soviet Far East. Without these supplies, the Soviets would not have been able to enter the Pacific War at all—Japan would have surrendered long before the Soviets could attack. Soviet conquest of Manchuria, Korea, and Sakhalin was thus by no means inevitable. At Yalta, Roosevelt agreed to force Chiang to accept Soviet control of Manchuria; this was not inevitable or necessary and had vast consequences for the future of Asia.

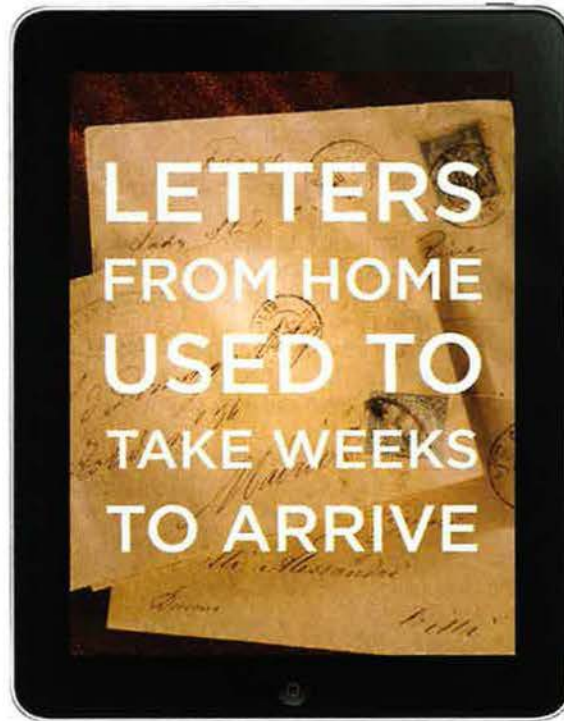
Correll considers that Stalin got everything he wanted at Yalta “at a bargain price.” But Stalin only got what he wanted at Yalta because he spent millions of lives to defeat the Germans.

I was surprised that this article did not discuss airpower. At Yalta, the Allies agreed to continue strategic bombing, emphasizing oil targets, and consequently 20 percent of the total tonnage dropped on Germany fell in the last few months of the war. The Soviets requested air attacks on German communications to prevent them from shifting troops to the East—and this led to the firebombing of Dresden shortly after the conference. Finally, the bombing of Hiroshima represented Truman’s unsuccessful effort to end the war before the Soviets could seize the territories that Roosevelt promised them at Yalta.

James Perry
Reston, Va.

■ *In the early years of the 20th century, US foreign policy was fundamentally opposed to spheres of influence as a matter of principle. That policy was moderated as a matter of expediency during World War II and was eventually reversed because of Cold War realities. Stalin’s intentions for Poland had been known since 1939. At the Big Three conference at Teheran in 1943, the United States and Britain agreed to Soviet control of eastern Europe, including a substantial part of Poland. Nevertheless, at Yalta Roosevelt and Churchill persuaded themselves to believe Stalin’s assurances of a representative Polish government. They*

were outraged when he defaulted on the promise. The Far Eastern concessions to the USSR were a side deal made by Roosevelt without participation by Britain or China and from which the United States ultimately gained nothing of value. The weight of evidence refutes the claim, often heard, that the Soviets were a significant factor in the Japanese surrender. Truman did not use the bomb in an attempt to get ahead of the Soviets. At the time of the Hiroshima mission, he still welcomed Soviet military action in Asia as a hedge in case the atomic bomb did not end the war and an invasion of Japan became necessary.—John T. Correll



TECHNOLOGY CHANGES EVERYTHING:

IT TRANSFORMED THE WAY YOU DEPLOY OVERSEAS. THE WAY YOU TALK TO YOUR LOVED ONES. HEAR NEWS FROM HOME. EVERY DAY. INNOVATIONS CONNECT PEOPLE ACROSS SPACE AND TIME.

WHAT IF TECHNOLOGY CONNECTED YOU TO A COLLEGE DEGREE?

IT'S POSSIBLE. YOU HAVE THE TECHNOLOGY TO BELONG TO A WORLDWIDE LEARNING COMMUNITY. THAT COMMUNITY IS ASHFORD UNIVERSITY.



MILITARY.ASHFORD.EDU/AFMAGAZINE
866.806.5117

Zero-defect mentality; Protecting taxpayer resources; Maintaining the science and technology base

FINE LINES IN ACQUISITION

It will be tricky to manage Air Force programs in a culture where neither the budget nor Capitol Hill will tolerate delays, overruns, or failure in technology programs—but Air Force Materiel Command's new commander thinks it can be done as long as USAF sticks to proven concepts. Gen. Janet C. Wolfenbarger said it's impossible to impose a zero-defect mentality on basic research.

"The whole objective of science and technology ... is to explore new avenues to get our missions accomplished," she said in a September interview. Some of those paths "simply don't come to fruition," and in "the discovery and maturation stage, I maintain that the zero-defect culture doesn't exist and really cannot. That would be really detrimental to us."

However, Wolfenbarger believes that with tight funding, the Air Force is compelled to be less "aggressive" with setting requirements for new programs of record than it has been in the past. The F-22—a program Wolfenbarger was closely associated with during her career—produced an "awesome weapon system," but if it were being launched today, it would be structured differently, she said.

"We would stipulate that those revolutionary technologies could still be incorporated into a program of record, but we'd want to wring them out and prove them out in a technology program" first.

Programs have to be built on technologies already well in hand.

Where AFMC will be "held accountable to cost and schedule," there now has to be "a high confidence approach" to ensure technologies are mature enough to meet schedule and cost goals.

The Air Force is willing to take risks and "leapfrog, and get after revolutionary technologies, but we want to do that prior to establishing a program of record," she said. "There certainly is less willingness to see growth and overruns and missed expectations," and USAF must spend the nation's money wisely.

For the KC-46, the Air Force set appropriate requirements, which now can't be changed without top-level approval, Wolfenbarger noted. There are a large number of "lessons learned" from the on-again, off-again tanker replacement program, and these can be applied to other projects, she said.

One of the most crucial new technology efforts is the Air Force's long-range strike bomber. The "intent" of the bomber program "is to leverage proven, mature technologies in that weapon system to establish sound requirements early, at the most senior levels of our Air Force, and keep them stable," said Wolfenbarger.

Moreover, USAF has established "a unique oversight structure" for the bomber program. It is "very small, very highly skilled, with senior oversight. And the belief," the general added, is that it is "progressing well to the schedule it is on."

To further improve efficiency and save money, Wolfenbarger said USAF is taking a hard look at contractor logistics support (CLS) vs. organic work performed by the Air Force.

"We are seeing cost growth across the board in our weapon system sustainment accounts, but in particular our focus area is in the CLS arena," she said. AFMC is "relooking" at weapon systems where it was once expected that they would be serviced under contractor logistics support for the life of the program.

"We are now pulling some of that [CLS] activity into our organic" efforts, she said. Such programs include the legacy C-17 airlifter and the still-developmental F-35 strike fighter. For the fighter, decisions will have to be made in concert with the program's various stakeholders—which include two other services and eight partner countries.

GROWTH DURING CONTRACTION

While the Air Force is reducing personnel and force structure, AFMC is still adding people to recapture lost expertise. "We realized a few years ago that we had allowed [a] portion of our acquisition workforce to atrophy, to get to a level that wasn't sustainable, in terms of both numbers and skill sets," Wolfenbarger said.

Some of that expertise had migrated "solely to industry," she explained, and some of AFMC's new hiring is needed because "we felt we just had smaller numbers than we needed to be able to execute" on programs across the spectrum.

One area that atrophied was the acquisition and logistics career field, where there were "too few resources" to accomplish the task of cost estimating.

"Even in this downsized environment, ... we've managed to realize a growth," Wolfenbarger said. AFMC increased by 2,000 people and would have added even more but,

like all other commands, was under orders to find efficiencies and reduce manpower due to austerity measures demanded a few years ago by then-Defense Secretary Robert M. Gates.

The growth is possible in part because AFMC previously "freed up 1,051 manpower authorizations and \$109 million per year," Wolfenbarger said.

Even so, though "we are on a growth path" in the Fiscal 2013 budget request," she said that "we didn't achieve the levels [of manpower] that we had established as a requirement" during the Future Years Defense Program.

The Defense Department has directed AFMC to maintain a spending floor of three percent of its total obligation authority to basic science and technology. Wolfenbarger said that number "may go up or down" as AFMC's budget rises or falls, but three percent is the minimum.

DOD "has insisted that we maintain a strong S&T base. ... We can't foreclose the future with short-sighted decisions today." ■



Lessons were learned from the tanker competition.

EMPLOY THE BEST VIDEO FOR LESS.



DOES YOUR VIDEO LOOK THIS GOOD?



For a fraction of the cost and a fraction of the footprint, ScanEagle delivers full-motion video with a level of clarity that you have to see to believe.

Day or night, the small tactical ScanEagle unmanned aircraft system flies under the weather and undetected, with state-of-the-art sensing equipment for your domain awareness missions. So why fly larger, Group 4 UAS?

Choose intelligently. Choose the best video for less.

www.insitu.com


INSITU

Tyndall Joins ACC

Tyndall AFB, Fla., transitioned from Air Education and Training Command to Air Combat Command Oct. 1 as part of the Air Force's F-22 fleet re-organization.

Tyndall, home to one Raptor training squadron, is due to receive a new combat-coded F-22 squadron transferring from Holloman AFB, N.M.

"Co-locating a combat-coded F-22 squadron together with F-22s assigned to the formal training unit ... provides training, maintenance, and operational advantages that benefit combatant commanders and ensure operational readiness," AETC officials stated in a press release Oct. 1.

Due to budgetary constraints under the continuing resolution, the Air Force had no immediate "specific timetable" for the combat-ready jets' arrival. A CR took effect at the beginning of October to supply funds in lieu of Congress enacting Fiscal 2013 defense appropriations legislation before the new fiscal year began.

The 337th Air Control Squadron (redesignated from the 325th ACS Oct. 4), trains air battle managers and is the only unit at Tyndall that still remains under AETC.

New Guard Bureau Chief

Army Gen. Frank J. Grass replaced Air Force Gen. Craig R. McKinley as National Guard Bureau chief in a change-of-responsibility ceremony at the Pentagon Sept. 7.

McKinley was the first four-star leader of the Guard Bureau and the first Guard chief to serve as a statutory member of the Joint Chiefs of Staff.

"The National Guard has been an integral part of our Active force for decades, and I don't think we've ever reached a point where it's been more relevant, or reliable, or competent," McKinley said at the handover.

Grass, who previously served as US Northern Command's deputy commander, received his fourth star at the event prior to taking charge of the National Guard Bureau.

McKinley, who had served as NGB chief since November 2008, retired after 38 years of uniformed service and

assumed a new role as the Air Force Association's President.

Double Raptors in the Pacific

A second package of F-22s from JB Elmendorf-Richardson, Alaska, deployed to the western Pacific, joining Raptors from JB Langley-Eustis, Va., that deployed over the summer.

The placements were "a prudent measure to maintain a credible deterrent posture and presence in the region," said Elmendorf spokeswoman Capt. Ashley Conner, quoted by the *Alaska Dispatch* Sept. 18. Though territorial tensions between China and Japan were running high in September, the deployments were "not in response to any specific situation," she said.

Elmendorf's F-22s took up station at Andersen AFB, Guam, while the Langley Raptors operated from Kadena AB, Japan.

The twin deployments are the Raptors' first to the region since the F-22 fleet returned to flight in 2011.

The Elmendorf contingent includes airmen from the Active Duty 3rd Wing and Air Force Reserve Command's 477th Fighter Group, which reached full operational capability for the first time in September.

Back on Campus

Air Force ROTC cadets took the oath of enlistment at Yale University for the first time in decades, at the beginning of the school year at the New Haven, Conn., campus.

Return of an Air Force ROTC detachment to the Ivy League school resulted from an agreement between Air Force Secretary Michael B. Donley and Yale President Richard C. Levin, signed in September 2011.

University officials allowed the detachment's return after the Obama Administration's repeal of the law banning homosexuals from openly serving in the US military.

Yale had an AFROTC detachment on campus until 1957. The school's ban predated DOD's Don't Ask, Don't Tell policy by several decades.

Yale's new AFROTC detachment officially opened its doors on Sept. 21, with 38 cadets from Yale and cross-town

USAF photo



partnership institutions, said AFROTC officials at Maxwell AFB, Ala.

Classes began for the academic year Aug. 29, and AFROTC Det. 009 Commander Col. Scott Manning administered the oath in a ceremony Sept. 6.

Goodbye, 13th Air Force

The Air Force inactivated 13th Air Force, headquartered at JB Pearl Harbor-Hickam, Hawaii, transferring its airpower planning and execution functions to

Pacific Air Forces headquarters, also at Hickam.

"Our commitment to the region remains steadfast," said Lt. Gen. Stanley T. Kresge, who led the numbered air force at its inactivation, effective Oct. 1. "The joining of 13th Air Force and PACAF not only ensures an effective response in a crisis, but also facilitates increased trust and interoperability with allies and partners," said Kresge, taking up his new post as PACAF vice commander.

The inactivation ceremony took place on Sept. 28 and also celebrated the NAF's 70-year history of supporting the Pacific region.

In Air Force parlance, PACAF is a C-Majcom, or component major command, that now has direct operational responsibility under US Pacific Command for the area of the Asia-Pacific region formerly covered by 13th Air Force. PACAF's 7th Air Force at Osan AB, South Korea, still has operational



10.04.2012

A loadmaster with the 192nd Airlift Squadron watches out the back of a C-130 during a Spouse Lift operation over Lake Tahoe. The 152nd Airlift Wing performs these flights occasionally to orient spouses of airmen to the unit aircraft and familiarize them with the unit's mission. The flights are retention and recruitment incentives for airmen with critical skill sets.

Afghanistan Surge Ends

The United States has completed the drawdown of surge forces from Afghanistan, returning to the US all 33,000 additional troops authorized by President Obama in December 2009.

Completion of the surge drawdown marks an "important milestone" in the gradual handover of security in Afghanistan to Afghan forces, Defense Secretary Leon E. Panetta said in a Sept. 20 statement.

The return of US surge forces fell at a difficult time for NATO's International Security Assistance Force. A week before Panetta's announcement, the coalition suspended the majority of its joint operations with Afghan forces, due to a spike in "green on blue" killings, incidents in which uniformed Afghans turn on allied forces. (See: "Green on Blue Scourge," p. 44.)

Speaking in a press briefing Sept. 21 during a visit with New Zealand Defense Minister Jonathan Coleman in Auckland, Panetta said the 68,000 US troops in Afghanistan will continue working to reduce violence.

In addition, US forces remain dedicated to building the capacity of Afghan forces to ensure the Taliban does not regain momentum in the region, he said.

In his statement, Panetta reiterated that the transition to Afghan control "will be completed by the end of 2014" per the Administration's plan.

responsibility for the Korean peninsula and northwest Pacific.

In addition to 13th Air Force, USAF stood down 17th Air Force in April and inactivated 19th Air Force in July as part of a servicewide initiative to operate more efficiently and shed redundancy.

B-2 Fleet Upgraded

Northrop Grumman completed field installations of an upgraded radar system for the B-2 stealth bomber fleet, according to company officials.

"Every operational B-2 is now equipped with the new radar" thanks to efforts undertaken for the B-2 Radar Modernization Program, Northrop Grumman said in a Sept. 24 news release.

Raytheon supplied the components to upgrade the B-2's 1980s-vintage AN/APQ-181 multimode radar; they include active electronically scanned array antennas, a power supply, and a modified receiver/exciter.

Northrop Grumman completed hardware installation at Whiteman, delivering jets "anywhere from one to 11 days early," said Ron Naylor, company director of B-2 modernization.

The total package improves the radar's maintainability and lays the foundation for future capability enhancements.

USAF operates a fleet of 20 B-2s, including one normally used for testing

Not Just Blowing Smoke: SSgt. Ernest Andrews wades through smoke during combat airman skills training at JB McGuire-Dix-Lakehurst, N.J. The training ensures that soon-to-deploy airmen have fundamental skills in fighting and survival in a combat zone. Andrews is from the 7th Civil Engineer Squadron, Dyess AFB, Tex.

at Edwards AFB, Calif. The others are assigned to the 509th Bomb Wing at Whiteman AFB, Mo.

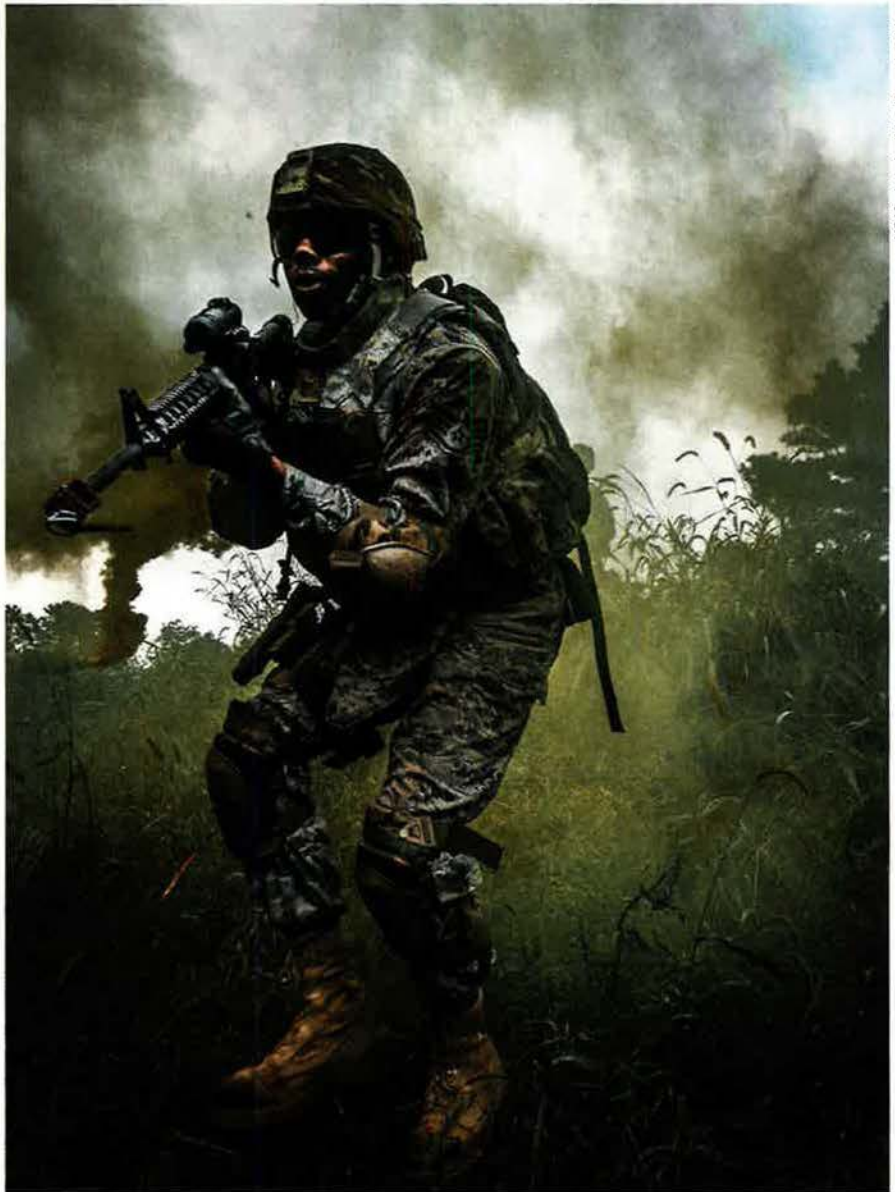
Space Fence Post

The Air Force will base its first Space Fence radar site on Kwajalein atoll in the Marshall Islands, Air Force space officials revealed Sept. 25.

Space Fence features an S-band radar system expected to be capable of detecting, tracking, identifying, and characterizing objects as small as a softball in low and medium Earth orbits up to 1,200 miles away.

Construction is scheduled to begin next September and take 48 months to complete, leading the site to initial operational capability in Fiscal 2017, according to the service's news release.

Lockheed Martin and Raytheon have been maturing their respective Space Fence designs, and the Air Force is ex-



USAF photo by SSgt. Kenneth Bricker

The Future of Light Attack is Here



The Beechcraft AT-6 is the world's finest Light Attack and Armed Reconnaissance aircraft. Purpose-built to leverage prior investment in the U.S. Air Force's T-6, A-10C, and MC-12W platforms. The AT-6 is available at a fraction of the acquisition, sustainment and training costs of other combat aircraft. The AT-6 provides a full suite of synchronized, ground-based training capabilities and an established global logistics infrastructure. The AT-6 is the only American-made aircraft designed to meet the needs of a world where unpredictability is common and flexibility is crucial.

www.missionreadyat-6.com



The only fixed-wing aircraft to fire laser guided rockets

Hawker Beechcraft

DEFENSE COMPANY, LLC



National Guard photo by SMSgt. Brian Avery

See Ya, C-5: The last 105th Airlift Wing C-5 aircraft at Stewart ANGB, N.Y., heads off to retirement on Sept. 19. The wing is transitioning from the venerable C-5A aircraft type to the more modern C-17, an airlifter capable of rapid strategic delivery of troops and cargo to forward bases.

pected to select one competitor to begin engineering and manufacturing development early this fiscal year.

The Air Force may also establish a second Space Fence site in Western Australia that would come online sometime in Fiscal 2020, according to Federal Business Opportunities documents online.

The Fence will form an important part of the Air Force's overall space surveillance network.

Spooky in the Sunlight

AC-130 gunships began daylight missions for the first time this summer, providing fire support to coalition ground forces in Afghanistan thanks to a new high-definition sensor suite.

"We have not flown gunships during the day before, but they are currently flying during the day" now over Afghanistan, said Air Force Special Operations Command boss Lt. Gen. Eric E. Fiel.

The new sensors "allow us a longer standoff range, which caused a little

problem since the weapons can't engage targets at that range," said Fiel, speaking at the Air Force Association's Air & Space Conference outside Washington, D.C., in September.

AFSOC is working to fix the problem, he said. The command has already integrated Small Diameter Bombs onto its AC-130W gunships for a limited standoff precision strike capability and is working to expand the arsenal.

Stinger gunships in Afghanistan currently carry eight SDBs—four under each wing—as well as "internal precision guided munitions," said Fiel.

AFSOC planned to begin testing Hellfire air-to-ground missiles on the AC-130 in October to add true standoff capability in the near future, he said.

Missile Defense Center Opens

US European Command and NATO leaders recently inaugurated the new European Integrated Air and Missile Defense Center in Einsiedlerhof, Germany.

The center is meant to support the increased education and training requirements driven by the emerging NATO mission for the territorial ballistic missile defense of Europe. "What we see today represents the US contribution to this critical mission, and we fully expect to grow it into a true coalition center with US and European nation partners working side by side," said Gen. Philip M. Breedlove, commander of US Air Forces in Europe.

Breedlove also leads NATO's allied Air Component Command, collocated with USAFE at Ramstein AB, Germany. He assisted EUCEM Commander Adm. James G. Stavridis, who also heads NATO's Supreme Headquarters Allied Powers, Europe, in the ribbon cutting Sept. 26.

F-35 Schoolhouse About To Open

Air Force evaluators began the final certification process for full-up F-35A training at Eglin AFB, Fla., early this fall.

A cadre of four pilots began the operational utility evaluation, essentially a dry run of every facet of Eglin's F-35 training pipeline, on Sept. 10.

"The start of the OUE is another huge milestone for the Air Force and the program as a whole," said Col. Andrew J. Toth, 33rd Fighter Wing commander in charge of Eglin's joint F-35 schoolhouse.

Training officials at Eglin originally intended to launch the OUE last October, paving the way to start training operational F-35 pilots this past January. Instead, Air Force officials didn't clear the F-35A to begin flight operations at Eglin until the end of February, bumping the OUE back almost a year.

Following the 65-day OUE, "we should receive the Air Education and Training Command's approval that states we are 'ready for training'" sometime in mid-November, said Toth.

Index to Advertisers

Arinc	Cover II
Ashford.....	9
Boeing	11, 33, 43, Cover IV
Bose	35
General Atomics.....	19
General Dynamics.....	7
Gulfstream.....	41
Hawker Beechcraft	15
Hewlett Packard.....	17
Lockheed Martin	5
Northrop Grumman	3, 25
Panasonic.....	21
Pilatus.....	27
Pratt & Whitney.....	23
USAA.....	Cover III
Airforce-magazine.com.....	84
AFA Hangar Store	85
AFA Technology Expositions	86
AFA Upcoming Events.....	65

We count on you. Now you can count on us.

While Airmen are focusing on defending our country, their families need to be taken care of at home. HP's experience in delivering personnel and pay ERP systems ensure military families get the services and benefits they deserve, without interruption. And that matters.

Learn more at hp.com/go/defense



White House Reports on Sequestration

If Congress doesn't reach a deficit reduction deal before January, the Pentagon will have to cut its base budget by \$54.7 billion in Fiscal 2013 under sequestration, according to a White House report released to Congress.

The cut translates to a 9.4 percent reduction to each of the services' discretionary accounts—except for personnel accounts, which are exempt—states the document, issued by the White House budget office Sept. 14.

Congress mandated the report under the Sequestration Transparency Act of 2012 in order to understand sequestration's effect on defense accounts and federal nondefense programs in Fiscal 2013.

Among the Air Force's cuts would be a \$5.2 billion reduction to operation and maintenance activities; a \$2.7 billion hit to research, development, test, and evaluation work; a \$2 billion reduction in aircraft procurement; and \$167 million less for military construction, according to the report.

"While the Department of Defense would be able to shift funds to ensure warfighting and critical military readiness capabilities were not degraded, sequestration would result in a reduction in readiness of many nondeployed units, delays in investments in new equipment and facilities, cutbacks in equipment repairs, declines in military research and development efforts, and reductions in base services for military families," states the report.

New GPS Satellite Launches

The Air Force and its industry partners launched the third GPS Block IIF satellite into space Oct. 4.

A United Launch Alliance Delta IV rocket carried the Boeing-built positioning, navigation, and timing satellite aloft from Cape Canaveral AFS, Fla. "Once again, the 45th Space Wing, working in concert with our talented mission partners, is delivering space assets that will greatly benefit our nation," said Col. Robert J. Pavelko, the wing's vice commander and the mission's launch decision authority.

The October launch was the first boost of a GPS satellite this year, and the Space and Missile Systems Center expects SVN-65 to be designated "healthy" for navigation use approximately 90 days after the launch.

In the meantime, the satellite will undergo extended navigational signal testing, but indications are good, as controllers confirmed initial contact several hours after the launch, according to Boeing.

Block IIF satellites are designed to provide greater navigational accuracy, a more secure and jam-resistant military signal, a more robust civil signal, and an extended design life. The first IIF satellite entered operational service in August 2010, followed one year later by the second IIF satellite.

MALD-J Starts Operational Testing

The Air Force and Raytheon began operational testing of the Miniature Air Launched Decoy Jammer with four successful test shots, company officials said.

The decoy and jammer variants have "achieved 13 successful flight tests in 13 attempts," according to Raytheon's announcement Sept. 24.

The MALD-J adds radar jamming capability to the basic MALD platform, which Air Combat Command cleared for real-world operations in July.

"MALD saves lives by saturating enemy integrated air defense systems, causing

them to pursue the wrong target instead of attacking our aircraft," said Harry Schulte, Raytheon's vice president of air warfare systems. "With MALD-J, we are building on this combat-proven decoy to provide the warfighter with even more capability."

Several more operational test and evaluation flights were scheduled for the remainder of the year, according to the company.

Reports Complete on Two Accidents

A combination of operator and mechanical errors downed an MQ-1 Predator remotely piloted aircraft that crashed in Afghanistan Feb. 14.

Air Combat Command investigators found that the Predator experienced a dual alternator failure followed by the complete loss of electrical power mid-flight, according to a command press release Sept. 7.

The controller responsible for launch and recovery of the Predator then "failed to adequately assess the nature of the emergency and fully execute proper procedures," states the release.

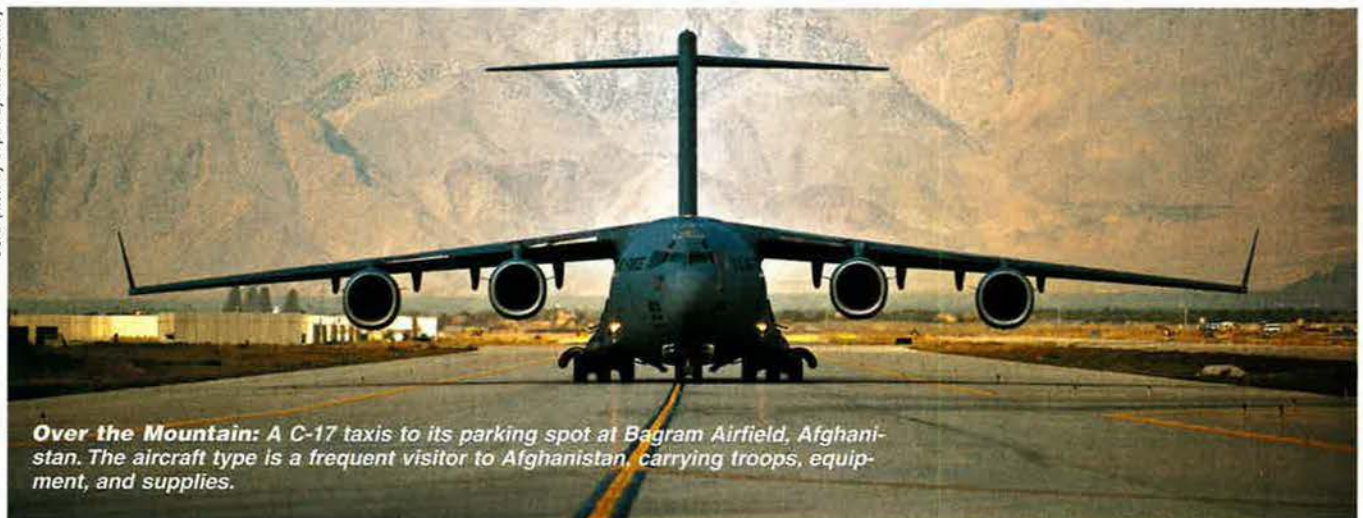
The RPA lost electrical power and crashed in a field northeast of the deployed airfield. The resulting loss of equipment and property damage totaled an estimated \$3.9 million, the abbreviated investigation report said.

In a second incident, engine failure caused by an ignition cable malfunction downed an MQ-1B Predator remotely piloted aircraft during a reconnaissance mission over Afghanistan April 14, Air Combat Command determined.

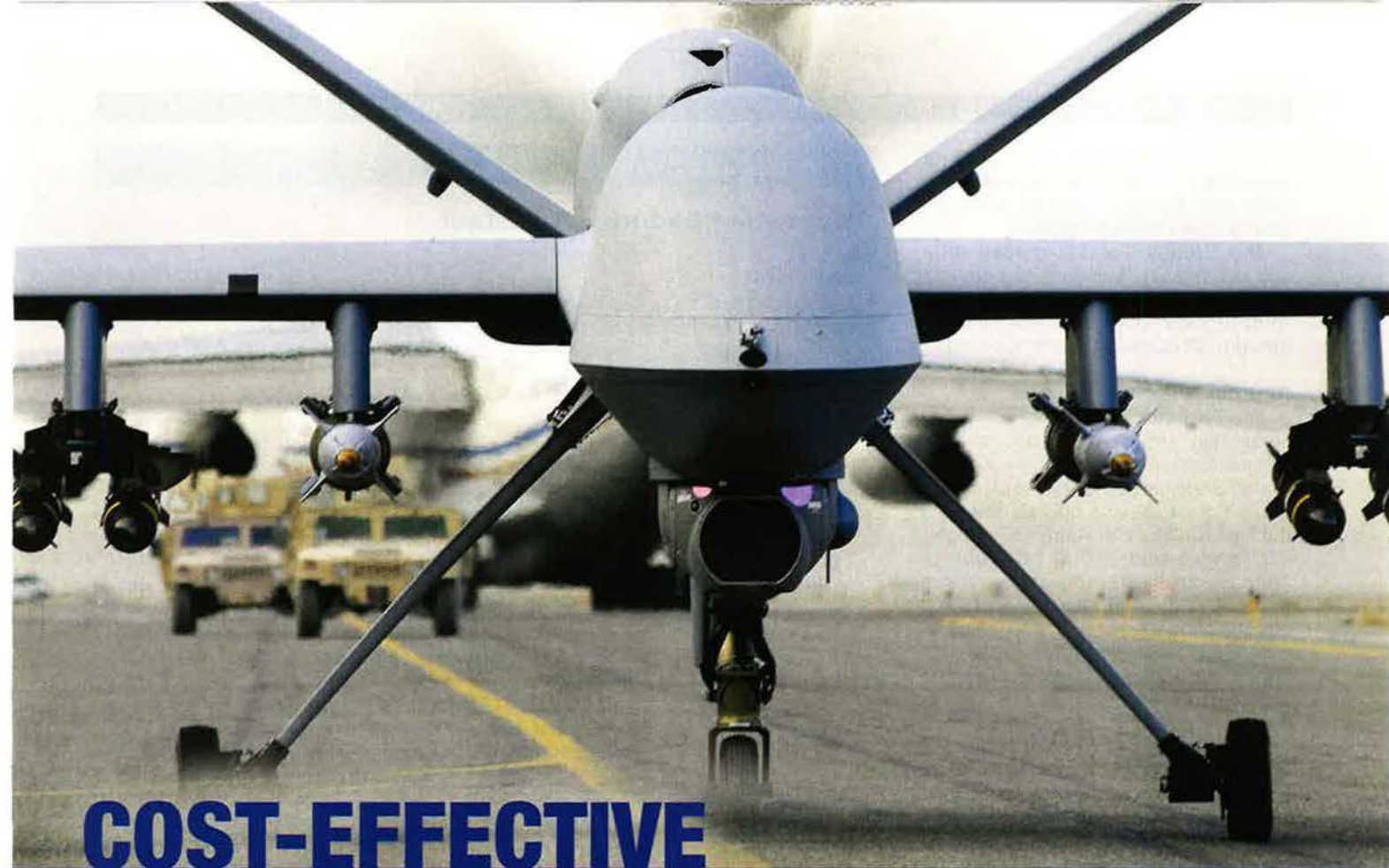
The RPA "experienced a single-point failure that simultaneously caused both ignition circuits" to lose control of engine ignition, stated an ACC press release, summarizing the accident investigation board's findings Sept. 4.

The RPA controllers followed the correct protocols and attempted to recover the aircraft. After deeming

USAF photo by Capt. Raymond Geoffroy



Over the Mountain: A C-17 taxis to its parking spot at Bagram Airfield, Afghanistan. The aircraft type is a frequent visitor to Afghanistan, carrying troops, equipment, and supplies.



COST-EFFECTIVE MULTI-MISSION CAPABLE

Lynx Multi-mode Radar

- State-of-the-art airborne sensor, designed to support diverse missions
- Synthetic Aperture Radar (SAR) provides wide field-of-view photographic-quality images through adverse weather
- Ground Moving Target Indicator (GMTI) detects moving vehicles and dismounts in real-time
- Capable of land or maritime operations
- Currently deployed with the U.S. Air Force MQ-9 Reaper

Lynx Multi-mode Radar: A high-performance force multiplier – deployed and mission-ready today



SAR Imagery



Ground Moving Target Indicator



Maritime Surveillance



it impossible to restart the engine or glide the aircraft safely to base, the crew intentionally crashed it on an unpopulated mountainside.

The Predator and a guided anti-surface missile survived the impact mostly intact and were destroyed by an Army recovery team after they stripped the aircraft of sensitive components.

Another Hot, Busy Season

The Air Force's small fleet of C-130 firefighting airplanes finished a busy season battling wildfires in the western United States in mid-September.

US Forest Service officials released the final two Modular Airborne Firefighting System-equipped C-130s due to favorable conditions in the western states Sept. 14, 153rd Air Expeditionary Group officials stated.

MAFFS C-130s began fighting the wildfires on June 25, with up to six airplanes simultaneously battling blazes across the western US throughout the summer.

As of the stand-down, MAFFS aircraft had released some 2.5 million gallons of fire retardant in 1,011 drops over 10 states, racking up the second highest tally for gallons dispensed in a single season in MAFFS fleet history. In the 1994 season, aircraft dropped five million gallons.

The last two C-130s—Air National Guard assets from California and North Carolina—staged from Sacramento, Calif., for several weeks prior to the end of operations.

"Although our planes and crews have returned home, we all know MAFFS can still be reactivated well into the fall," warned Lt. Col. Donald Taylor, 153rd AEG acting commander.

C-130s from the Wyoming Air Guard and Air Force Reserve Command's 302nd Airlift Wing also took part in wildfire operations, surging several times throughout the summer.

Reserve Raptors Cleared for Ops

Five years after activation, Air Force Reserve Command's 477th Fighter Group at JB Elmendorf-Richardson, Alaska, is now fully capable of executing its combat mission, group officials said in early September.

"Fully operation[ally] capable means that we are ready and able to execute our wartime tasking," said Col. Bryan P. Radliff, 477th FG commander, announcing the milestone Sept. 9.

The group cooperates with Elmendorf's Active Duty 3rd Wing to operate and maintain the base's two squadrons of combat-coded F-22s.

The 477th FG was activated at Elmendorf in October 2007, becoming the Air Force's first Reserve F-22 unit and the only AFRC unit in Alaska.

The War on Terrorism

Operation Enduring Freedom

Casualties

By Oct. 16, a total of 2,133 Americans had died in Operation Enduring Freedom. The total includes 2,130 troops and three Department of Defense civilians. Of these deaths, 1,691 were killed in action with the enemy while 438 died in noncombat incidents.

There have been 17,790 troops wounded in action during OEF.

Liberty's 100K

MC-12 Liberty aircraft of the 4th Expeditionary Reconnaissance Squadron surpassed 100,000 flight hours over Afghanistan on a sortie from Bagram Airfield.

The unit reached the operational milestone less than three years after USAF introduced the MC-12s to Bagram in December 2009, according to 4th ERS officials.

Flying the first MC-12 airframe to arrive at Bagram three years ago, the 4th ERS aircrew reached the flight milestone on a Sept. 11 mission.

"One hundred thousand hours is huge," said Lt. Col. Jeffrey Alexander, 4th ERS commander. "That's about 11-and-a-half years' worth of flying for the MC-12s in two years and nine months."

It took the unit nearly two years of providing ISR to coalition ground forces in theater to achieve 50,000 flight hours, and only a single year to double the figure, according to a statement released in September.

Arizona Warthogs Descend on Bagram

Twenty A-10s from the 354th Fighter Squadron recently deployed from Davis-Monthan AFB, Ariz., to Bagram Airfield, with approximately 400 airmen and support personnel.

"Over the last six months, the men and women of the 354th Fighter Squadron and 355th Aircraft Maintenance Squadron have done a superb job preparing to support operations in Afghanistan," said Lt. Col. Daniel Luce, 354th FS commander.

The unit's Warthogs began departing for Bagram on Sept. 26, two days after the first maintainers and operators left, according to an Oct. 3 news release.

D-M's contingent is replacing a mixed group of Air National Guard A-10s from Arkansas' 188th Fighter Wing at Ft. Smith and Maryland's 175th Wing near Baltimore that arrived in Afghanistan in early July.

The Davis-Monthan A-10s will serve at Bagram as the 455th Air Expeditionary Wing's close air support package, flying strike missions for coalition operations and top cover for personnel recovery missions.

The group reached F-22 initial operational capability along with the 3rd Wing less than a year later in September 2008.

The 477th FG traces its heritage to the Tuskegee Airmen of the 477th Bomb Group in World War II.

Plinking at Pilsung

Air Force Special Operations Command deployed AC-130U gunships to South Korea for the first time in more than a decade to participate in live-fire close air support training with South Korean special operations forces.

For Exercise Teak Knife, South Korean special operators directed the two gunships as well as F-16s and A-10s from the 51st Fighter Wing at Osan Air Base against targets on the Pilsung Range complex.

Additionally, five members of Osan's 51st Security Forces Squadron trained to direct air strikes in defense of Osan,

should the base come under attack, according to Osan officials.

Along with the gunships, some 100 US special operators and support personnel deployed for the exercise, which ran Sept. 2 to Sept. 14.

WinFly Ends, Deep Freeze Begins

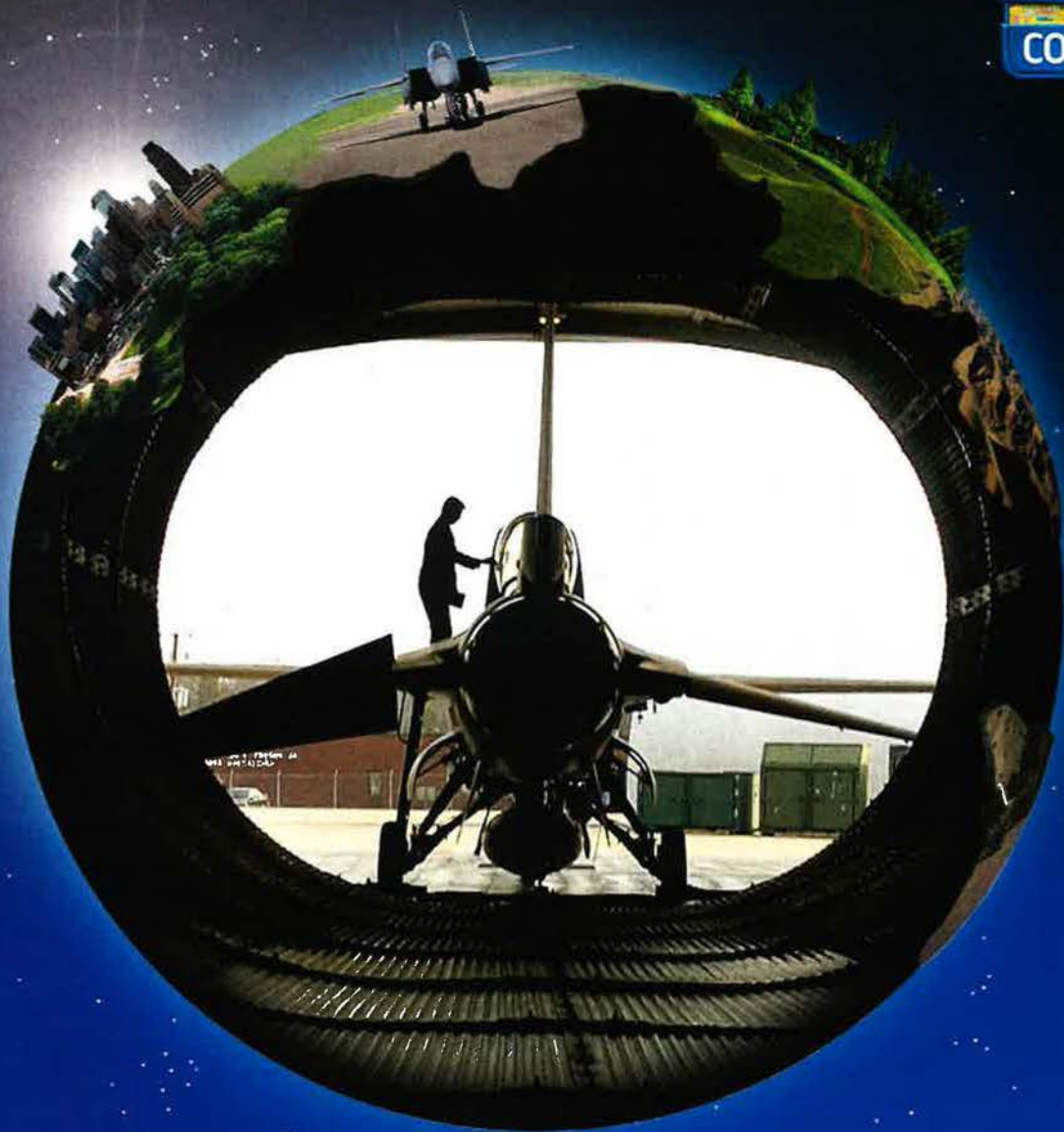
A C-17 from JB Lewis-McChord, Wash., launched aerial resupply activities for the 2012-2013 season of Operation Deep Freeze, the US military's mission providing logistical support to US scientific researchers in Antarctica, Oct. 1.

Active Duty and Reserve airmen of McChord's 62nd Airlift Wing and Air Force Reserve Command's 445th AW deployed with the airlifter to the staging base at Christchurch, New Zealand, on Sept. 29, according to McChord officials.

In August, a McChord C-17 flew six preseason missions to the barren

Panasonic
ideas for life

Panasonic recommends Windows® 7.



Controlling the air starts from the ground up. Rugged Panasonic Toughbook® mobile computers powered by the Intel® Core™ i5 vPro™ processor. Giving Air Force specialists the eTools they need to efficiently manage maintenance operations in any environment is how we're engineering a better world.

Contact us at airforce@us.panasonic.com

Available on the AFWay eTools Program and QEB.



Toughbook 53 Toughbook 31 Toughbook H2 Toughbook 19

Intel, the Intel logo, Intel Core, Intel vPro, Core Inside and vPro Inside are trademarks of Intel Corporation in the U.S. and/or other countries. Toughbook notebook PCs are covered by a 3-year limited warranty, parts and labor. To view the full text of the warranty, log on to panasonic.com/toughbook/warranty. Please consult your Panasonic representative prior to purchase. Panasonic is constantly enhancing product specifications and accessories. Specifications subject to change without notice. ©2012 Panasonic Corporation of North America. All rights reserved. Controlling_the_air_FG_FY12-3

TOUGHBOOK®

SOLUTIONS FOR U.S. AIR FORCE

Senior Staff Changes

NOMINATIONS: To be Lieutenant General: Christopher C. **Bogdan**. To be Major General: Andrew M. **Mueller**. To be ANG Major General: Donald P. **Dunbar**. To be ANG Brigadier General: Matthew P. **Jamison**. To be AFRC Brigadier General: Gerard F. **Bolduc Jr.**, Jon A. **Weeks**.

CHANGES: Lt. Gen. (sel.) Christopher C. **Bogdan**, from Dep. Dir., Jt. Strike Fighter Prgm., OSD, Arlington, Va., to Dir., Jt. Strike Fighter Prgm., OSD, Arlington, Va. ... Brig. Gen. Scott L. **Dennis**, from Cmdr., Kandahar Airfield, US Forces-Afghanistan, CENTCOM, to Spec. Asst. to the Cmdr., ACC, JB Langley-Eustis, Va. ... Brig. Gen. John K. **McMullen**, from Cmdr., 325th FW, AETC, Tyndall AFB, Fla., to DCS, Ops., Allied Air Command, Allied Command Ops. (NATO), Ramstein AB, Germany.

SENIOR EXECUTIVE SERVICE CHANGES: Richard K. **Hartley**, to Asst. DCS, Strat. Plans & Prgms., USAF, Pentagon ... Gregory C. **Radabaugh**, to Dir., Jt. Info. Ops. Warfare Center, JBSA-Lackland, Tex. ... Barbara A. **Westgate**, to Exec. Dir., AFSPC, Peterson AFB, Colo. ■

continent, ferrying 319 passengers and more than 230,000 pounds of cargo to McMurdo Station, Antarctica. Despite weather delays, the team extracted 69 passengers and more than 35,000 pounds of equipment on return flights to Christchurch.

McChord C-17s and ski-equipped LC-130 "Skibirds" from the New York Air National Guard's 109th AW in Scotia form the air component of Joint Task Force-Support Forces Antarctica. The C-17 primarily shuttles between Christchurch and McMurdo. LC-130 flights from McMurdo farther inland were slated to begin Oct. 18, according to a task force statement on Sept. 26.

Flaming Titanium

An unexplained engine fire caused an F-15E to crash during an aggressor training sortie from the 380th Air Expeditionary Wing's operating location in Southwest Asia May 3, stated Air Combat Command.

"A rare ignition of the titanium components" within the right engine severely damaged vital systems, leading to the crash, according to ACC's accident inves-

tigation board, which released its findings in a report Sept. 26.

Midway through the training engagement, the Strike Eagle's crew experienced a violent concussion during a full-afterburner climb. The pilot leveled the aircraft, and immediately shut down the right engine, responding to an overheat warning. Struggling to control the aircraft, the pilot applied full left stick and rudder to keep the fighter near level. He called for his backseater to eject, then canceled the order after regaining momentary control. Moments later, a complete power failure forced the crew to eject. Both were recovered unharmed.

The F-15E belonged to the 391st Fighter Wing from Mountain Home AFB, Idaho. ACC estimated losses and damage from the crash at \$45.5 million.

Grading Gulfstreams

Medical flight crews at Ramstein AB, Germany, tested use of a civilian Gulfstream III jet as a way of speeding aeromedical evacuations from Africa earlier this fall.

"Each takeoff and landing places stress on patients, and any delays in a flight could

hinder a patient's care," said SrA. Gabriela Perez, a technician with Ramstein's 86th Aeromedical Evacuation Squadron.

The Learjet C-21s the squadron currently uses for low-capacity transfers lack sufficient range to reach Africa unrefueled, so the unit has been exploring the feasibility of using civil Gulfstreams instead.

"This is something that has been in the planning phase for more than a year," explained Lt. Col. Paul Yenter, air evacuation chief in Ramstein's 603rd Air and Space Operations Center. "Once the waivers to fly on the G3 were complete," along with the training, unit members just had to "wait for the right patients," he said.

The first flight departed Ramstein on a one-day mission, recovering two ambulatory patients from Africa Sept. 3, according to a news release.

Spayed Blade

A fan blade flawed in manufacturing caused an F-16C to crash during ground-support training over the Utah Test and Training Range May 4, Air Combat Command investigators determined.

Eight years of cracking and wear along the manufacturing anomaly at the base of the fan blade caused it to snap off, causing "catastrophic damage to the engine fan, compressor, and turbines," ACC said, outlining the accident investigation findings in a release Sept. 6.

The pilot "correctly applied" procedures, trying to restart the engine for 90 seconds before he was forced to eject from the crippled jet, the accident investigation board report said.

The pilot escaped unscathed, but the fighter was destroyed upon impact, resulting in a \$23.9 million loss, according to ACC.

Investigators faulted the "failure to detect the anomaly" during an engine installation inspection in 2004 as the main contributing factor in the crash.

Both the pilot and the F-16 were assigned to the 421st Fighter Squadron at Hill AFB, Utah.

CV-22s and MC-130Js to Britain

Air Force Special Operations Command plans to stand up a squadron of CV-22 Ospreys at RAF Mildenhall, UK, next year, AFSOC boss Lt. Gen. Eric E. Fiel said at AFA's Air & Space Conference in September.

"Probably June or July [2013], we'll be standing up our third CV-22 squadron when the first CV-22s land at Mildenhall," he said speaking at National Harbor, Md., Sept. 19.

The command had originally planned to deploy CV-22s to England sometime this year.

Next summer, AFSOC also plans to replace its legacy MC-130 covert operations aircraft at Mildenhall. Shortly after the Ospreys arrive, "we'll begin to recap

The Eye of the Storm: C-130Js sit out a storm at Dyess AFB, Tex. Dyess recently received the 23rd of 28 such tactical airlifters slated for the base. See "H Model Hercs Leave Dyess," p. 26. Dyess will be home to the largest C-130J fleet.



USAF photo by A1C Damon Kasberg

A next generation fighter
takes a next generation engine.



Pratt & Whitney is the only company in the world delivering 5th generation fighter engines. Our F135 engine is powering the F-35 Lightning II today, and our decades of operational experience and technology have produced the most capable and reliable fighter engine ever. Ready today and for tomorrow's challenge. See it for yourself at f135engine.com.



Power People Depend On.™



Pratt & Whitney
A United Technologies Company

China's Raptor?

Clearer photos of China's second stealthy-looking fighter design emerged on the Internet as Defense Secretary Leon E. Panetta kicked off his diplomatic visit to Beijing in September.

The Shenyang F-60—also called the J-21 or J-31—resembles the F-22, but with the intakes more reminiscent of the F-35 strike fighter. The F-60 appears to lack the Raptor's stealthy thrust-vectoring engines, and there appear to be no attempts at a reduced radar cross section with the engines currently installed in the airplane.

The F-60's canopy, nose, and overall dimensions closely mimic those of the F-22, and the photos seem to show internal weapon bays arranged similarly to the Raptor's.

Unlike the F-22, however, the fighter sports a ruggedized undercarriage, potentially suiting it to future carrier-deck operations.

Photos of what may have been a partially disassembled F-60—heavily shrouded en route to testing earlier this year—implied the aircraft is smaller than the Chengdu J-20, unveiled by the Chinese at the end of 2010.

As such, the larger J-20 seems designed for longer-range strike roles, while the F-60 appears to be optimized for air superiority.

our ageing MC-130 fleet, both our Talon IIs and our Combat Shadows," by replacing them with the MC-130J Commando II, said Fiel.

AFSOC hopes to introduce CV-22s into the Pacific region as well by 2014, he added.

The 500 F119s

Pratt & Whitney delivered the 500th F119 turbofan built for the F-22 Raptor fleet in September and plans to wrap up production of the fifth generation power plant by year's end, company officials said.

The F119 also recently surpassed 20 years of simulated use in accelerated mission tests, the company announced in a release Sept. 25.

"Delivery of the 500th F119 engine, along with our accomplishments in AMT, provides tangible proof of the durability of this fifth generation propulsion system," said company F119 director Cliff Stone. "We continue to demonstrate substantial life-extension capabilities and cost savings" much as the company has for F100 engines used on the F-15 and F-16, he said.

"The F119 AMT demonstrates our ability to deliver similar cost savings for the F-22," said Chris Flynn, vice president of F119 and F135 engine programs.

To date, F119 engines have logged more than 230,000 operational flight hours on the F-22 fleet, according to the company.

Lancer Torture Test

Boeing recently began fatigue-testing a B-1B bomber wing late this summer and was scheduled to begin similar testing on the Lancer's fuselage this month.

The stress testing at the company's facility in Tukwila, Wash., will help validate the aircraft's predicated life expectancy,

revealing areas of concern for future maintenance and repair planning.

"This comprehensive testing is a proactive way for Boeing to meet its mission of keeping the B-1 bomber fleet ready and viable," said Rick Greenwell, the company's B-1 program director.

Boeing projects that the B-1 will remain structurally viable out to 2050.

A Fourth Serving of BACN

Bombardier delivered a Global 6000 business jet destined for conversion to an Air Force E-11A overhead communica-

tions relay aircraft, the Canadian company revealed in September.

"The intention is to equip this new addition with the battlefield airborne communications node, or BACN, in time for deployment next summer," the company stated in a press release Sept. 6.

After conversion, this airframe will be the fourth BACN-equipped Bombardier Global aircraft to join the inventory.

USAF's three other E-11As have been supporting coalition operations in Afghanistan, alongside several similarly equipped EQ-4B Global Hawk remotely piloted aircraft.

The BACN communications suite, supplied by Northrop Grumman, enables disparate battlefield communications systems to share data, even in rugged terrain.

Handover ceremonies took place at Bombardier's facility in Connecticut Aug. 30.

Lot Two F-15E AESAs

Raytheon received a contract to build the second lot of APG-82(V)1 active electronically scanned array radars for the Air Force's F-15E fleet, the company announced.

Delivery of Lot 2 low-rate initial production AESA units is scheduled to begin in February 2014, according to a Raytheon release Sept. 17.

Under the F-15E Radar Modernization Program, Boeing is installing the Raytheon-supplied AESAs on the Strike Eagle fleet, replacing the aircraft's existing APG-70 mechanically steered radar.



Tie Me Kangaroo Down, Sport: SSgt. T. J. Grover (l) and A1C Rachael Orazine ready straps used to secure airdrop bundles in the belly of a C-130J at Kandahar Airfield, Afghanistan. Both airmen are loadmasters with the 772nd Expeditionary Airlift Squadron. Loadmasters run preflight checks of the aircraft, make sure all equipment is working, supervise cargo and passenger loading, and calculate the weight and balance of the load.

USAF photo by TSgt. Chad Chisholm

ACTIVE ELECTRONICALLY
SCANNED ARRAY



**THE VALUE OF
SPARKING THE
AESA REVOLUTION.**

As a pioneer of AESA radar, Northrop Grumman has been at the forefront of AESA innovations for over 60 years. Today, our expertise continues to define trends in radar technologies, and we offer more proven and affordable AESA solutions than anyone else. *That's why we're a leader in multi-mission radar solutions from undersea to outer space.*

THE VALUE OF PERFORMANCE.

NORTHROP GRUMMAN

Realistic Torture

Lockheed Martin engineers inspecting the F-16C Block 50 airframe soon to undergo a 12,000-hour full-scale durability test discovered the aircraft's left wing was not original to the airframe.

"The left wing was installed onto the aircraft postproduction," said Air Force spokesman Richard Essary at Hill AFB, Utah.

Officials picked airframe 91-0409 as a representative example of the Block 40/42/50/52 inventory, expecting it to have original components with approximately 3,800 flight-hours of wear. Despite the discrepancy, USAF will go ahead with the "torture" test and doesn't expect it to delay service life extension program plans, said Essary, quoting F-16 program management.

"Many flying units ... swap aircraft parts in order to meet flying schedules and/or real-world missions," he said in a Sept. 13 statement. This is "not an unusual occurrence," and "therefore, the wing mismatch is indeed representative of the fleet," he said.

Lockheed Martin accounted for the newer wing with "specific flight-load criteria" and has already "updated the overall test spectrum," said Essary.

Testers will take advantage of the situation to see if there're any structural implications of wing mismatches throughout the fleet, he noted.

Raytheon will assemble 10 units during the Lot 2 production run according to prime contractor Boeing.

In addition to enhancing reliability, the APG-82 can simultaneously detect, identify, and track multiple air and surface targets at longer ranges than the current APG-70, according to Raytheon.

The company began Lot 1 production totaling six units last fall.

First Cadet T-53A Solo

Cadet 1st Class Staci Rouse became the first cadet to solo in the Air Force Academy's new Cirrus T-53A single engine flight training aircraft on Sept. 7.

Rouse lifted off on the historic flight at the academy's airfield, flying once around the pattern before landing.

"I had much more confidence flying the aircraft than I expected I ever would after my first flight," said Rouse, a senior from Woodbridge, N.J., with Cadet Squadron 40.

"I was overjoyed to see everyone waiting for me after the flight because they all helped me so much," she added, thanking her classmates and instructors who greeted her after the flight.

Rouse "was definitely ready for solo and well-qualified to be the first solo cadet," said her instructor, Lt. Col. Scott Oskvarek, a Reservist with the 70th Flying Training Squadron. "I'm extremely proud of her accomplishment."

BACN Bits and WiFi

The Air Force awarded Northrop Grumman a \$20 million contract to add beyond-line-of-sight command and control functions to one of its E-11A communications-relay aircraft.

BLOS C2 will allow the Battlefield Airborne Communications Node-equipped jet to spread "wireless Internet over the

battlefield," giving ground forces access to video, imagery, and Internet chat, according to a company announcement Sept. 24.

The Air Force's small, combined fleet of BACN-equipped E-11As and RQ-4B Global Hawk remotely piloted aircraft currently provide near-constant communications relay over Afghanistan, the company revealed.

The E-11A slated for the upgrade is one of three Bombardier BD-700 Global Express airplanes already modified with BACN payloads. Technicians at Hanscom AFB, Mass., are scheduled to complete BLOS C2 installation and integration work on this aircraft by next June.

The Air Force previously announced it is undertaking conversion of a fourth Bombardier aircraft to E-11A standards to augment the existing BACN fleet.

H Model Herks Leave Dyess

The last two C-130H transports assigned to Dyess AFB, Tex., departed for their new home at Little Rock AFB, Ark., this fall, as part of Dyess' ongoing transition to the C-130J.

"We're not only saying goodbye to the H models that have had a great history here for 37 years, but we are losing flight engineers and navigators" as well, said Col. Walter H. Ward, Dyess' 317th Airlift Group commander. "It's a bittersweet day."

In March 1975, Dyess received the first C-130H to roll off Lockheed Martin's assembly line in Marietta, Ga., according to the base.

Capt. Christopher Dorrough—son of the pilot who ferried the first C-130H to Dyess—flew the final C-130H to leave the Texas base Sept. 26. Lockheed Martin delivered the 23rd of Dyess'

planned 28 C-130Js just two weeks before.

McChord Adds C-17

Boeing delivered the Air Force's 218th production C-17 Globemaster III to JB Lewis-McChord, Wash., in mid-September.

The commander of Air Force Reserve Command's 446th Airlift Wing, Col. Bruce A. Bowers Jr., piloted the factory-fresh airlifter from Boeing's assembly plant in Long Beach, Calif., to McChord Field Sept. 14, base officials said.

The 446th AW cooperates with the Active Duty 62nd Airlift Wing to operate and maintain McChord's three C-17 flying squadrons.

USAF has ordered 224 C-17s from Boeing.

Wyatt Inducted Into Order

The Air National Guard's enlisted corps inducted Lt. Gen. Harry M. Wyatt III, Air Guard director, into the reserve component's Order of the Sword, honoring him for his contributions to supporting enlisted Air Guardsmen.

The induction ceremony took place on Sept. 28 in Tulsa, Okla., according to the National Guard Bureau. Wyatt has led the Air Guard since February 2009.

Gen. Bennie L. Davis, 1928-2012

Retired Gen. Bennie L. Davis, commander of Strategic Air Command from August 1981 through July 1985, died Sept. 23 in Georgetown, Tex. He was 84 years old.

Born in McAlester, Okla., in 1928, Davis graduated from West Point in 1950 and subsequently joined the Air Force, earning his pilot wings in 1951.

He flew more than 9,000 hours as a bomber pilot throughout his career, including cockpit time in the B-29, B-47, B-52, and B-57.

Among his early assignments, Davis served as a B-52 instructor pilot. He then flew the B-57 during the Vietnam War from 1967 to 1968, accumulating more than 350 combat hours, according to his official service biography.

Later, Davis led the Air Force Recruiting Service and became deputy chief of staff, personnel. In April 1979, he received his fourth star for his appointment as commander of Air Training Command at Randolph AFB, Tex. He then led SAC until his retirement in August 1985. A maintenance facility at Offutt AFB, Neb., home to SAC headquarters, is named in his honor.

Davis is to be interred with full military honors at Fort Sam Houston National Cemetery in San Antonio early this month. ■

command and control and more ...



Procurer one aircraft; perform multiple roles. All in a large-volume platform that costs millions less to procure – and less than half as much to operate – than many competitors. It's only logical that the PC-12 NG is being deployed for Command and Control missions in some of the most austere and harsh environments around the globe. Combine real-

time data processing and ground communication with long loiter capability and high dash speed for long-range standoff. The result is the most cost effective, flexible and versatile C2 platform available. Call us today for a demonstration of the most compelling asset for your arsenal – the Pilatus PC-12 NG. Clearly, more is more.



PILATUS

Call 800.745.2887
or visit PC-12Spectre.com

Advocating for

DOD, Congress, and the American public don't fully understand airpower's contributions to national defense. This causes numerous problems.



The Air Force has been among the most adaptable elements of the US military over the last decade-plus of war. USAF has perfected the art of joint operations and allowed all the other services to operate without ever having to worry about whether they would get the support they need, said Army Gen. Martin E. Dempsey, Chairman of the Joint Chiefs of Staff, during the Air Force Association's Air & Space Conference in September.

Today, airmen are operating alongside the Army, Navy, and Marine Corps—moving people and equipment across the globe, leading caravans down dangerous IED-laden roads in Afghanistan, providing overwatch and close air support to troops on the ground, flying spacecraft, and downloading data.

Combatant commanders have come to rely on the Air Force's dominance of air, space, and cyberspace, but few actually know what is required to achieve the mission. Through all these joint operations, the Air Force has largely opted not to advocate for itself. That has to change, concluded dozens of active and retired senior leaders at the conference held at National Harbor, Md.

During his conference address, Air Force Chief of Staff Gen. Mark A. Welsh III told the story of Army Maj. Gen. James C. Boozer, deputy commanding general of US Army Europe. Boozer, who has commanded at almost every level, including four times during combat, told Welsh that as a commander he worries about everything

the Air Force

By Amy McCullough, Senior Editor



L-r: SrA. Antonio Ortega, MSGT. Nelson Rodriguez, and SrA. Christian Marrero-Santana load a GBU-54 bomb onto an F-16 at Homestead AFB, Fla. The average airman is younger, and the force is more well-educated.



A1C Tevin Duhart checks for debris in an oil sample taken from an A-10 engine at Selfridge ANGB, Mich.

from ammunition storage points to tactics, logistics, and intelligence, “but not once in my career have I ever worried about anything ‘up there,’” said Welsh, quoting Boozer, referring to command of the air.

Boozer also freely admits he has no idea how it happens either, added Welsh.

“He just doesn’t worry about it because it’s never wrong. ... That is an incredible testimony. It’s also a little worrisome because he doesn’t know how it happens,”

said Welsh. “He has no idea what goes into it. He doesn’t know the resources required. He doesn’t understand how many people are operating to make sure he doesn’t have to worry about what’s up there. I believe my job, our job, is to tell him.”

Because Boozer isn’t alone.

The general consensus at the conference was that it is time for USAF to stop resting on the laurels of airpower and start shouting

its accomplishments loudly and proudly. Retired Lt. Gen. David A. Deptula, former deputy chief of staff for intelligence, surveillance, and reconnaissance, said the Air Force has always assumed that airpower speaks for itself. The problem with that theory, said Deptula, is that Washington, D.C., is a “town where people will argue successfully that one plus one equals three and then [base] national policies on that.”

Becoming “Air-Minded”

Deptula argued that “good strategy is developed through competition of ideas, but to have good competition you need good advocacy.”

Retired Maj. Gen. Charles J. Dunlap Jr., former deputy judge advocate general, said airmen need to be more aggressive while defending their service. Too many airmen believe their job ends when they make the ground commander successful. They must become more “air-minded” and not place so many constraints on airpower, he said.

“The other teams are playing rough and they are advocating strongly,” said Dunlap during the same panel discussion with Deptula. “I firmly believe that’s how you get the best. You don’t launch ad hoc attacks. You talk about what you are trying to achieve, which is mission success and wise stewardship of taxpayer resources.”

The future will continue to be fiscally daunting and the international landscape

Shaping the Future Force

The composition of the US Air Force will change in the coming years, not only in its force structure but also in its personnel footprint, senior leaders repeatedly stressed at AFA’s Air & Space Conference in September. The future Air Force will be a smaller, more adaptable, and deployable force transitioning from a war footing to a peacetime service. Airmen today must be better educated, more coalition-minded, and understand that the service is facing pressures to manage its growing personnel bills in the coming years.

The Air Force that fought the Cold War once numbered more than a half-million airmen. It is now closing in on an end strength of 332,000. Fewer bodies means less overhead, but also less flexibility when it comes to staffing in areas such as squadron support functions. “We are a force that spends a lot of time doing the mission of the Air Force out there,” said Lt. Gen. Darrell D. Jones, head of manpower, personnel, and services on the Air Staff. “And you know, we pay a lot for this force.”

Over the past two decades, the Air Force has reduced manpower some 38 percent—but at the same time, the price of the force has gone up 23 percent. Not per-airman—overall. “If you were the accountant in your family and you cut something by [38] percent, while the price went up 23 percent, somebody would be asking to look at your books,” Jones said.

Before Desert Storm, the approximate pay gap between the Active Duty and the civilian sector was around 15 percent, Jones pointed out. “We’ve been very blessed, during the last 20 years ... that that gap has closed. And so the price of our force is going up, and that’s something that we have to deal with.” While not as attention-grabbing as major recapitalization programs, personnel costs in the Air Force budget—from pay, to benefits, to child care, and to morale and recreation programs—make up almost 29 percent of the budget.

As the service looks to pare down its overhead and decide where to separate and where to keep personnel, it is being

careful to preserve “seed corn”—and avoid creating career bathtubs where certain fields are hollowed out of experience for extended periods. “We have taken a policy, we’ve taken a strategy ... to protect the force today and in the future,” Jones said. He pointed out that today’s force is young—74 percent of airmen are under 34 years old. It is a tech savvy force and as such, it has different quality of life preferences and priorities and responds to different incentives than the Cold War generation.

The Air Force has to find a way to keep up with what a younger force believes is important for quality of life and services. Jones said after surveys across the force, the Air Staff is going to focus on “core” areas of programs for airmen and their families—such as fitness facilities, child care, youth programs, and libraries. “We are going to be challenged to fund 100 percent of the core,” Jones cautioned.

Retention is at a 17-year high, so to strike the right balance the Air Force has to involuntarily separate some airmen.

is becoming increasingly dynamic and uncertain, making cost effectiveness even more vital to mission success, said Air Force Secretary Michael B. Donley.

"As this tension grows, as the uncertainty continues, we need to ensure that we remain well-grounded in the foundations of our Air Force," said Donley. "The more uncertainty there is, the more budgetary churn ahead, the more important it is to come back to basics—to the Air Force family and the central role of airmen in the fight."

However, the current environment means the service must take "an honest look in the mirror" and figure out exactly what role it will play in the future American national security spectrum, said Welsh. Then it must fight with all its might to ensure mission success.

"The Air Force matters. It's important that we tell that story. We're not better than anybody else, folks, but we're just as essential," he continued.

Part of the problem is that the Air Force's message often gets lost in translation, thanks in large part to a continuously evolving bowl of service alphabet soup that can be difficult for even the most senior Air Force leaders to digest. Welsh acknowledged even he doesn't understand "what all the terminology means," saying he is "not understanding the stories" when he hears them. The constant evolution in



USAF photo by Scott M. Ash

Gen. Mark Welsh III, Air Force Chief of Staff, said the hostility the current budget request generated in Congress is untenable.

terminology is causing a disconnect within the Air Force, among its sister services, and with Congress, even though the overall mission has not changed.

Executive Order 9877, part of the 1947 National Security Act—through which the Air Force was born—states that the Defense Department's newest service would be responsible for achieving and maintaining "air superiority, strategic air forces, air reconnaissance, airlift, air sup-

port for ground forces, [and] coordination of air defenses," said Welsh.

That's exactly what the Air Force does today.

"We can call [these missions] whatever we want, but this is what [combatant commanders] are looking for. They all understand these words" said Welsh. "My concern is we're not telling our own story well enough. We're trying, but something's not connecting."

"To protect the seed corn, you've got to make people get out," Jones said bluntly, and over the next few years the service will be tinkering with its approaches to get people to separate, starting with voluntary separation, then using incentives, and only lastly involuntary separation initiatives. "We've gotten pretty scientific these days," he said—noting airmen can go down to their group and Air Force Specialty Codes to find out exactly what's available for options and incentives. "All the services are in lockstep because, frankly, whatever we offer to an airman needs to be offered to a soldier, a sailor, a marine, and a coastie because we have to do this together," Jones added.

As billets have come down, USAF has consolidated support staffing and functions at field operating agencies and will continue to do so.

At the same time that overall end strength is going down, the Air Force is expanding in growing missions such as cyber operations and remotely piloted aircraft.

As the force shrinks, both Jones and USAF's top enlisted airman, CMSAF James A. Roy, believe education of the force must be protected—as demands on today's airmen are far different than they were a generation ago. Jones noted when he entered the Air Force in 1979, 24 percent of all the enlisted force in the Air Force had attained some education beyond high school. Today that number is 96 percent. The success of the Community College of the Air Force has a great deal to do with this, he said, but educational opportunities are key to a versatile, adaptable force, and while tuition assistance programs will face pressure in the coming years, the service needs to be careful to protect its investment in its personnel development.

Roy stressed development of the NCO corps in his speech at the conference, noting today's airman is a joint and international airman.

Roy has pressed to expand international NCO training and exchanges with partner nations such as Canada and Singapore—and announced at

the conference that a new partnership exchange would soon open its doors in South Africa.

"It's taken a long time ... but [the expansion is] very important because if you look at the deliberate development of airmen today, this is what it's going to take—it's going to take somebody with a joint background," Roy said. "Somebody that understands this coalition much better than most of us did when we grew up."

He also announced a new position in the Air Force Secretariat's international affairs shop, where SMSgt. Manny Pinheiro will be the first NCO to work enlisted issues at that level, building partnership for events, exercises, and training with NCOs.

Roy said the force today is well-prepared for the changes coming. "There's a lot of burps to come, for sure, but we are going to be OK," he said. "We train you and educate you for a reason. ... We want you to think your way through this."

—Marc V. Schanz



A MAFFS-equipped C-130 drops fire retardant on a West Texas fire. USAF is looking to communicate effectively all of what it does in support of the nation as well as the other services.

Dempsey urged the Air Force to “hang onto fundamentals,” acknowledging that stopping the Air Force also would halt the other services from accomplishing their own missions. Without air superiority, said Welsh, the Army and Marine Corps would have to change the way they fight, “what they buy, how they train, maybe even who they recruit.”

“We need to make that very clear to everyone,” emphasized Welsh.

The Air Force’s inability to articulate what it does and why has morphed into a serious trust issue over the years with both Congress and industry—a topic that came up during Welsh’s confirmation hearings this summer.

“The feeling is, the Air Force doesn’t ... tell the whole story or tries to slant the story,” Welsh told reporters after his speech in September. “I don’t know anybody in

the Air Force who does that. I certainly do not. And if I see it, I won’t allow it to happen.”

Though aware of the problem, senior leaders haven’t quite figured out exactly how to fix it. The solution could be as simple as meeting regularly with members of Congress, obtaining some insight on how each side thinks, offered Welsh.

A Matter of Perception

More likely, though, the solution is more complicated. The Air Force is going to have to offer up more realistic plans, acknowledge differing views, and present all the facts at one time, said retired Gen. Bruce Carlson, former Air Force Materiel Command commander and former National Reconnaissance Office director.

Carlson said he had luck turning around the NRO’s broken relationship with Con-

gress by presenting lawmakers “a single ... go-to guy” having all the facts on the agency readily available. The NRO—like the Air Force—had earned a devious reputation by sending plans to the Hill that simply couldn’t be executed.

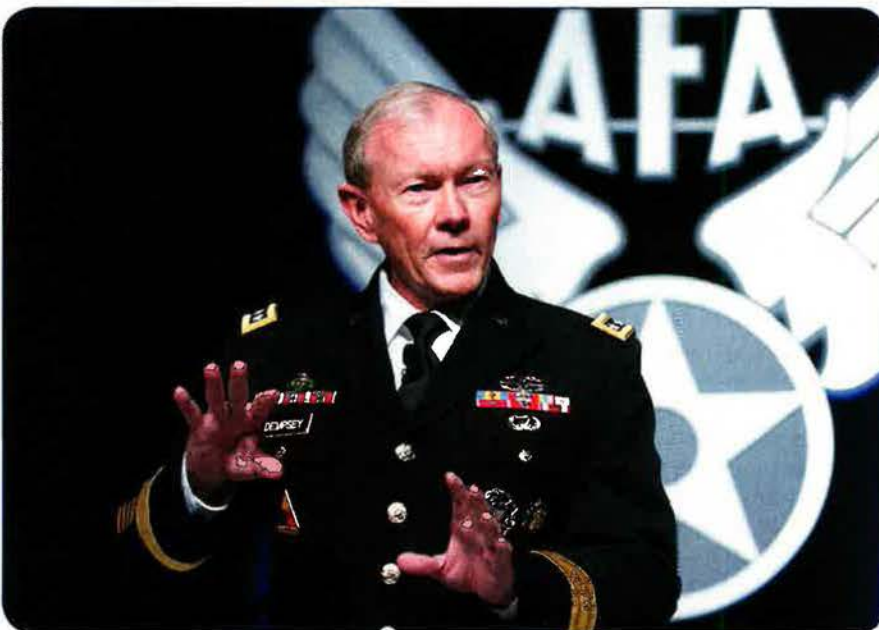
During the same panel discussion, retired Gen. Gregory S. Martin, former commander of US Air Forces in Europe and Air Force Materiel Command, echoed Carlson’s comments, saying it’s “critical we represent ourselves properly” and be mindful of how the Air Force is perceived—even if it is “not a pleasant conversation.”

The F-35 Joint Strike Fighter Program is perhaps the best example of how pie-in-the-sky planning and tainted relationships can affect the mission.

Maj. Gen. Christopher C. Bogdan, the F-35 deputy program executive officer, caused a few dropped jaws on the expo floor when he boldly stated that the relationship between F-35 manufacturer Lockheed Martin, the Joint Program Office, and F-35 stakeholders—the Air Force, Navy, and the Defense Department more broadly—was “the worst I’ve seen. The worst I have ever seen.”

The F-35 is projected to be the most expensive acquisition program in DOD history and one of the most important. Though the Air Force, Navy, and Marine Corps maintain it is vital for future operations, the F-35 has been plagued with a series of highly publicized cost overruns and lengthy delays.

Bogdan said he now sees “some glimmer of hope” for the program, but he also acknowledged there is no chance of success if the relationship between government and industry remains strained. That’s “a cultural thing” that Lockheed Martin, the JPO, and DOD all need to work on, he said.



Chairman of the Joint Chiefs of Staff Gen. Martin Dempsey told the AFA conference attendees that USAF has perfected the art of joint operations.



A BOMBER LEGACY LIKE NO OTHER.

For more than 91 years, Boeing's unmatched expertise in the design, integration, manufacturing and support of bomber aircraft has helped bring strength and victory to our nation's armed forces. As the challenges of the future loom, we stand ready to support the U.S. Air Force in the critical development of the next-generation bomber.

 **BOEING**

"It should not take 10, 11, or 12 months to negotiate a contract with someone we've been doing business with for 11 years," blasted Bogdan. "There's something fundamentally wrong with that. We've got to fix it. ... I would tell you that I think that's the biggest threat to this program."

The Air Force's proposed force structure cuts will be another major test of an already fragile relationship with Congress as service leaders, lawmakers, and the Council of Governors work to "fine tune" the plan submitted in the President's Fiscal 2013 budget request, said Donley.

The Air Force wanted to cut 5,100 Air National Guard positions, 900 Reservists, and 3,900 Active Duty billets from its payroll next fiscal year, in an effort to help DOD reach the \$487 billion in defense cuts over the next decade as mandated in the 2011 Budget Control Act. Air Force leaders said further cuts to the Active force were not possible without hurting readiness.

Much Work Left To Do

Congress didn't buy that argument, though, saying the Air Force failed to present any evidence to back up its claim. The National Guard and the Council of Governors got into the debate, saying the reserve component provides a better bang for the Air Force's buck and arguing that the cuts were unfair.

It is not clear what the final numbers will be, or how the debate will play out, but the Air Force has a lot of work to do if it wants to repair these relationships and present a unified message by the time the 2014 budget request rolls out this winter.

At the conference, Welsh called the current budget request and the hostility it generated in Congress "just untenable." However, in what appeared to be a competing opinion, Donley said the Air Force would "stand firm on our strategic decisions." Both said they were committed to working with all parties to reach an agreement.

Donley said it is understandable that Congress would find USAF's proposal a bit jarring, seeing as it was "the first time lawmakers saw" the depth of changes necessary to meet the required reductions. He stood by the Air Force's decision to accept quality in exchange for size, however, and put "readiness above all." Donley also emphasized the importance of moving "forward together as one Air Force."

That solidarity was on display as Air National Guard Director Lt. Gen. Harry M. Wyatt III gave his conference address. Speaking to a packed room that included Welsh, Donley, and CMSAF James A. Roy among attendees, Wyatt acknowledged a difference of opinion between the reserve component and active force but said there is no deep-seated conflict.

Wyatt did note, however, that much of the distress could have been avoided if the governors and other parties were included or kept informed of the deliberation process.

DOD is holding discussions with the Council of Governors about how to keep the states in the budget discussion loop, said Donley. That's a big step forward, considering budgeting deliberations typically don't leave the Pentagon until they

officially appear in the President's budget request.

"We do not share that information [about how specific cuts are determined] down to every base, every fort, [or] post in the Department of Defense," said Donley. However, he said, "we have to figure out how to build that bridge" between the Guard Bureau and the state adjutants general to share information "at the appropriate time."

Wyatt also suggested the National Guard use its clout as the newest participant on the Joint Chiefs of Staff to help build a better Total Force, "not block it." He said some of the tension between the Air Reserve Components and the Active component stemmed from lingering bad blood from last year's fight over whether the Guard Bureau should get a seat on the Joint Chiefs.

"It's time to recognize the Guard will be a full member of the Joint Chiefs," Wyatt told reporters after his speech. The Air Force needs to understand the strength it has in this relationship when it comes to assembling budgets and priorities in the future.

Wyatt, who will be retiring in January 2013, said his office has worked hard to maintain credibility with the adjutants general and USAF leadership and to present ANG views even when they are not adopted. Rather than seeing a Guard Bureau chief on the JCS as a hindrance, Pentagon officials should embrace the new construct rather than try to refight a settled battle, he said.

Considering the emerging national security and fiscal environment, change is inevitable. Wyatt said the adjutants general are aware of that; they just want to get a "little bit of stability" rather than the tumult and mission changes experienced by the Guard since the 2005 Base Realignment and Closure plan was implemented.

With stabilization, the Active-ARC relationship will be "a whole lot better than it has been."

Because force structure is just one of many tough decisions to come, communication will continue to top the Air Force's priority list. It likely will become a regular talking point for senior leaders.

"We've got to think of a smarter way, a more innovative way, of communicating. We've got to figure out who our key partners are—on the Hill, in the Pentagon, in the Guard and Reserve—and we've got to make sure we're connected to them in a meaningful way," said Welsh. "We have to make it lasting. We can't do it for a week and quit. This is a generational change." ■

USAF photo by SSgt. Jonathan Snyder



A1C Matthew Perry (r), a radio operator maintainer and driver, and Army Sgt. 1st Class Darryl Honick, a joint fire observer, support a mission in Southwest Asia. Today's airmen are experienced in joint operations.

YOUR MISSION IS CRITICAL. OURS WAS TOO.

BOSE® A20® AVIATION HEADSET



Military studies show that reducing noise allows for improved communications and mission effectiveness. That's why we introduced active noise reducing headsets to military aircrews across the world more than 20 years ago, forever changing the way crews fly critical missions.

This time, our mission was to improve on the standard set by our Aviation Headset X® – a mission-critical part of military operations worldwide, with a proven record of performance in military applications. The Bose A20 Aviation Headset is specifically designed for the high noise levels military aircrews experience. It features acclaimed noise reduction, a comfortable fit and clear audio. It also meets or exceeds all FAA standards, offers responsive customer support and is made in the U.S.A. Call today to try it and see how well we've accomplished our mission.

Ask about our no-obligation military evaluation program.
Call 1-800-736-5018 or visit www.Bose.com/militaryair1

BOSE
Better sound through research

GSA Schedule
Contract GS07F0232N

©2012 Bose Corporation, C_008782

Enemies adapt. The Air Force must also.



Evolving the 21st Century Air Force

By John A. Tirpak, Executive Editor

Even though its departure from combat in Afghanistan is still a year away, the Air Force is rapidly evolving into the next version of itself: becoming smaller, but highly capable, and keeping at least one technological step ahead of potential adversaries, while living within its financial means. The end state of the reinvention, however, is not yet fully in view.

So said top USAF and defense leaders at AFA's Air & Space Conference, held in September just outside Washington, D.C. Newly installed Chief of Staff Gen. Mark A. Welsh III set the stage in his keynote speech, saying, "For the last 20 years the enemy's been changing. Now here we sit at another one of those turning points. Where are we going to be when we grow up? It's time to think seriously about that. ... It might not be who we were."

While the US military has been fighting in Iraq and Afghanistan, "our

friends and enemies elsewhere have not stood still, and technology has not stood still," said Deputy Defense Secretary Ashton B. Carter. It will be the job of all the services to "look out to what the world will need next" with regard to international security challenges, but to do so bearing in mind "the need to keep the United States' fiscal house in order."

To go with a new national military strategy that puts emphasis on the Asia-Pacific region and winning on battlefields teeming with anti-access, area-denial threats, Carter said the Pentagon is aiming to reshape the US military by 2020 to be "agile, ... lean, ... ready, ... technologically advanced, ... [and] able to "defeat any adversary, anywhere, anytime." This, he said, is "what we're building towards."

The Air Force, Carter said, is "well-suited" to the new national strategy, by virtue of its long reach and technological orientation.

"We need to continue to invest in future-focused capability," Carter asserted. "We must protect the seed corn of the future." Those investments will emphasize "cyber, space, electronic warfare, unmanned aerial vehicles, the long-range ... strike family of systems, all of which are so important to the Air Force and will be so important to our future operations."

One Force, Total Force

Carter warned, however, that "our newest investments have the shallowest roots," and it's "easier to tear them up when we need to make cuts." The US, he said, "can't afford to lose our future technological edge by cutting the seed corn." The Air Force "understands this better than almost anyone," he said.

Carter said the Air Force is to be "congratulated for innovative approaches" to the new long-range strike family of systems, for its fixed-price tanker development, and improvements in



F-22 Raptors fly a two-ship formation over New York.

acquiring spacecraft and launch vehicles. The service understands that in order to get new systems, “acquisition management matters.”

Service Secretary Michael B. Donley highlighted the rationale underlying force structure cuts in the Fiscal 2013 budget—and those beyond—by saying “the best course of action for the Air Force is to trade size for quality. Becoming smaller will allow us to protect a high-quality and ready force, one that will continue to modernize and grow more capable in the future.” Nevertheless, he insisted, “we intend to be a superb force at any size.”

Donley acknowledged challenges in getting the Active Duty, Guard, and Reserve to reach a full-throated consensus on how to shape both personnel levels and force structure in the coming years. However, he maintained: “We must consider our overall program and budget, as well as our strategy for the future, on a holistic basis. We can’t

manage the Total Force in 50 separate packets, and the success of our Total Force will remain dependent on the collective success of all three components. We must move forward together as one Air Force.”

Welsh, also commenting on the friction between the components, said it will be a temporary condition. “We’ll figure it out, I promise you.”

The coming years will have to be marked by innovation—an Air Force “tradition,” Welsh said—as the service struggles to balance spending on new technology with keeping enough force on hand to cope decisively with an immediate threat from any enemy.

In remotely piloted aircraft, for example, Welsh said the Air Force has invested more than \$55 billion on “the infrastructure, the communications architecture, the PED [processing, exploitation, dissemination], the people, the training, the entire complex.” But regional commanders have an insatiable

demand for the intelligence, surveillance, and reconnaissance products that RPAs provide, Welsh said. “The requirement is now 65” 24-hour RPA patrols, he said, “with a push to go to 85, although [Donley] is holding the line.”

Welsh said he understands “if you’re getting shot at, you want more” ISR. However, “we’re going to have to get engaged seriously in the mental process ... of how we define the ISR requirement for the future, because there isn’t enough money in the universe to fund the requirement that we have in the Department of Defense.”

Later, in a press conference, Welsh allowed, “we have a problem with so many [RPAs] right now that I don’t know what we’re going to do with them when they come back from Afghanistan. So buying more right now probably doesn’t make much sense” although “it probably does make sense down the road.”

Welsh said he finds the idea of the jet-powered Predator C “a pretty



Air Force Chief of Staff Gen. Mark Welsh III speaks on the state of the Air Force at the Air Force Association's Air & Space Conference. Welsh said USAF is at a historic turning point.

interesting system," though he was noncommittal about whether USAF still plans a stealthy MQ-X to follow on to the MQ-9 Reaper. He also expressed interest in having RPAs controlled from manned aircraft.

The good news is that while the Air Force has been heavily focused on ISR for 20 years, the rest of the world hasn't been, and "they're lagging [behind] us," Welsh noted. But what does that mean?

"Do we slow down?" Welsh asked rhetorically. "Do we create partnerships that will actually allow us to build capacity in other nations that we can

use as parts of coalitions? Or do we just keep running on this? This is a big debate" within the Pentagon, he said, observing that the regional commanders will "frame" the debate but it will be up to the Air Force to figure it out.

"It's our job to do the thinking on this," Welsh asserted. "How much we can afford has to be factored in. Do you need an orbit for every squad on the ground? Maybe for some missions; certainly not for all."

Lt. Gen. Larry D. James, deputy chief of staff for ISR, said his organization is transforming largely through the

way it handles the vast amounts of data coming in. Rather than have all analysts in-theater, more and more of them will be at Distributed Common Ground System nodes in the US and elsewhere, thus minimizing their forward footprint. Additionally, the Air Force is investing in machines that will do the drudge work of watching RPA video feeds for hours at a time, alerting crews only when there's something important to watch, James said.

Train to the Fight

Gen. G. Michael Hosten III, Air Combat Command chief, said the training of the combat air force is already evolving to a post-Afghanistan mindset. After years of fighting in a permissive environment, largely unchallenged by enemy air defenses, ACC is adjusting its training to reflect how it will fight in an A2/AD environment.

When "working up" for a deployment to the fight in Afghanistan, CAF units still "prioritize their training" to how they'll actually fight there, Hosten said. His instructions to units are to "focus on what is most important ... because we know in this era of constrained fiscal budgets, we're not going to have the resources to do every possible thing we might need you to do."

However, when preparing for an operational readiness inspection or in general training, "then they are focusing on that contested, degraded environment, dealing with anti-access, because

The Importance of the Nuclear Triad

Operating a fleet of nuclear-capable B-2A and B-52 bombers as well as hundreds of Minuteman III ICBMs remains the Air Force's most important contribution to the nation's security, said senior service officials at AFA's Air & Space Conference outside Washington, D.C., in mid-September.

"The nuclear mission—continuing to strengthen the enterprise—is still our No. 1 priority in the United States Air Force and it will remain that way," said Chief of Staff Gen. Mark A. Welsh III in his Sept. 18 conference address.

Welsh said it's "a huge responsibility" to provide two-thirds of the nation's strategic nuclear deterrent. (The triad's third leg is the Navy's force of submarine-launched ballistic missiles.)

"We have 36,000 airmen every day who worry about the nuclear mission," said Welsh. "It's a big deal for us. We can't afford to ever get this wrong."

In addition to the challenges of sustaining and enhancing the decades-old bombers and ICBMs, modernization looms on the horizon for these forces. This comes at a time when the Pentagon braces for an era of fiscal austerity.

"That will require not only innovative thinking in the short term, but an opportunity to develop a culture of innovation," said Lt. Gen. James M. Kowalski, Air Force Global Strike Command commander, during the conference's four-star forum on Sept. 19.

I have some resistance there," said Kowalski. "Some people think that the word 'innovation' is the opposite of the word 'nuclear.' It's not." In fact, he added, "if you look at the early days of Strategic Air Command, it was an amazingly innovative command."

As part of the modernization, the Air Force is developing a penetrating bomber for conventional roles, with initial field-

ing anticipated in the mid-2020s. Welsh called this future platform "a must-have capability."

The Air Force is proposing adding nuclear certification to the bomber "in the late 2020s, early 2030s," said Maj. Gen. William A. Chambers, assistant chief of staff for strategic deterrence and nuclear integration, in an interview with *Air Force Magazine* at the conference venue.

With tightening budgets, elements of the nuclear triad—in particular, the ICBM force—may come under scrutiny for reductions or elimination altogether, said Chambers during the conference's Sept. 18 panel discussion on the role of the ICBM force in 21st century deterrence. Advocates of going to a nuclear dyad, for example, might argue that the money spent on ICBMs would be better invested in other weapon systems, such as in ensuring a robust F-35 Lightning II fleet.

our [inspector general] now tests to that standard,” Hostage said. Such training now stresses units by jamming their access to Global Positioning System information, with reduced input from certain elements of the ISR network, a more vigorous and modern “enemy,” and tougher air defenses.

“The IG will not let you fly a scenario during the ORI that doesn’t have some type of challenge to those things that you normally would’ve expected to have in the old days,” Hostage observed.

“The reality ... is that we have an adversary out there who is focused on all of those things that make us the world-class force that we are, and is systematically investing in capabilities to deny us that full capability,” Hostage warned.

Though US forces have gotten used to having “maximum capability” and complete access to “connectivity, communications, data links, networks, ... [and] ISR anywhere and everywhere we need it,” that’s not how it will be in a fight with a near-peer, Hostage said.

Nevertheless, “there should never be a question that our airpower will be where it needs to be and will be effective,” he said.

The F-22 is still rewriting the rules of air combat, he said, flying higher than anything besides the U-2 and maneuvering forcefully even in that thin air. The F-22 is a world-beater, and that will provide some cushion as USAF sorts out its future, he explained.

Chambers countered this argument during the interview, saying he wants the debate over the relative value of the deterrent’s legs to be framed on some first principles.

“The nuclear deterrent force underpins and underwrites every other tool of statecraft, every other military capability,” he said. “The reason we can keep small regional, low-intensity conflicts under control is because we have this underwriting of protection against major power conflict that is produced by deterrent forces. That has to be taken into consideration in the relative-value debate if it is a fiscal discussion.”

Despite such outside pressures for triad alterations, Chambers said, within the Pentagon, “I don’t think the fundamental change that would call for us to reconsider the three legs of the triad has taken place.”

In fact, Chambers said in the past year he’s sensed “a strengthening of the consensus” that “the triad is actually even



USAF photo by Scott Ash

Secretary of the Air Force Michael Donley said in his keynote address that USAF must trade size for quality.

“It does things I have never seen airplanes do before, ... and I still can’t believe it,” Hostage said. “It’s amazing. The best thing about it is our adversaries watch it carefully, and it scares the hell out of them, which is a good thing.”

Pacific Air Forces chief Gen. Herbert J. Carlisle, at a press conference during the AFA conference, echoed Hostage’s point that the Air Force can no longer assume it will be vastly better than any potential adversary it may face. Asked about the recent appearance of a second Chinese stealth fighter prototype—this

one bearing strong resemblance to the F-22 and seemingly optimized for high maneuverability—Carlisle acknowledged that China’s technology is improving rapidly.

“With respect to stealth capability, they are behind us, but they will develop and they will get better, and we certainly can’t rest on our position,” he said. The lag time between the introduction of an American military innovation such as stealth and the appearance of similar technology in other air forces will steadily shrink in the future, he said.

more important” as the size of US deterrent forces decreases to the levels laid out in the the New START arms reduction agreement with Russia and, perhaps at some later point, goes beyond those thresholds.

“We’ve now argued well that the attributes, in particular of our two legs of the triad, actually are well-tailored for the new strategic environment,” said Chambers.

For example, he said the bomber fleet will continue to provide the national leadership with “a tremendous amount of flexibility” and a visible tool to signal to potential adversaries and allies alike that “America has a long arm and is able to project power.”

For its part, the ICBM force is stabilizing, lethal, responsive, and highly credible, said Chambers during the panel discussion. Further, operating the Minuteman III fleet cost the Air Force only one percent of its budget—some \$1.1 billion—in Fiscal 2011, he noted.

“That’s not a lot of money” in the overall scheme of defense priorities, he said.

The Air Force spent about \$2.5 billion in Fiscal 2011, about two percent of its budget, to operate the nuclear-capable bomber fleet, he told the magazine.

The Air Force is involved in the preparations to reduce the bomber and ICBM forces to meet the caps established in New START by the deadline of February 2018. This will require converting some B-52 bombers to conventional-only roles and removing some Minuteman III missiles from operational status.

“It is a complex undertaking. There are a lot of moving parts to be programmed out basically [in] the next five years,” said Chambers. “We want to be at the central treaty limit a little before February of 2018.”

He noted that the final number of operational ICBMs “has not been decided.”

—Michael C. Sirak



USAF photo by Veli Gempis

TSgt. Wyatt Bloom, a cyber transport technician, uses a spectrum analyzer to check television broadcast network routers. Top USAF leaders agree that the cyber mission is critical to the future of the Air Force.

"I think whatever advantages we have technologically ... won't last as long," he predicted.

In his press conference, Welsh broke with the Air Force's long-held position that the service has all the F-22s it needs and would turn down more if they were offered.

Asked if USAF would ever consider reopening F-22 production, Welsh said "I would never draw a line in the sand and say I would never consider buying the most capable aircraft in the world for the United States Air Force." He confessed, however, that he didn't know what restart costs would be or what other budget priorities additional F-22s would displace. Air Force and think tank studies of a few years ago pegged restart costs as running anywhere between \$7 billion and \$17 billion.

Welsh told reporters he doesn't anticipate a budgetary push "to downsize our air mobility fleet," observing that "people have agreed" that the proposed size of the lift inventory is appropriate, "and the requirement is clear."

He's less optimistic about fighter force structure, which has already been reduced by hundreds of aircraft in the last few years.

"I think our fighter fleet ... will be the first thing to come under pressure," Welsh asserted. "I think we've got to be careful about that." While 181 F-22s "sounds like a lot, it's not," especially if two demanding scenarios—Welsh

mentioned Syria as one—pop up at the same time.

If called to fight in Syria, the Air Force "would be using the F-22," Welsh said flatly. But to split the fleet with "a concern in the Pacific somewhere, there aren't many airplanes. In this business, quantity does have a quality all its own."

Cold, Hard Caution

Further reductions of the fighter inventory "would affect our ability to do the air superiority mission," he declared.

Welsh singled out the A-10 as a platform that "nobody wants to get rid of" but that doesn't make the cut in a force where the reduced numbers of aircraft demand that each be capable of multiple missions. The A-10, though excellent at ground attack, can't swing to a high-end dogfight mission. It will continue to serve but at reduced numbers.

The centerpiece of the Air Force's future fighter fleet will be the F-35, but attendees got a cold dose of caution from the newly nominated program manager for the strike fighter, Maj. Gen. Christopher C. Bogdan.

Bogdan, who came to the fighter program in August, described it as a misunderstood project that's far more complex than people realize.

"I thought ... it was a single program with three variants," Bogdan said in an exhibit hall presentation. "It's not. It's

three separate airplane programs that have common avionics and a common engine." With two major contractors, eight international partners, three services, and already two foreign military sales customers, Bogdan said, the F-35 couldn't be more complicated if it had been designed to be so.

He admitted that the 20 million-plus lines of software code to make the airplane and its support systems work "scares the heck out of me," and he said those depending on the program shouldn't be overly optimistic about its success.

Given the progress made so far in turning around flight test, concurrency, and production problems, Bogdan declared the F-35 "potentially achievable."

He noted that software development is only a few months behind, test points are being achieved ahead of schedule, and Lockheed is "right on the edge of getting really, really good" at production, though that has yet to result in significant cost savings.

The Autonomic Logistics Information System—which tracks flight hours and maintenance action on every F-35 aircraft and automatically orders parts or prescribes maintenance actions—is a monster of a program itself, Bogdan noted, saying it could well be a separate effort requiring top-level Pentagon oversight. The system has already had some security problems but "we went back and fixed those vulnerabilities," he reported. The ALIS will get tremendous attention because, without it, "we don't fly airplanes."

He noted that there is "a bunch of airplanes" at Lockheed's factory in Fort Worth, Tex., that are finished but can't be delivered or completely paid for because "they can't fly unless ALIS 1.03 works. So there's a lot riding" on the success of the support project.

Bogdan also hinted strongly that the Pentagon will seek competition on F-35 support, though he was cagey about whether that would be competition between organic and contractor logistics support, or competition between contractors. The program is too big not to have competition, he said, and that approach will save money.

The major overhaul of the F-35 program two years ago—which added 30 months and billions of dollars of wiggle room—was a one-time deal, Bogdan warned.

"There is no more money [and] no more time in the development of this

C-37B

Uniquely Ccnfigured G550 for the U.S. Government



MISSION READY

More Gulfstream aircraft perform government and military service than any other large-cabin business jet in the world. Though the missions vary, the requirements are resolute: unsurpassed performance and proven reliability. With the expertise of our Special Missions Program office and collaboration with technology partners for advanced equipment integration, be assured, whatever your mission, we're ready when you are.

program," he asserted. "That is it. ... We will not go back and ask for any more. It's as simple as that." From now on, he said, the F-35 is "fundamentally a fixed-price development program." If problems come up, "we're going to have to make trades." He pledged that he won't allow optimism to substitute for realism in explaining to customers what to expect. Bogdan also promised accountability on the part of the program office.

Donley, asked in a press conference to respond to Bogdan's remarks, concurred, saying the Pentagon "is done ... with major restructures that involve transferring billions of dollars into the F-35 program from someplace else in the defense budget." If there are additional bills to pay, he said, "they need to be [paid] ... within the resources already provided." That means there could be "a reduction in tails"—meaning fewer aircraft—"or there could be ... slippage in schedule or changes in content."

There's been "intense" bargaining between the government and Lockheed Martin, Donley acknowledged, but "I think we'll eventually bridge our differences."

Speakers at the conference universally agreed on two things regarding the cyber mission: one, that it will be critical to the future of the Air Force, and two, that it is so specialized that few of the service's top leaders comprehend it enough to make intelligent decisions about it.

"My concern," Welsh said in his press conference, "is I don't know of a really clearly stated requirement from the joint world—from US Cyber Command, in particular—as to exactly what kind of expertise they need us to train [to], and in what numbers, to support ... their effort to support the combatant commanders in the cyber arena."

Welsh guessed that more than 90 percent of USAF's cyber warriors are actually cyber architecture and infrastructure specialists. That's "confusing to the rest of the Air Force," he said, and most of the service "doesn't really understand it. They don't really know what we're doing. And until we're all on board and we're all running [in] the same direction, I'm just a little hesitant to commit wholeheartedly to major resource expenditure" in the cyber domain.

In his speech to attendees, Welsh pleaded with cyber specialists and

industry vendors to banish jargon from their discussions and speak plainly so that nonexperts can understand the issues at stake. That's essential, Welsh said, because he's convinced that the Air Force's future lies with "air, space, and cyber."

AirSea Battle

One of the foundational concepts of the Air Force's evolution will be the AirSea Battle concept, which Donley described in a press conference as the two services seeking synergistic solutions to operating against A2/AD. Among the projects they will work on, Donley said, are joint integrated air and missile defense, ISR, command and control, and common weapons. He reiterated that the strategy is "not aimed at a particular threat"—read China—but rather at the A2/AD technologies that have proliferated in the last two decades and "have the ability to threaten US forces or threaten freedom of action in the global commons." Those conditions exist "in more than one theater around the world," he added.

Army Gen. Martin E. Dempsey, Chairman of the Joint Chiefs of Staff, also weighed in on AirSea Battle in his remarks to the conference. Though the idea originated with the Air Force and Navy as a way to cope with long-distance, well-defended threats, Dempsey said he sees all the services playing a role in it.

AirSea Battle, he said, is "a multi-service approach to ... operational access." In the arena of joint doctrine, the Army has been working to be a player in the concept, and Dempsey—who acknowledged his job is to agnostically get the services working together—said, "I think we've got work to do ... to make sure" we are thinking about it the right way.

Dempsey urged the Air Force to continue focusing on "the fundamentals" of air and space control, because its success has meant the other services never have to worry about attack from the air.

"If you're stopped, we're stopped," he said.

Dempsey said constraints on defense spending mean that the military services will probably have to hang onto about 80 percent of the equipment they already have for the foreseeable future.

"We've got an opportunity to change about 20 percent" of the hardware, Dempsey said, and that new gear will not only have to meet new threats but

make "the other 80 percent" better "right along with it."

Carlisle said Pacific Air Forces is working to translate AirSea Battle into operational use, and the first step is to ratchet up coordinating on efforts with allied air forces in the region. He promised an increased number of multinational exercises, mil-to-mil contacts, and the continued presence of USAF's best equipment in the theater. That said, Carlisle acknowledged that even though a larger proportion of USAF's combat air forces will be stationed in or rotate through PACAF, the number of troops and aircraft permanently posted there won't increase much.

Gen. William L. Shelton, head of Air Force Space Command, said his command is evolving by emphasizing an operational bent in every aspect of its activities. That has led to tremendous success in a string of space launches and declaring initial operational capability recently for the Space Based Space Surveillance system.

However, "business as usual will amount to an 'epic fail,'" Shelton said. Space Command is looking at better business models to reduce the cost of launch. Next year, including new-start rocket companies in competitions could lower launch costs by a quarter—or by half if the companies' optimistic estimates are to be believed.

"We'll look for cost trades" on all aspects of AFSPC's activities, he said, re-examine architecture to see if satellites can be built on more of an assembly-line basis and piggyback on commercial satellites—called hosted payloads—to a greater degree.

Along with the rest of the ISR enterprise, Space Command will work toward making ISR products "platform and domain agnostic," Shelton said, so operators will neither care nor really need to know where battle information is coming from—only that it's secure and reliable.

Welsh said the single most critical factor in the Air Force's evolution is that, while the service figures out what it is becoming, it must remain ready for any contingency.

He said he has worries that the Air Force is not as ready as it thinks it is. Augmenting real flying hours with simulator time, for example, is fine if you fund the simulators, but "if you don't, you're kidding yourself." Overall, he's worried that with readiness accounts, "I don't think we're where we think we are." ■



BOEING JDAM: A MODEL OF PERFORMANCE.

The Joint Direct Attack Munition (JDAM) is a model of precision as a weapon and as a program. An affordable, "smart" weapon that's proven 99% mission reliable, more than 200,000 JDAM kits have been delivered, all exceeding technical requirements and all delivered on time and on budget. From acquisition to delivery, that's precision by every measure.

 **BOEING**

Green on Blue Scourge

By Marc V. Schanz, Senior Editor

The Air Force and DOD are struggling to halt a disturbing trend of Afghans killing US troops.

For the US Air Force, the deadliest day of the war in Afghanistan so far came on April 27, 2011. USAF suffered dramatic losses not on a mountain pass or in a desert defile but, of all places, inside the home of the Afghanistan National Air Force.

Eight airmen were killed at the heavily guarded Kabul compound. The Air Force hadn't suffered that many deaths at one time since June 25, 1996, when a truck bombing of Khobar Towers in Saudi Arabia claimed the lives of 19 airmen.

This time, the attacker did not come from the ranks of al Qaeda or the Taliban. Col. Ahmed Gul, the shooter, was a supposed ally who was working in close quarters with US advisors. He was a helicopter pilot.

On that April day, Gul entered the headquarters at the Kabul International Airport. The place was filled with American and other coalition officers, civilians, and contractors, all engaged in the rebuilding of Afghanistan's air arm.

Grave Concern

When he arrived around 10 a.m., Gul found a group of airmen gathering for a briefing in the Air Command and Control Center. Then, recalled eyewitnesses, Gul suddenly pulled a 9 mm service pistol from his belt holster and started shooting.

Out in the hallway, at least two airmen pulled their own sidearms and began firing at Gul, wounding him.

Gul moved through the building, shooting as he went. Though he spared most of the Afghans who came into his view, he wounded two. He periodically stopped what he was doing to call out the building's window to "good Muslims," warning them to stay away or be shot.

Coalition security forces arrived. At some point during the mayhem, the Afghan dipped his fingers into blood and scrawled on a wall, "God is one" and "God, in your name."

Gul finally retreated up a stairway to a second floor lobby. He sat down on a couch and shot himself twice in his upper body. Those wounds were fatal.

The Kabul massacre remains the worst example yet of a pernicious brand of "friendly fire" that has emerged in the war in Afghanistan. It's known as "green on blue" violence, in which supposedly friendly members of Afghan military and security services turn their weapons on US troops and advisors.

It is obviously a matter of grave concern for the International Security Assistance

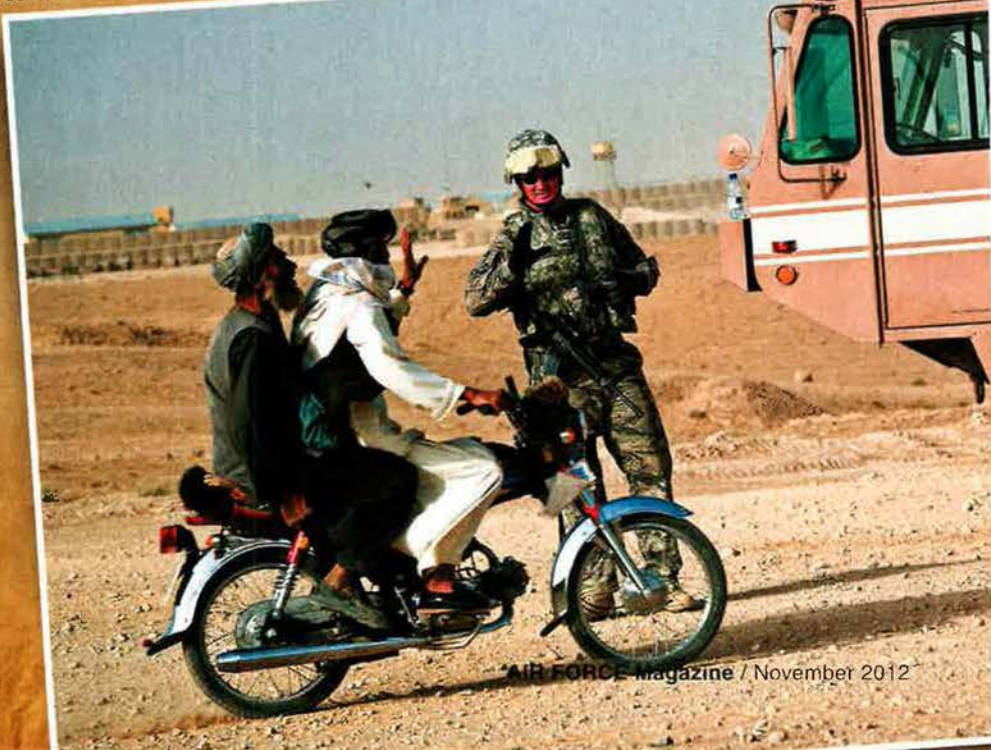
Force, the NATO coalition of which the US Air Force is a key part. In the shooting's aftermath, ISAF and the Air Force alike have conducted searching investigations of the training and advising function in Afghanistan.

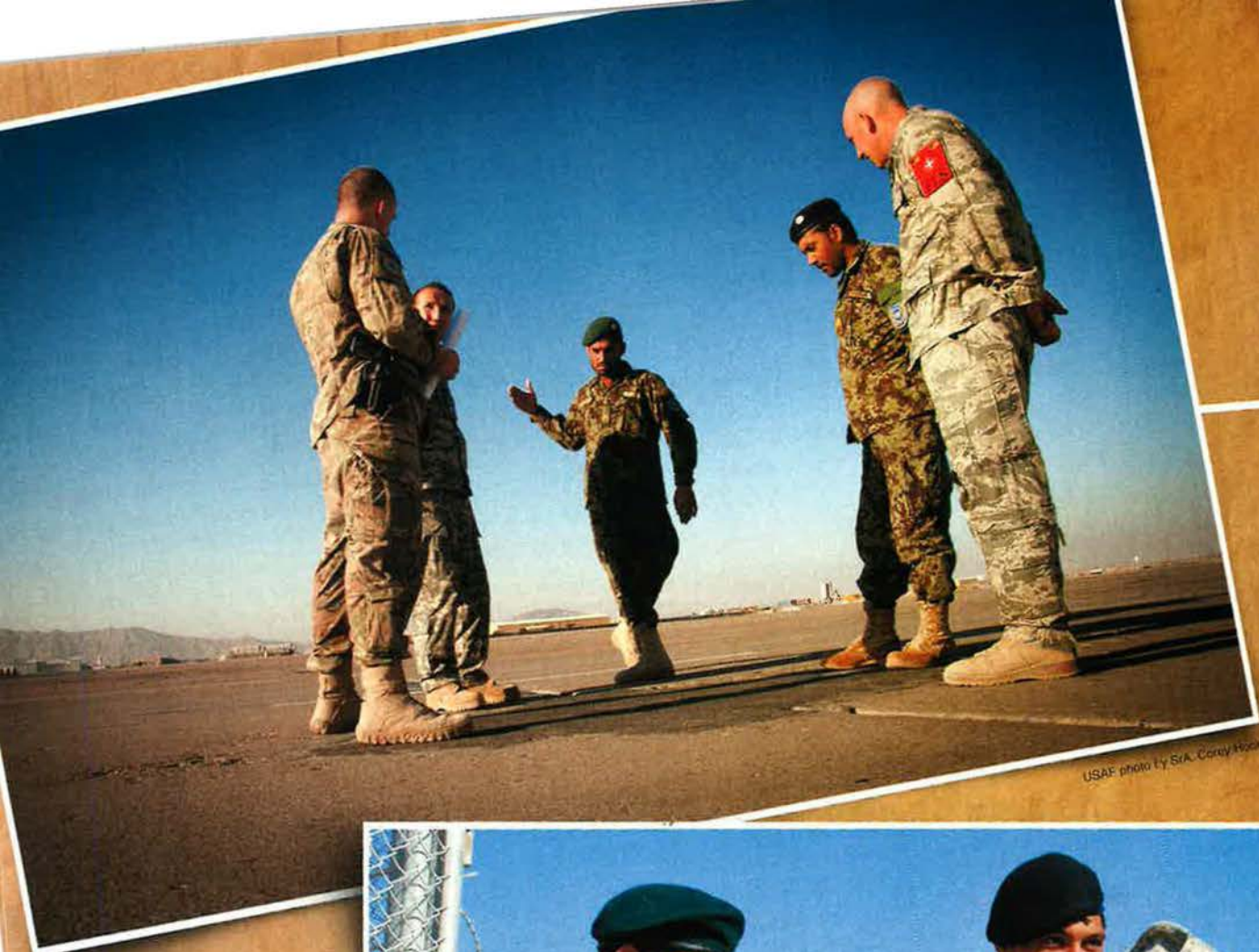
They have examined, among other things, active-shooter training for air advisors, emergency response procedures, and command and control techniques.

"We've made some adjustments to our security procedures and our footprint," said Gen. G. Michael Hothage III, then US Air Forces Central boss, who spoke with *Air Force Magazine* in May 2011 about the matter.

The shooting was the very definition of a "worst-case scenario," Hothage observed. It was almost impossible to predict.

USAF photo by SSgt. David Salaniti





USAF photo by SrA. Corey Hozak



USAF photo by SrA. Melissa B. White



Left: USAFTSgt. Gabriel Johnson (l) and SSgt. Aaron Scofield greet two Afghan men riding a motorcycle past their firefighting truck near Forward Operating Base Apache. Top: USAF security forces work with Afghan security personnel on the flight line. Above: CMSgt. Dave Staton (r), superintendent of the 738th Air Expeditionary Advisory Group, advises Afghan security force airmen about the importance of weapons cleanliness. So far in 2012, green on blue attacks have caused one in every seven NATO deaths.



TSgt. Thomas Scheide (r), assisted by a translator, leads a "Level 2" training session for Afghan Air Force noncommissioned officers at Shindand AB, Afghanistan. The recent spate of violence has not deterred ISAF and the US from their goal of shifting to a training and advisory role after 2014.

USAF photo

especially for personnel involved in the sensitive training and advising mission.

"It's a matter of risk," he said. The trainers in Kabul "were in a relatively safe environment, and so that means their guard was a bit down."

The Kabul attack was a harbinger of future atrocities. In its wake, a wave of such attacks has beset ISAF and Afghan forces around the country.

According to the RAND Corp., green on blue violence has accounted for one in every seven NATO deaths in Afghanistan during 2012.

In August, the deadly incidents came in close succession. On Aug. 10 in Helmand province in two shootings, six marines were killed by an Afghan policeman and by a civilian worker. Three days later, an Afghan policeman opened fire on NATO troops, marking the fifth attack in a week.

These attacks are coming at a time when the US is attempting to shift over from a combat-intensive mission to one focused on training and advising—a mission requiring an extraordinary degree of trust.

Coalition leaders continually assert the attacks are "isolated incidents" in the ranks of a quickly expanding Afghan military and don't reflect its overall dedication and professionalism.

"At this particular moment, I don't believe that we need to contemplate reducing our contact with the Afghans," Marine Corps Gen. John R. Allen, the ISAF commander, declared in August at the height of the attacks.

The pressure on US and NATO strategy exerted by the attacks has not relented. In late September, US officials confirmed most joint operations between Afghan and American forces have been suspended

until further notice. In a statement, ISAF said it has taken "prudent, but temporary, measures to reduce our profile and vulnerability to civil disturbances or insider attacks." As of Sept. 17, the number of attacks had risen to 36, with a death toll of 51 NATO troops.

Conflicting Reports

Allen said ISAF is putting "greater emphasis" on ensuring that coalition personnel take proper protective measures. In August, Allen authorized *all* coalition personnel to carry a loaded magazine with their service weapon while on base—a slight change in procedures for troops "inside the wire."

Allen stressed that relationship-building is at the core of the coalition's training and advising missions.

"What we have learned is that the closer the relationship with [Afghan forces] the more secure ... we are," he said. Allen noted that coalition troops have tens of thousands of daily interactions with Afghans. There is, he said, "growing friendship and a deeper relationship."

Allen's view is echoed by top officials. Still, American leaders seeking to solve the problem say it's hard to develop the solution when motives for attackers vary widely.

Informed officials note that only some of the attacks stem from direct Taliban coercion of Afghans or Taliban infiltration of the ranks. Many, if not most, incidents result from battle fatigue or personal grievance felt by an Afghan, they say.

Allen conceded that ISAF lacks sufficient data on the attackers to support "any kind of a definitive conclusion" about their motives.

Of the attacks recorded this year, only about 25 percent appear to be linked to Taliban activity—even though the Taliban claims credit for virtually all of them—and these Taliban cases range from direct infiltration of Afghan military units to simple blackmail.

In many cases, Allen noted, Taliban elements have coerced Afghan troops by threatening their families. In others, the violence appears more directly related to personal disagreements and animosity between an individual soldier and coalition members.

The Gul rampage offers a good example of the difficulty of establishing a motive for any particular attack. The Air Force Office of Special Investigations produced a 400-plus page report on the incident but did not pinpoint its cause.

The report said Gul never presented a disciplinary problem but occasionally voiced radical sentiments. He moved to Pakistan and then returned to Afghanistan for military service. A relative told investigators Gul made the move because he wanted to "kill Americans." Other relatives reported he had mental problems ever since he was in a mid-1990s helicopter crash. Gul was also deeply in debt.

Gul would become angry at seemingly minor problems, said the report, but no one viewed him as a serious religious radical. Indeed, no direct contacts between Gul and the Taliban were ever established.

The green on blue violence, however, hasn't deterred ISAF and the US from their goal of shifting to a training-and-advising footprint after 2014. The trend has led to a tightening of the vetting process for Afghan recruits in all sectors of the security enterprise.

In late August, after a round of meetings with top US officials at the highest levels, Afghanistan agreed to more closely monitor its own military and police recruits. This will entail the use of more undercover agents, increased surveillance of phone calls made by Afghan troops, and the banning of cell phone use among newer recruits to eliminate one possible means of communicating with Taliban handlers.

ISAF officers aren't working on this problem in isolation. US officials note that the Afghans have put in place a new eight-step process to vet recruits for

SSgt. Frank Reddy (r) explains the function check process for a Russian PKM machine gun to Afghan Air Force Mi-17 crew members. Recently, Afghanistan agreed to more closely monitor its own military and police recruits.

the security forces. These steps include issuing an official ID card, gathering background information from tribal elders about family members, conducting criminal background checks, screening for drug and medical problems, and collecting biometric data.

Canadian Army Brig. Gen. Thomas E. Putt, head of ISAF Joint Command's Afghan National Security Forces Development, has seen progress in developing the Afghan military into an organization able to function at brigade and corps level. The coming months, he said, will be critical to this effort.

"My particular focus over the course of this year is to look at how to improve key enablers for the ANSF," Putt said in a news conference on Aug. 1.

Refining, Reviewing, Enhancing

He explained that a modern military needs supporting capabilities such as a command and control system, intelligence, logistics, and anti-mine and explosive ordnance disposal units, to name a few. ISAF's development priorities for the Afghan military, Putt said, focus on logistics, countermine tools, and the Afghan air corps.

In a rugged country with poor infrastructure, the ability to move personnel and materiel quickly—as well as to deliver ordnance—will be crucial to the survival of the Afghan security forces after NATO leaves, he asserted.

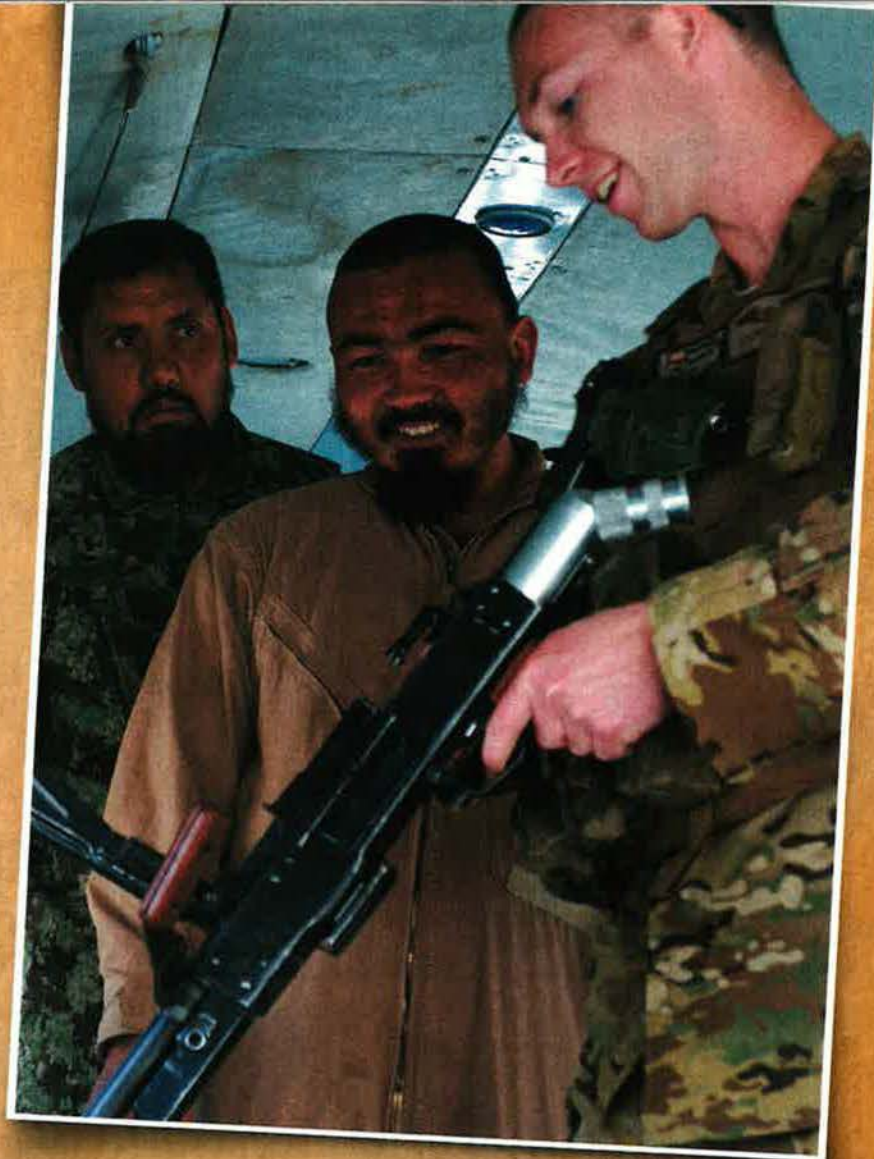
The USAF advisory mission in Afghanistan is focused on building rotary wing and light transport capabilities; some are already available for medical evacuation and troop transport for air assaults.

"They're really just getting going in terms of what we're looking for down the road," Putt noted.

He said most Afghan air corps operations will be backed by ISAF air support until 2014. ISAF, meanwhile, is accelerating a program to stand up sustainable helicopter and transport squadrons.

As Putt sees it, "There is every indication that ... the air force development will go on after 2014."

Green on blue incidents strike at the core of ISAF's transition efforts. When trainers are attacked by the Afghans who often have worked closely with coalition forces, it is a "very, very troubling" sign, said Maj. Gen. Tod D. Wolters, former



USAF photo by SSgt. Nadine Y. Barclay

commander of the 9th Air and Space Expeditionary Task Force-Afghanistan.

Commanders are looking closely at those advisory relationships, Wolters said in an August speech to the Mitchell Institute for Airpower Studies in Arlington, Va.

Some officers believe the problem should be put in the larger context of overall Afghan-coalition relations. They warn that, if overly harsh or indiscriminate measures are taken against Afghan troops or citizens, the winner will be the Taliban, which will play on popular Afghan disillusion with the war.

ISAF has been taking steps to protect its people by reassessing sleeping arrangements, internal defenses at its small forward operating locations, and the force protection posture of its forces.

Coalition forces are working with Afghan commanders and their religious and cultural affairs officers to combat the risk of personally motivated attacks. A 900-person cadre works with Afghans at the local unit level, helping overcome cultural differences.

These efforts, officials hope, will reduce those insider attacks caused by disagreements or perceived slights or other offenses.

These officers will screen Afghans returning from leave for any signs of radicalization. Had this been done in Gul's case, it might have tipped the Afghan government and ISAF as to changes caused by his stay in Pakistan.

Air Force officials in the region won't discuss specific force protection measures, but they say ISAF is "refining, reviewing, and enhancing" measures that meet mission needs and ensure the safety of deployed forces.

While the lessons and scars from USAF's experience in the Gul shooting are still fresh, leaders know the training and advising mission will only gain in importance as December 2014 draws closer.

"Afghan [air] capability ... is going to be a critical national element," Hostage said. "A fully capable Afghan Air Force ... ultimately represents our ticket home." ■



Sexual Misconduct at BMT

By Amy McCullough, Senior Editor

The Air Force must reverse a troubling increase in sexual assaults at basic training and elsewhere.

The Air Force's war on sexual assault in the ranks is not going well, despite an all-out drive to eliminate the problem and the many stern anti-harassment warnings of high-level Pentagon leaders in recent years.

Far from bringing a halt to these assaults, USAF has not even been able to arrest the worrisome upward trend. The rate of incidents continues to increase, concedes Gen. Mark A. Welsh III, the service's new Chief of Staff.

At his confirmation hearings in July, Welsh told the Senate Armed Services Committee, "There is a lot more work to be done here. ... We've done a lot of work, and we've made no difference."

His assessment is borne out by the multitude of high-profile sexual misconduct cases that have rocked the service over the last year.

Seven former military training instructors at JB San Antonio-Lackland, Tex., were charged with sexual misconduct, for

victimizing more than 30 trainees. Their offenses range from verbal misconduct to rape. As of September, 11 more instructors were under investigation for similar alleged offenses.

The number of MTIs under investigation began to climb in June 2011, when an Air Force trainee first reported an assault by SSgt. Luis Walker.

The Cases

At the time of the incident, Walker was an MTI assigned to 326th Training Squadron in San Antonio. A military jury convicted him of having committed 28 criminal acts, comprising rape, adultery, aggravated sexual assault, and violation of a lawful order regarding unprofessional relationships with at least 10 female recruits.

The Air Force handed Walker a sentence of 20 years in prison, a dishonorable discharge, a reduction in rank to airman basic, and a forfeiture of all pay and allowances. It was the most severe

punishment meted out so far in the unfolding MTI scandal.

Walker's case was preceded by that of SSgt. Peter Vega-Maldonado, a former MTI assigned to the 331st Training Squadron, San Antonio. In June, Vega-Maldonado pleaded guilty to a single charge of having an improper relationship with a trainee and of violation of a no-contact order. A military judge imposed a sentence of 90 days of confinement, 30 days of hard labor, forfeiture of \$500 of his monthly pay for four months, and reduction in rank to airman.

Vega-Maldonado's plea agreement required him to give testimony against fellow MTIs. For this, he received testimonial immunity, meaning that none of his statements given under oath could be used against him in additional cases.

However, Vega-Maldonado surprised military officials with a bombshell admission, given under oath, of having had improper relationships with not one but

Assaults Cannot and Will Not be Tolerated

The Air Force is close to wrapping up an "exhaustive investigation" of sexual assaults throughout the service's Air Education and Training Command, AETC Commander Gen. Edward A. Rice Jr. said during the Air Force Association's Air & Space Conference in September. USAF launched the investigation after a series of allegations against basic military training instructors surfaced earlier this year.

"I have just concluded several productive meetings here in Washington, D.C., with select members of Congress and other government officials to brief them on the commander-directed investigation of basic training led by Maj. Gen. Margaret Woodward," said Rice in a late September statement. He added, "The leaders I've met with in Washington have shared helpful input, which will help guide the Air Force as we develop the best means to address the problems identified."

Woodward's team interviewed more than 200 people at BMT, including leadership, faculty, and trainees. The team also analyzed more than 25,000 end-of-course surveys from BMT graduates completed since 2009 and conducted its own survey of more than 18,000 trainees, students, MTIs, training leaders, and technical training instructors, according to a statement released by AETC.

The investigation took about 20,000 man-hours to complete and resulted in 46 recommendations—30 of which had either been fully or partially implemented as of mid-September, said Rice.

During his keynote address to the conference, Air Force Secretary Michael B. Donley said the entire force was "shocked and troubled" by the scandal.

"The misconduct alleged has no place in our Air Force culture and is especially egregious when it occurs in the basic military training environment," said Donley. "This behavior constitutes an abuse of power and an abuse of trust which cannot and will not be tolerated."

Donley said he hopes the investigation "identifies any systemic failures" and promised that Air Force leaders would "be addressing next steps in the immediate weeks and months ahead."

Chief of Staff Gen. Mark A. Welsh III said he takes the problem of sexual assaults in the military personally. "I get emotional about this," he said. "This one bothers me in the biggest way, and it has for a long time."

"This is a horrible crime, and it's not just the [victims], it's the family, friends, the organization. ... It just sucks the life" out of everyone affected, Welsh said. "The idea that we can't protect people in our Air Force from predators kills me."

Air Force officials have chosen a woman—Col. Deborah J. Liddick—to replace ousted Col. Glenn E. Palmer as the new commander of the 737th Training Group, USAF's basic military training unit at JBSA-Lackland, Tex. Palmer was fired in August after Air Force leaders "lost confidence" in his ability to lead.

In September, Defense Secretary Leon E. Panetta ordered a complete revision of the Defense Department's sexual assault prevention and response training requirements, including working with Congress to create a "special victims unit" that can assist each of the services when necessary. The new guidance also looks to establish a new policy that would allow victims of sexual assault to "quickly transfer from their unit or installation as a way to protect them from possible harassment and to remove them from proximity to the alleged perpetrator," states a Sept. 25 Pentagon release.

"Leaders at every level have an obligation to adhere to and enforce Air Force standards and to establish and maintain a unit climate and culture that reflects what we stand for," said Donley. "This is family business. Nobody will do this for us. We must do it for ourselves, for our airmen, and for our Air Force. And I have every confidence that we will confront this challenge and come out a stronger and better Air Force on the other side."

with 10 recruits. Vega-Maldonado took, in jailhouse parlance, an "immunity bath," and USAF hasn't been able to bring additional charges against him.

In a special court-martial held on Aug. 1, TSgt. Christopher Smith, another MTI who had been assigned to the 331st TS, was found guilty of seeking an intimate relationship with one recruit and carrying on a personal social relationship with another recruit. He was sentenced to 30

days of confinement and reduction in rank to airman first class.

SSgt. Kwinton Estacio pleaded guilty to having sex with a trainee and in September received a sentence of a year in prison, reduction in rank to airman, and a dishonorable discharge. The jury acquitted him of wrongful sexual contact, due to the issue of consent by the trainee.

On Sept. 27, a special court-martial sentenced SSgt. Jason Manko to 45 days

of confinement, reduction to airman first class, forfeiture of \$500 for three months, and hard labor for 30 days. He had pleaded guilty to seeking to develop an unprofessional relationship and had sex with a trainee.

Thus, as of late September, US military authorities had completed only five court-martial proceedings stemming from the Lackland scandal, and two more were scheduled.

Meanwhile, the scandal at Lackland also has led to nonjudicial punishments. So-called "loss of confidence" problems have brought the firings of two commanders at basic military training.

One of those fired was Col. Glenn E. Palmer, commander of 737th Training Group, who oversaw the training of all recruits going through BMT. The other was Lt. Col. Michael Paquette, commander of the 331st Training Squadron, where the majority of the accused MTIs were assigned and committed their offenses.

Gen. Edward A. Rice, the commander of Air Education and Training Command, has vowed to "aggressively" pursue all alleged perpetrators. Rice has launched both internal and external investigations aimed at discovering the true scope of the problem.

In late June, the Air Force assigned Maj. Gen. Margaret H. Woodward to lead an outside probe. Woodward, who commanded the US air campaign in Libya, was serving as the acting director of operational planning, policy, and strategy at the Pentagon at the time. She has since completed her report, which was still being reviewed as of early September, said AETC spokesman Nathan Simmons.



Gen. Edward Rice Jr., AETC commander, vows to aggressively pursue all perpetrators.

"We are leaving no stone unturned," Rice declared at a late June press briefing at the Pentagon. "I'm not minimizing this investigation. In fact, I'm being as aggressive as I can, and we won't stop the investigation until I'm completely satisfied that we've done as thorough a job as we possibly can."

Since the allegations first came to AETC's attention in 2011, the command has "further tightened those protective measures that were already in place," said Rice.

Within 72 hours of arrival at Lackland, trainees now receive a special briefing from the training group commander and an interdisciplinary team that includes the judge advocate, the sexual assault response coordinator, and the chaplain. This briefing covers the rights and responsibilities of a trainee who encounters acts of sexual misconduct.

The training group commander has been directed to read, within 24 hours of receipt, all urgent comment sheets submitted by a trainee and immediately report to higher authority any allegation of sexual misconduct. Accused MTIs are to be removed from their flights immediately and issued a no-contact order, said Rice.

Moreover, Rice added, his command is considering other steps. These include expanded training for trainees, instructors, and leaders to prevent sexual harassment; changes to the instructor selection process; and the hiring of more instructors.

The Air Force is considering taking the major step of assigning only female MTIs to lead female flights. Rice said he has not ruled out such a change, which would be a BMT first.

After the allegations surfaced, AETC took the unprecedented step of shutting down basic training for an entire day so that it could interview and survey all 5,900 recruits who were going through training at Lackland at the time.

Rice said that more than 98 percent of airmen who are surveyed after BMT have positive comments about their training experience.

Roughly 35,000 recruits go through BMT at Lackland each year. They are trained by some 500 military training instructors, each of whom goes through a rigorous screening process that in-

cludes psychological evaluations. Of those 35,000 trainees, 22 percent are women, said Rice, but only 11 percent of the instructor corps is female.

"The vast majority of our 500 military training instructors are performing magnificently in a tremendously demanding environment," Rice said. "No one—no one—is more angry and disappointed than they are that a relatively small number of their cadre has cast a shadow over the entire program."

Rice added that not only Air Force leaders but also the instructors themselves are "committed" to doing "everything possible" to rid the Air Force of the problem.



USAF photo illustration by SrA. Marc I. Lane

Even as the Air Force was struggling to get a grip on the BMT problem in San Antonio, another high profile sexual assault investigation was unfolding halfway around the world.

At Aviano AB, Italy, Lt. Col. James H. Wilkerson, the inspector general of the 31st Fighter Wing, was removed from his post by the wing commander, Brig. Gen. Scott J. Zobrist. Wilkerson now faces a court-martial on charges that he groped a female civilian base employee in March.

Efforts Not Working

Zobrist also fired the wing's vice commander, Col. Dean Ostovich, citing a loss of confidence in Ostovich's ability to lead. That decision was based, in part, on information that surfaced during the Air Force Office of Special Investigations review of allegations against Wilkerson. Ostovich has not been charged with any offense. The former vice commander, who was reassigned to the Pentagon, could be called as a witness in Wilkerson's trial, which was slated for October.

In an Aug. 16 statement, Zobrist noted that Aviano was a small and close-knit community. "For us to operate effec-

tively," he went on, "our airmen, civilian employees, and family members must be confident in their own security and the safety of their loved ones. Sexual assault threatens the very fabric of our community. I take any allegation of criminal conduct by someone under my command very seriously—regardless of the rank of the accuser or that of the alleged offender."

In his Senate confirmation hearing, Welsh said that the Air Force in recent years had implemented many steps aimed at curbing sexual assaults in the service. Training in sexual assault prevention has been institutionalized at every level, he said, and the Air Force has added new special prosecutors and OSI investigators specially trained in pursuing sexual assault cases.

Welsh acknowledged, however, that the problem persists.

"What we have been doing is not working," he said. "It's not for lack of effort."

Statistics bear out his gloomy view. Welsh told Senators that USAF projects a total of roughly 600 sexual assaults will be reported this year. That would essentially duplicate the scope of the problem in 2011, when 614 assaults were reported.

Sen. John Cornyn, the Texas Republican whose state is the scene of the MTI problem, placed a hold on Welsh's nomination until he was confident the service was "adequately addressing the unacceptable situation at Lackland and taking corrective steps to reform their training program to prevent this from happening again."

Cornyn and Welsh held a private meeting on Aug. 2. When it was over, Welsh had agreed to begin a formal review of Air Force policy and sexual assault prevention training, as well as the status of fraternization and inappropriate relationships between airmen. He also agreed to take a look at the organizational structure at BMT and report back to Congress regularly on his findings.

Cornyn removed his hold on the nomination, saying he saw in Welsh "genuine resolve" to tackle the problem.

As Welsh said, "The goal for sexual assault in the United States Air Force ... is not a declining trend. It's zero. ... In this crime, the goal is zero." ■

By Robert S. Dudley

Our Entitled Allies

"The leader of the local [Afghan] police ... insisted that a nearby compound be blown up because enemy snipers used it. The Bravo Company platoon commander, [Marine] Lt. Kurt Hoenig, explained that only the Afghan district chief could make that decision. In that case, the local leader retorted, his men would not patrol anymore. ... Over the past decade, an attitude of entitlement has taken hold among Afghans, many of whom believe the Americans need them more than they need the Americans. This explains how an obscure hamlet leader could demand that the Marines do his bidding. Lieutenant Hoenig handled the situation perfectly. He agreed that the local police didn't have to patrol with the marines. They could stay behind in Taliban territory, without Marine protection, instead. The police rejoined the patrol."—*Author Bing West, reporting on a patrol with Bravo Company, 1st Battalion, 7th Marine Regiment, in Afghanistan, Wall Street Journal, Oct. 1.*

Amazing Grace

"Before, they were blind, deaf, and dumb. Now we're beginning to make them to see, hear, and sense."—*US Air Force Chief Scientist Mark T. Maybury, on the creation of autonomous, self-directing remotely piloted aircraft, Agence France-Presse, Sept. 28.*

See: 12/7/41, 9/11/01 ...

"There will likely be military action, probably after the US elections, with or without the help of the US. [Israel fears that the] US will accept [political] containment of Iran despite it having nuclear weapons. That's not a good choice in the case of Iran because the regime is very unpredictable. I believe Obama when he says he won't allow Iranian nuclear weapons, but the US red line is an actual break-out. But will they have that information? You can find a lot of cases when intelligence didn't provide the answer in time."—*Ephraim Asculai, senior research fellow at Tel Aviv University's Institute for National Security Studies, quoted in Aviation Week, Oct. 1.*

An Offer He Can't Refuse

"I'll take whatever the hell deal they can make right now to deal with se-

questration. The problem now is that they've [members of Congress] left town and all of this has now been put off into the lame-duck session."—*Secretary of Defense Leon E. Panetta, remarks to Pentagon reporters about lack of progress on stopping sequestration cuts, Sept. 27.*

Drawing the Line

"I'm mad as hell about them. ... You know, we're willing to sacrifice a lot for this campaign, but we're not willing to be murdered for it."—*USMC Gen. John R. Allen, head of the NATO force in Afghanistan, commenting on "insider" Afghan attacks on NATO troops, CBS "60 Minutes," Sept. 30.*

Confucius Meets Dr. Strangelove

"The countries of Asia ... have identified grave threats to the national interest in the tiny outcrops and shoals scattered off their coasts. The summer has seen a succession of maritime disputes involving China, Japan, South Korea, Vietnam, Taiwan, and the Philippines. This week, there were more anti-Japanese riots in cities across China because of a dispute over a group of uninhabited islands known to the Japanese as the Senkakus and to the Chinese as the Diaoyus. ... Amid heated rhetoric on both sides, one Chinese newspaper has helpfully suggested skipping the pointless diplomacy and moving straight to the main course by serving up Japan with an atom bomb."—*Article titled, "Could Asia Really Go to War Over These?," The Economist, Sept. 22.*

Evil Science

"The pace of the scientific development is so rapid, and trying to understand where adversaries may try to use that advancement—in, say, biotechnology, synthetic biology, genetic engineering—how it may be misused, is what we have to try to anticipate. And that's where we don't have a good crystal ball. ... It is evolving and it is changing, and that is a challenge that we face. What a decade ago may have [been] impossible is now within the realm of feasibility for bad actors, to use, say, enhanced agents or new agents from a chemical and biological domain, to cause us harm."—*Gerald W.*

Parker, top Pentagon official for chemical and biological defense, interview with foreignpolicy.com, Sept. 24.

Giving the Guard Its Due

"Last Friday, Gen. Craig McKinley hung it up. Forty years of service to our nation. The first Air Guardsman to wear four stars. The first National Guard Bureau Chief to be a member of the Joint Chiefs of Staff. That's a pretty good résumé, folks. And you know, that last point's an important one, because when the Congress made that appointment of Craig to be a member of the Joint Chiefs of Staff—over the objections of virtually every Active Duty leader—it sent a very clear message that I think we need to keep in mind moving forward. That's that, quite possibly, the National Guard today is more important than it has been since you stood the watch at Concord."—*Gen. Mark A. Welsh III, USAF Chief of Staff, address to the National Guard Association of the United States, Sept. 11.*

Going Straight to Hell

"We don't have a vision [of victory in Afghanistan]. ... What happens when you leave? Tell me a scenario where we're safer by pulling the plug on Afghanistan. I can't envision a scenario that doesn't lead to holy hell ... and I can't envision a scenario where another 9/11 doesn't come about."—*Sen. Lindsey O. Graham (R-S.C.), commenting on Obama Administration policy in Afghanistan to news reporters, Sept. 19.*

Ready, Fire, Aim

"I still twitch when I say, 'cyber.' I'm a believer. I'm just not sure we know exactly what we're doing in it yet, and until we do, I'm concerned it's a black hole."—*Gen. Mark A. Welsh III, USAF Chief of Staff, AFA Air & Space Conference, Sept. 18.*

Well, If You Insist ...

"If any international court declares me guilty for announcing the bounty, then I am ready to be hanged in the name of the holy prophet Muhammad."—*Pakistani official Ghulam Ahmad Bilour, who offered a \$100,000 reward for killing the maker of an anti-Islamic video, remarks to reporters, Sept. 22.*

It has been 16 years since the Pentagon laid out a set of requirements—the blueprint—for the advanced stealthy strike fighter now known as the F-35 Lightning II. Ambitious plans called for the Air Force's F-35A to be operational by now, before Russia or China could field their own stealth fighters.

Plans, unfortunately, have changed. Serious program delays have pushed scheduled deliveries well to the right. Today, no one expects the fifth generation F-35A to enter operational service before 2017, if then.

How much of the F-35's postulated combat advantage will remain? By the time it reaches squadron service, will it still be a dominant fighter, relative to the rest of the world? In short, is the F-35A going to be worth the wait?

If the view of Lockheed Martin is any guide, the answer is emphatically yes. In a recent briefing for *Air Force Magazine*, the F-35's developer offered important new details about the fighter's stealthy design, employment concepts, modern air combat capabilities, and more.

Just a Quartet

The briefing, summarized here, offers what should be viewed as something close to a best-case scenario for the new fighter.

Lockheed Martin Vice President Stephen O'Bryan, the company's point man for F-35 affairs, declared that the fighter meets requirements. A former Navy F/A-18 Hornet pilot, O'Bryan said the combat capability of even the earliest baseline model will greatly exceed that of the most heavily upgraded fourth generation fighters and strike aircraft, such as the F-15, F-16, and F-18.

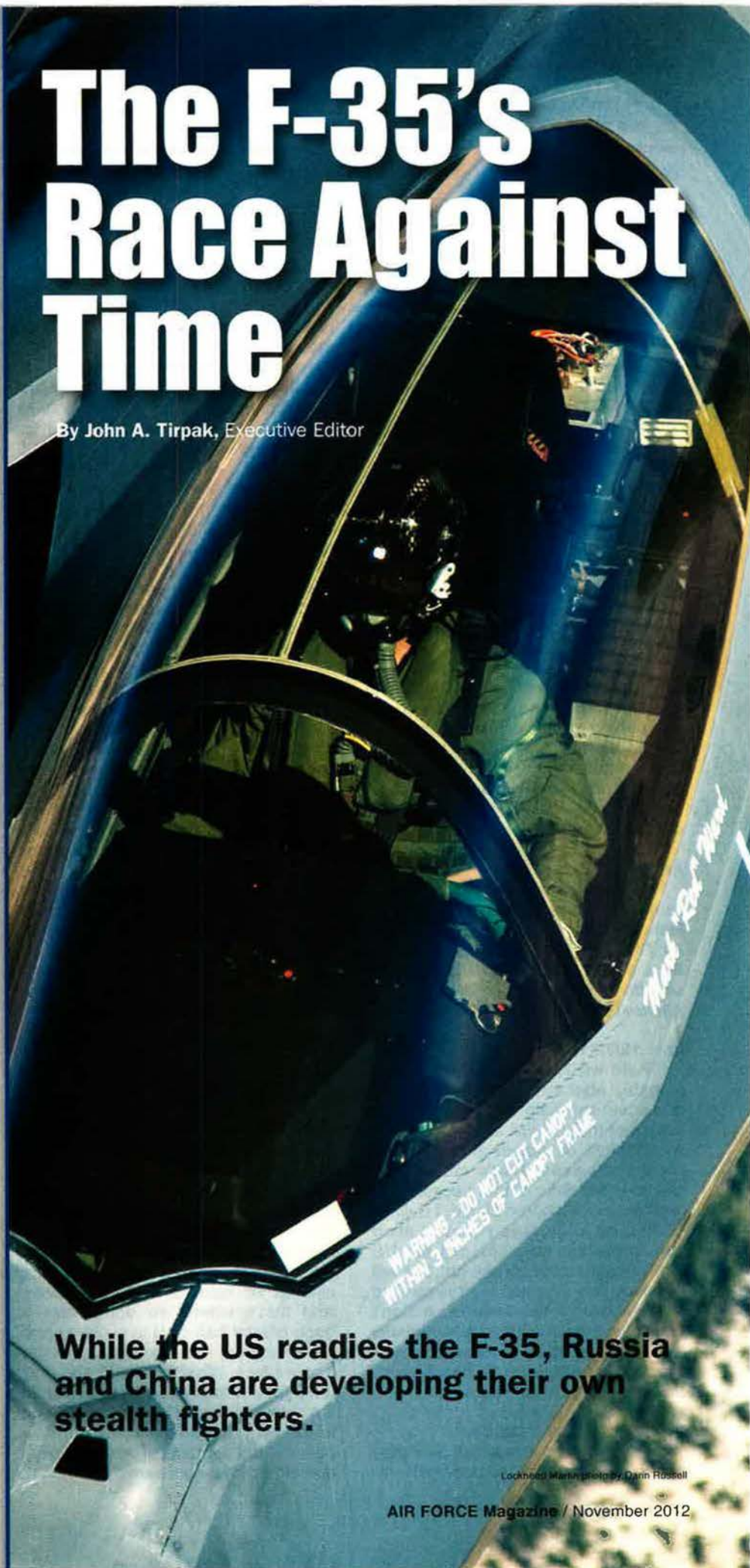
The fighter's capabilities will make it a three- or four-for-one asset, said the Lockheed briefers, meaning that it will be able to simultaneously perform the roles of several different aircraft types—from strike to electronic attack, from command and control to battlefield surveillance.

O'Bryan pointed out an important truth about air combat: Fourth generation strike aircraft assigned to hit targets guarded by modern anti-access, area-denial systems (A2/AD, in military parlance) require the support of "AWACS, electronic attack, sweep air-

Lt. Col. Peter Vitt pilots the F-35 designated AF-4 through an air-to-air refueling evaluation flight.

The F-35's Race Against Time

By John A. Tirpak, Executive Editor



While the US readies the F-35, Russia and China are developing their own stealth fighters.

Lockheed Martin photo by Dann Russell

planes, SEAD” (suppression of enemy air defenses) aircraft and cruise missiles. Such a package could run to dozens of aircraft.

The same mission, he claimed, can be achieved with just a quartet of F-35s. Each would be capable of operations that go well beyond air-to-ground missions. The four-ship would be a potent factor in any scenario calling for the employment of airpower, O’Bryan asserted.

In short, he concluded, the F-35 is “the efficient package” for future strike missions, offering high probability of success with “lower probability of loss.”

When it comes to maintainable stealth design, the F-35 represents the state of the art, O’Bryan said, superior even to the F-22 Raptor, USAF’s top-of-the-line air superiority aircraft.

The F-22 requires heavy doses of regular and expensive low observable materials maintenance. F-35 stealth surfaces, by contrast, are extremely resilient in all conditions, according to the Lockheed team.

“We’ve taken it to a different level,” O’Bryan said. The stealth of the production F-35—verified in radar cross section tests performed on classified

western test ranges—is better than that of any aircraft other than the F-22.

This, he went on, is true in part because the conductive materials needed to absorb and disperse incoming radar energy are baked directly into the aircraft’s multilayer composite skin and structure.

Moreover, the surface material smoothes out over time, slightly reducing the F-35’s original radar signature, according to the Lockheed Martin official. Only serious structural damage will disturb the F-35’s low observability, O’Bryan said, and Lockheed Martin has devised an array of field repairs that can restore full stealthiness in just a few hours.

Dramatic Stealthiness

The F-35’s radar cross section, or RCS, has a “maintenance margin,” O’Bryan explained, meaning it’s “always better than the spec.” Minor scratches and even dents won’t affect the F-35’s stealth qualities enough to degrade its combat performance, in the estimation of the company. Field equipment will be able to assess RCS right on the flight line, using far less cumbersome gear than has previously been needed to make such calculations.

In designing the new fighter, Lockheed Martin engineers assumed they would guess wrong about some access doors; it would be necessary to put some in different places during the course of its lifetime.

Thus, said O’Bryan, the company left open several ways to make field modifications that can create a quick-release door in the aircraft’s skin. These doors won’t then need tape or caulk to restore stealthiness, the application of which is a time-consuming and expensive chore in other stealth aircraft.

The repair and upkeep of low observables has been one of the F-22’s “main maintenance drivers,” he said, “and that goes away with [the] F-35.”

The F-35A has a serpentine inlet making engine fan blades invisible from any point outside the fuselage. That factor eliminates one of the biggest RCS problems for stealth designs.

Moreover, the air intakes constitute a single piece of composite material devoid of seams, rivets, or fasteners. These types of parts are huge RCS reflectors and caused massive signatures on earlier-generation aircraft. Their absence dramatically aids the F-35’s stealthiness.

That’s not all. No antennas protrude from the aircraft’s surfaces. These elements are instead embedded in the leading and trailing edges of the wings. Their positioning there not only reduces the radar signature but also yields a far wider, deeper, and more precise picture of the battlespace.

Stealth, said O’Bryan, has to be “designed in from the beginning” and can’t be added as an afterthought or upgrade. That means radar, electronic warfare, data links, communications, and electronic attack “need to be controlled” and must be fused from the start to work in concert with the special shapes and materials of the airframe itself.

The F-35A fighter has an active electronically scanned array radar and unique antennas spaced around the aircraft so that it can direct radar energy precisely, with minimal “bleed” in unintended directions. That puts more power where it’s wanted and reduces emissions that can give away the F-35’s position.

In addition, it uses machine-to-machine communications with other F-35s. Emitters such as the radar and the electronic warfare system can flash on and off among all the F-35s in a flight.



An F-35 Lightning II (top), accompanied by an F-22 Raptor, powers over Fort Walton Beach, Fla. This was the first time the two fifth gen fighters had flown together.

USAF photo by MSgt. Jeremy T. Lock

A leading fighter, for example, can have a trailing F-35 illuminate his target with radar. The data in such an operation will be shared via a laser-powered Multifunction Advanced Data Link; the pilots don't even need to talk to each other.

Stealth also permits (and requires) internal fuel and weapons carriage. The Air Force F-35 variant, fully loaded for combat, can pull nine-G turns with a full load of fuel and missiles. This cannot be done by fighters lugging along external weapons and fuel tanks.

O'Bryan took skeptical note of other fighter makers' boastings that they have reduced by up to 75 percent the radar signatures of their fourth generation aircraft. He finds the claim perplexing; their original signatures are so massive, he says, that even a 75 percent reduction still leaves a huge radar return. These uprated fighters are visible within the maximum range of adversary air-to-air missiles, he said.

"You basically haven't really done anything, in terms of a practical tactical advantage against an enemy," said the Lockheed official.

Worse, the RCS reductions evaporate once nonstealthy ordnance, fuel tanks, and other stores are hung on the "clean" aircraft.

"Until you have a first-shot, first-look, first-kill" capability, said O'Bryan, "you're still at the same standoff [range], hoping that training and tactics are going to overcome a potential adversary."

China and Russia have recognized the fallacy of trying to make a silk stealth purse out of a nonstealthy sow's ear. That is why China is vigorously pursuing the J-20 and Russia the PAK-FA stealth fighter designs. If their programs pan out as expected, said O'Bryan, "fourth gen airplanes are really going to be at a serious disadvantage" against them.

In a modern A2/AD environment, no fourth generation fighter can survive, O'Bryan insisted, no matter how much support it receives from jammers. In such an environment, however, the F-35 can fly in relative safety, with more range than the F-16 and with the same combat payload.

When enemy defenses have been beaten down, and the need for stealthiness is not so strong, the F-35 will use



Lockheed Martin photo by Darin Russell

F-35 airframe AF-6 goes through the paces on a navigational accuracy/GPS test flight near Edwards AFB, Calif.

both internal and external stations. That would boost its carrying capacity to a full 18,000 pounds of ordnance—more than triple the F-15's max load of 5,200 pounds.

O'Bryan said the F-35 is an all-aspect stealth aircraft—that is to say, stealthy from any and all directions.

A Conspicuous Omission

Cost and performance trade-offs were made when it came to designing the F-35's exhaust system, O'Bryan said. Lockheed Martin chose not to employ a two-dimensional thrust-vectoring nozzle, as it had on the F-22 Raptor.

For one thing, the decision reduced cost. For another, it eliminated one of the larger practical challenges to maintaining the stealth characteristics of the F-35.

The classified "sawtooth" features that ring the nozzle help consolidate the exhaust into a so-called "spike"

signature, while other secret techniques have been employed to combat and minimize the engine heat signature.

"We had to deal with that, and we dealt with that," O'Bryan said, declining to offer details.

The F-35 meets or exceeds the services' infrared signature specifications. Many of the standard fighter engine features such as a big afterburner spray bar assembly and related piping are missing from the F-35. The F135 power plant, built by Pratt & Whitney, is truly a "stealth engine," he said.

Much speculation has swirled around the question of the F-35's electronic warfare and electronic attack capabilities. The Air Force has resolutely refused to discuss any specifics. Yet experts have pointed out that, in its most recent EW/EA roadmap, USAF has failed to mention any plans for a dedicated jamming aircraft. It is a conspicuous omission.

O'Bryan certainly couldn't go into the subject of the fighter's EW/EA suite in any detail, or the way it might coordinate with specialized aircraft such as the E-3 Airborne Warning and Control System, RC-135 Rivet Joint, E-8 JSTARS, or EA-18G Growler jammer aircraft.

He did say, however, that F-35 requirements call for it to go into battle with "no support whatever" from these systems.

"I don't know a pilot alive who wouldn't want whatever support he can get," O'Bryan acknowledged. "But the requirements that we were given to build the airplane didn't have any support functions built in. In other words, we had to find the target, ... penetrate the anti-access [defenses], ... ID the target, and ... destroy it by ourselves."

O'Bryan said the power of the F-35's EW/EA systems can be inferred from the fact that the Marine Corps "is going to replace its EA-6B [a dedicated jamming aircraft] with the baseline F-35B" with no additional pods or internal systems.

Asked about the Air Force's plans, O'Bryan answered with several rhetorical questions: "Are they investing in a big jammer fleet? Are they buying [EA-18G] Growlers?" Then he said, "There's a capability here."

O'Bryan went on to say that the electronic warfare capability on the F-35A



Aircraft AF-6 and AF-7 overfly the California desert during a formation maturity flight. The Lightning II can interrogate a target to its rear, an ability unique to the F-35.

“is as good as, or better than, [that of] fourth generation airplanes specifically built for that purpose.” The F-35’s “sensitivity” and processing power—a great deal of it automated—coupled with the sensor fusion of internal and offboard systems, give the pilot unprecedented situational awareness as well as the ability to detect, locate, and target specific systems that need to be disrupted.

When it comes to electronic combat, the F-35A will make possible a new operational concept, O’Bryan said. The goal is not to simply suppress enemy air defenses. The goal will be to destroy them.

“I don’t want to destroy a double-digit SAM for a few hours,” he said. “What we’d like to do is put a 2,000-pound bomb on the whole complex and never have to deal with that ... SAM for the rest of the conflict.”

At present, that is difficult to do. Adversaries, O’Bryan pointed out, recognize that the basic American AGM-88 High-Speed Anti-Radiation Missile has a light warhead able to do little more than damage an air defense array. Thus, they have adapted to the threat by deploying spare arrays with their mobile systems.

The hope is that the introduction of the new F-35 will put a stop to that practice.

The effect of the F-35’s stealth, EW/EA capabilities, and powers of automatic target recognition and location in all weather will offer conventional “deterrence” on an unprecedented scale, O’Bryan said.

The fighter’s version 3.0 automatic target recognition software won’t be able to distinguish one kind of battle tank from another. However it will be able to pluck out the mobile surface-to-air missile system from a forest of other kinds of vehicles.

Multiple fighters detecting and characterizing a site’s electronic emissions, coupled with a detailed synthetic aperture radar image, will lead a strike group to specific aimpoints. It goes without saying that all of this can be achieved while the fighters themselves remain undetected.

The F-35’s electronic attack capabilities, said O’Bryan, allow the fighter to penetrate into “places that other airplanes can’t go” and therefore “hold strategic targets at risk.” These capabilities are unique to the F-35, he asserted.

Countermeasures, Not Turning

As F-35s criss-cross enemy airspace, they also will automatically collect vast amounts of data about the disposition of enemy forces. They will, much like the JSTARS, collect ground moving target imagery and pass the data through electronic links to the entire force. This means the F-35 will be able to silently and stealthily transmit information and instructions to dispersed forces, in the air and on the ground.

Because it was designed to maneuver to the edge of its envelope with a full internal combat load, the F-35 will be able to run rings around most other fighters, but it probably won’t have to—and probably shouldn’t.

“If you value a loss/exchange ratio of better than one-to-one, you need to stay away from each other,” said O’Bryan, meaning that the fighter pilot who hopes to survive needs to keep his distance from the enemy.

He noted that, in a close-turning dogfight with modern missiles, even a 1960s-era fighter such as the F-4 can get into a “mutual kill scenario” at close range with a fourth generation fighter. That’s why the F-35 was provided with the ability to fuse sensor information from many sources, triangulating with other F-35s to locate, identify, and fire on enemy aircraft before they are able to shoot back.

The F-35’s systems will even allow it to shoot at a target “almost when that airplane is behind you,” thanks to its 360-degree sensors.

According to O’Bryan, the F-35 also can interrogate a target to its rear, an ability possessed by no other fighter.

If you survive a modern dogfight, O’Bryan claimed, “it’s based on the countermeasures you have, not on your ability to turn.”

If the situation demands a turning dogfight, however, the F-35 evidently will be able to hold its own with any fighter. That is a reflection on the fighter’s agility. What’s more, a potential future upgrade foresees the F-35 increasing its air-to-air missile loadout from its current four AIM-120 AMRAAMs to six of those weapons.

The F-35, while not technically a “supercruising” aircraft, can maintain Mach 1.2 for a dash of 150 miles without using fuel-gulping afterburners.

“Mach 1.2 is a good speed for you, according to the pilots,” O’Bryan said.

The high speed also allows the F-35 to impart more energy to a weapon such as a bomb or missile, meaning the aircraft will be able to “throw” such munitions farther than they could go on their own energy alone.

There is a major extension of the fighter’s range if speed is kept around Mach .9, O’Bryan went on, but he asserted that F-35 transonic performance is exceptional and goes “through the [Mach 1] number fairly easily.” The transonic area is “where you really operate.”

In combat configuration, the F-35’s range exceeds that of fourth generation fighters by 25 percent. These are Air Force figures, O’Bryan noted. “We’re comparing [the F-35] to [the] ‘best of’ fourth gen” fighters. The F-35 “compares favorably in any area of the envelope,” he asserted. ■

The days of a monolithic Air Force general officer corps are long gone.

By Rebecca Grant



UEAF photo by Michael J. Pausic

New-Look Leadership

The past decade has seen a major shift in what it means to be an airman in the United States Air Force. At the same time, there has been a significant change in our understanding of what it takes to be a general officer.

Even the post of Chief of Staff has been transformed. In August, Gen. Norton A. Schwartz wrapped up his four-year stint as USAF Chief of Staff. He was the first uniformed leader who was neither a fighter nor bomber pilot. He came from the special operations and mobility fields.

Take a look at the generals who wear four stars on their USAF uniforms. Often in years past, four-star officers at the Air Force's highest Corona conclaves were fighter pilots all. Now, the group portrait of USAF four-stars looks quite different.

"The general makeup of Corona four-star meetings is changing and that's not a bad thing for the Air Force," said retired Gen. Carrol H. Chandler, former commander of Pacific Air Forces and vice chief of staff.

He's right about the change. Today, the Corona membership comprises not only fighter pilots but also officers drawn from the mobility, bomber, space, acquisition, and financial management communities.

The group now includes the Air Force's first female four-star, Gen. Janet C. Wolfenbarger, head of Air Force Materiel Command at Wright-Patterson AFB, Ohio. The position of vice chief of

Above: Secretary of the Air Force Michael Donley (I) congratulates Gen. Larry Spencer following the pinning on of his fourth star in July. Below: Gen. Janet Wolfenbarger speaks at a ceremony at Eglin AFB, Fla. Wolfenbarger, commander of Air Force Materiel Command, is USAF's first female four-star general.



LSAF photo by Samuel King Jr.



Then-Air Force Chief of Staff Gen. Norton Schwartz (l) speaks with then-Col. Peter Gersten at Creech AFB, Nev., in 2009. Gersten's subsequent promotion to brigadier general from an RPA background indicates that USAF embraces new technologies as part of its service identity.

staff is held by a nonrated officer, Gen. Larry O. Spencer; he held the senior resource, budget, and planning post on the Joint Staff. For the first time in Air Force history, two African-Americans are holding four-star positions simultaneously.

Shaping the Cadre

The new look of USAF generals stems from changing demands on airpower and new leadership requirements that are reshaping the cadre of some 300 Active Duty men and women wearing stars. They are being shaped by new trends in missions, geopolitics, and the country itself.

Trend No. 1 is the fact that “fighter generals” have been joined in quantity by senior officers from air mobility, space, special operations, and other career fields.

Tracking the data on generals has been an interesting way to analyze the Air Force since 1998, when then-Col. R. Michael Worden published his book, *Rise of the Fighter Generals*. He traced the shift in power away from generals who'd flown bombers in combat and toward career fighter pilots.

For Worden, the signature event occurred in 1982, when Gen. Charles A. Gabriel became the first pure fighter pilot appointed to be Chief of Staff. His selection was “the first in a continuous string of generals with fighter back-

grounds as Air Force Chiefs of Staff,” Worden noted.

As Worden wrote, these fighter generals—strengthened by their combat experience in the Korean War and Vietnam War and time on Cold War alerts—reflected trends in Air Force technology and operations.

The string of fighter-pilot dominance lasted 26 years. Technically, it was broken when Schwartz became Chief in August 2008.

The impact of operations and technology has long been the primary force shaping USAF generals. “The Air Force, like all institutions, tends to draw senior leaders from the core mission of the organization, and that’s flying and fighting,” said RAND Corp. researcher Albert A. Robbert in a 2011 *Stars and Stripes* newspaper article.

Former Secretary of the Air Force Sheila E. Widnall pointed out that the qualities sought in a USAF general are shaped, in part, by USAF’s changing internal image as new technologies emerge. On a corporate scale, the institution seeks generals identified with the rising technology of the day.

Think back to Benjamin D. Foulois, Henry H. “Hap” Arnold, Billy Mitchell, Carl A. Spaatz, and their peers. The all-consuming task of keeping airplanes flying and arranging their missions into meaningful operations dominated. Their outstanding trait was mastery of aviation technology. The merge of technology and operations created the core identity of the Air Force. Brash and practical pilots led the Air Force for generations. Leaders got their schooling in the sky—if they survived.

“I became a leader the easy way,” recalled the legendary Brig. Gen. Robin



Maj. Gen. Margaret Woodward, then commander of Air Forces Africa, greets Gen. Carter Ham, head of US Africa Command, at Ramstein AB, Germany. Woodward became the first female to lead an air war when she led the coalition air campaign during Operation Odyssey Dawn in Libya.

Olds in a 1970 speech to cadets at the Air Force Academy. "I was one of the 40 young men that went over with a squadron in 1944 and joined the Eighth Air Force in fighters."

Olds ended up as a squadron commander at age 22. As he half-jokingly recounted, "By the time we were completing our first tour, there were only eight of us left. That made it pretty easy for me."

Here was the essence of Worden's point about flying and operational experience. Time in fighters and sorties in Vietnam marked the leaders of the 1970s through the early 2000s.

The rise of expeditionary warfare in the 1990s and 2000s changed the type of pilot getting that heavy operational experience. New strategies flung airmen to Iraq, Bosnia, Kosovo, Afghanistan, the Horn of Africa, and beyond.

Mobility aviators were off to war on a continuous basis. Lt. Col. Laura L. Lenderman put it succinctly in her study of mobility generals published in 2008 by Air University. "Since the end of the Cold War," she said, "airlift, air refueling, and aeromedical evacuation missions flown in support of combat and humanitarian operations have become an indispensable and direct aspect of US grand strategy."

By the numbers, mobility missions grew to dominate sorties controlled by the air operations center for US Central Command. Lenderman found that mobility missions flown in support of wars in Afghanistan and Iraq from 2002 through April 2006 outnumbered fighter and bomber sorties by a ratio of two-to-one.

As with the fighter generals of the post-Vietnam era, the numbers soon turned into a leadership shift. Lenderman found that, in 1997, mobility generals filled just three of the 36 USAF three-star positions. Ten years later, they held 10 of the 40 three-star billets. That is a rise from 8.3 percent to 25 percent in a relatively short period.

By then, air mobility four-stars had begun to take senior commands outside their field. Gen. William J. Begert led Pacific Air Forces. Gen. Roger A. Brady commanded US Air Forces in Europe. Gen. Duncan J. McNabb became vice chief of staff.

Will the Air Force soon see general officers drawn from the newest tribes, such as operators of remotely piloted aircraft?

"We already have one," Chandler noted. He referred to Brig. Gen. Peter E. Gersten, who was promoted to one-

USAF photo by Jason Minto



L-r: Army Brig. Gen. Kenneth Roberts, Gen. Carrol Chandler (now retired), and Col. Manson Morris return from a ceremony at Dover AFB, Del., in 2010. Chandler believes the changing makeup of the general officer roster is a good thing for the Air Force.

star rank after commanding the 432nd Wing at Creech AFB, Nev. Gersten started his Air Force career as an F-16 pilot, including a squadron command, then acquired time flying the Predator, Reaper, and Sentinel RPAs at Creech.

This promotion from the RPA wing was no accident. It's a sign the Air Force is embracing the new technology in its combat identity. Widnall described it as "sorting out the changing nature of what we're doing" with airpower.

A Sea Change

Expeditionary operations produced more firsts. Of great significance was the assignment of a woman officer from the mobility world to be a joint force air component commander, or JFACC, in a major air campaign. She was Maj. Gen. Margaret H. Woodward, who led the coalition air campaign during the 2011 Operation Odyssey Dawn in Libya.

"Women have now participated in many more things throughout the Air Force than in the past," said Chandler. "They are positioned to be at the four-star table."

When Wolfenbarger took over Air Force Materiel Command this summer, Widnall, for one, was not surprised. "It's gratifying," she said—but hardly surprising. "I just assumed it would happen," she said.

Widnall led the Air Force through a pioneering stretch as nearly all airmen's jobs were opened up to women after

Congress lifted the no-women ban on most USAF combat jobs.

One of the biggest steps was welcoming into the fold the Air Force's first three female fighter pilots. The first to finish her qualifications and move on to fly the F-15E was Jeannie M. Flynn. "Being in the pilot corps does give additional opportunities," Widnall said. Opening those careers to women made them "more of a complete part of the Air Force."

Still, given the changes in the Air Force, fighter and bomber cockpits did not remain the only paths to the top. Wolfenbarger herself brought long experience in engineering, support, and program management. She'd already served as vice commander at AFMC. But she acknowledged the sea change.

"This opportunity only really exists because the Air Force has embraced a culture of diversity," she said.

Today the one- and two-star ranks hold several rated women from the mobility forces. Women in total make up 18.8 percent of USAF officers and 19 percent of the enlisted force.

The Air Force has yet to see a female from a pure fighter or bomber background pin on her brigadier general's star, but it seems inevitable. In June, Flynn—now Col. Jeannie M. Leavitt—took command of the 4th Fighter Wing at Seymour Johnson AFB, N.C.

Chandler observed that the general officers as a group have to provide a breadth of experience to the Air Force.

"We need deep logistics experience that you may not have in a fighter pilot," he said by way of example. "There aren't enough years in a rated officer's career to do all those things."

The Air Force recently reached for financial and management experience in another significant promotion. Spencer, the new vice chief of staff, rose to his position in July from a background in budgets, finance, command of the 72nd Support Group, and serving as the Joint Staff's J-8 as a three-star.

"What better time to have a vice chief with his background?" asked Chandler. "That's an example of finding the officer the USAF needs."

Tapping talent from nonrated career fields might well improve the overall skill set of the general officer pool, but it does not solve the long-standing problem of how to manage rated career paths to produce combat-oriented officers who can lead on the Air Staff and find their way into top joint jobs. It is difficult to take those officers with experience in operations and combat and give them the extra skills they need for the highest levels of command.

The much-studied fighter pilots make a good example.

"If the fighter pilots are not getting the development in terms of experience in Joint Staffs and Air Staff and other places, ... they're not going to be sufficiently prepared to assume senior leadership roles in the future," concluded Robbert from RAND.

The Air Force's reliance on leaders who fly is a personnel headache. Flying, it turns out, takes lots of time. Pilots typically must gain 120 months—10 full years—of flying time in the first 18 years of their career, and wing command is the pinnacle. As a result, USAF brigadier generals form a pool characterized by "a heavy command focus and light experience in vital warfighting staff positions," wrote USAF Maj. William H. Burks in a 2010 thesis for the US Army's School of Advanced Military Studies at Fort Leavenworth, Kan.

He went on, "Something in the career path must change if the Air Force is going to grow future leaders more adept at strategic thinking and in the operational arts with the credentials to prove it."

Pilots or otherwise, generals from the Air Force have not captured a proportionate share of coveted joint assignments. For all of the adaptation occurring within the Air Force, getting blue-suit generals into big joint jobs is still a struggle.

The historical record on theater command is dismal. No USAF officer has ever led US Pacific Command or US Central Command. Gen. Lauris Norstad and Gen. Joseph W. Ralston served as Supreme Allied Commander, Europe, but their stints came some 40 years apart. Gen. Douglas M. Fraser became only the third USAF officer to lead a geographic command with an area of responsibility outside the US when he assumed the post of US Southern Command in 2009. Two airmen have run NORAD and US Northern Command since NORTHCOM's creation in 2002, but the post is now held by an Army general.

Current figures on who fills the top Joint Staff jobs tell another dismal story for the Air Force.

To begin with, only two of eight directors on the Joint Staff are Air Force generals. Lt. Gen. Brooks L. Bash was appointed in September 2011 to serve as director for logistics, J-4, and Lt. Gen. Mark F. Ramsay took over as director for force structure, resources, and assessment, J-8, in August. Both are pilots with long air mobility experience.

Meanwhile, the slate of nine combatant commanders includes Gen. William M. Fraser III at US Transportation Command and Gen. C. Robert Kehler at US Strategic Command.

Long and Delicate

No Air Force officers currently occupy the posts of JCS Chairman, JCS vice chairman, or director of the Joint Staff.

Of 21 high-profile Joint Staff or unified command jobs, only five are held by USAF officers. Clearly the much-reported one-third split between Army, Navy, and Air Force departments for budget resources doesn't carry over into command jobs.

Grooming general officers to compete for jobs like these is a long process with delicate timing. It has to be done at a brisk pace, too, so that prospective three- and four-stars are nominated for jobs while they still have plenty of time left to serve and move to other assignments.

Meanwhile, the prospects also have to know people in the joint environment; simply having your name submitted is not enough for an appointment. Any big job usually has a handful of candidates from multiple services, all with stellar records.

Chandler described the task of grooming potential combatant commanders or JCS Chairmen as "a 25- to 30-year problem." As officers move up, they "have to have the tools [they] need to become competitive down the road."

An early step is ensuring the right kind of advanced educational opportunities for officers. In particular, high-powered master's degrees and even the occasional doctorate lay the foundation for officers to obtain broader leadership opportunities and succeed when they get them.

Exposure to colleagues in other services, government branches, and industry also matters. For example, officers specializing in intelligence and cyberspace have to rotate through other parts of the national intelligence community as they advance. Relationships across Washington, D.C., can be an asset.

A prime example of the right mix of flying, fighting, and career broadening is the new USAF Chief of Staff, Gen. Mark A. Welsh III. Welsh began his career flying A-10s in combat in Desert Storm. He commanded several operational units and served on the Joint Staff before taking the four-star job at USAFE, a post that pops up on the biographies of many a Chief of Staff. Before that came an unusual three-star assignment—at the CIA. Welsh was assigned the title of "Associate Director for Military Affairs" from August 2008 through December 2010. The job brought him into close contact with newly appointed director of the CIA, Leon E. Panetta, who then became Secretary of Defense in 2011 and had a hand in selecting Welsh for the top Air Force post.

That type of close contact is all to the Air Force's benefit. A good sign for the Air Force's future is the number of younger USAF generals holding deputy positions on the Joint Staff. Working on the staffs of combatant commanders also counts. "We need overseas experience," said Chandler. "The exposure of being assigned overseas is going to become more and more important."

Chandler believes the pilot experience will stay central to USAF leadership. "As far as I can see into the future, the Chief will most likely be a rated officer," he acknowledged.

Even so, it seems clear that the monochrome days of the fighter generals aren't coming back. ■

Rebecca Grant is president of IRIS Independent Research. Her most recent article for Air Force Magazine was "Toward an Unblinking Eye" in the October issue.

It was a rescue operation, but it also foiled a plan for Cuban-Soviet expansionism.



The Grenada Adventure

By John T. Correll

Grenada is the smallest and southernmost of the Windward Islands in the Caribbean, only 21 miles long and 12 miles wide. Except for the spice plantations that produced a third of the world's nutmeg, there was not much there in 1983. A medical school operated by investors in the United States accounted for 15 percent of its total economy.

However, the little island nation offered several strategic benefits to the Soviet Union and its client state, Cuba. The leftist government in Grenada had given the Cubans permission to build a 9,000-foot airfield of military quality at Point Salines on the southern shore, and it was nearly complete.

The airfield would give Moscow a staging base to support the Sandinista regime in Nicaragua and Communist insurgen-

cies in El Salvador and Guatemala. For the Cubans, who could not fly nonstop to their operations in Africa, it would be a refueling base that avoided questions about landing in places where Cuban troops and military equipment were not welcomed. Revetments along the taxiway at Point Salines undercut the pretense that the airfield was for purposes of tourism.

The United States was worried about the formation of a "red triangle" with Cuba



Left: A C-141 Starlifter lands at Point Salines Airport during Operation Urgent Fury. Above: Flight line floodlights reveal members of the Army's 82nd Airborne Division boarding a C-141, ready to take off for Grenada.



DDO photos

in the north, Nicaragua to the west, and Grenada to the east. In a March 23, 1983, speech, President Reagan assailed "the Soviet-Cuban militarization of Grenada." Grenada's neighbors in the Organization of Eastern Caribbean States (OECS) were alarmed as well.

Then, on Oct. 12, the four-year-old revolutionary "New Jewel Movement" government was overthrown in a bloody internal coup. The plot was conceived

and carried out by even more-radical elements who wanted to move faster and harder toward a Marxist state. They executed President Maurice Bishop on Oct. 19. Gen. Hudson Austin, the head of Grenada's army, assumed control and ordered a round-the-clock, shoot-on-sight curfew.

An Awkward Fit

In the US, Americans still had fresh and painful memories of the 1979-1981 Iranian hostage fiasco. It was a humiliating crisis in which more than 50 US diplomats and staff, seized by revolutionary Islamic elements, were held captive in the US Embassy in Teheran for more than a year.

Thus, on short notice, the Pentagon organized Operation Urgent Fury to bring out of Grenada some 600 American students stranded at St. George's University Medical School. And since US forces were going in anyway, they would take advantage of the crisis to put the Grenada corner of the red triangle out of business.

"The entire Grenada operation was driven by the State Department," said George P. Shultz, the hard-nosed Secretary of State who pressed Secretary of Defense Caspar W. Weinberger and members of the Joint Chiefs of Staff to move faster than they were inclined to do.

"Weinberger said that we didn't know enough to act," Shultz said, but "we couldn't let the Pentagon drag out our

preparations until it was too late, which I feared they might do."

Reagan, who was already worked up about what was going on in Grenada, supported Shultz's call for a prompt response.

When Bishop was executed, the Joint Chiefs sent a warning order to US Atlantic Command, alerting it to a possible need for a rapid evacuation. Under the unified command plan, LANTCOM had jurisdiction in the Caribbean and would be in charge of any such operation.

It was an awkward fit for the Norfolk, Va.-based command; the Caribbean was strictly a sideline for LANTCOM, a maritime command geared toward offensive operations in the North Atlantic and reinforcement of NATO Europe in the event of a Soviet-led Warsaw Pact invasion.

"We made an effort to evacuate the students through a Pan Am charter, but the plane was refused the right to land," Shultz said. "We made another effort by chartering a cruise ship. It was denied permission to dock."

On Oct. 20, the original guidance for a possible evacuation was expanded to include "neutralization" of Cuban and local military forces in Grenada. Vice Adm. Joseph Metcalf, commander of the Second Fleet, was chosen to head the possible invasion force, and the Joint Chiefs assigned an Army officer, Maj. Gen. H. Norman Schwarzkopf, to advise Metcalf on ground operations.

The acting head of the eight-member OECS, Prime Minister Eugenia Charles of Dominica, asked the United States to intervene in Grenada. Her request was made on behalf of seven members—Dominica, Montserrat, St. Lucia, St. Kitts-Nevis, St. Vincent, the Grenadines, and the twin-island nation of Antigua and Barbuda.

The eighth OECS member was Grenada, which had, in addition to a Marxist revolutionary regime, a governor-general. The office was a relic of Grenada's days as part of the British Empire. When the island in 1974 gained independence from imperial control, it became a member of the largely ceremonial British Commonwealth, and the governor-general was a symbol of the crown.

Even after it seized power in 1979, however, Bishop's revolutionary government declined to abolish the post of governor-general. It was occupied by an eminent Grenadian, Paul Scoon. While Scoon represented the queen on the island, he did not speak for British Prime Minister Margaret Thatcher—a fact which soon would take on considerable significance.

At the moment, Scoon was being held under house arrest by the rebels. He was, however, communicating with the outside world. Prime Minister Charles sent around to other OECS members a Scoon request for intervention. The governor-general followed up with a written request when he was free to do so.

LANTCOM got the execute order on Oct. 22. Weinberger conferred full power to conduct the operation upon Army Gen. John W. Vessey Jr., the Chairman of the JCS, even though a Chairman was not normally in the operational chain of command.

Congressional leaders were told in confidence of the impending action, but otherwise Administration officials gave out no advance notification. Certainly, they provided nothing to the news media, although invasion rumors were in steady circulation.

Reagan later said, "We decided not to inform anyone in advance about the rescue mission in order to reduce the possibilities of a leak. ... We did not even inform the British beforehand because I thought it would increase the possibility of a leak."

Although the main effort would be by US forces, small military contingents from Antigua, Barbados, Dominica, Jamaica, St. Lucia, and St. Vincent joined in the intervention.

The plan was to quickly take and secure three main objectives: the Point Salines airfield, which was adjacent to the True Blue campus of the medical school; another

DOD photo



airfield at Pearls, midway up the eastern coast of the island; and Government House, where the governor-general was being held, just east of St. George's city, the capital of Grenada.

The Grenadian armed forces, consisting of about 300 regulars and 1,000 militia, were no real challenge. They were armed mostly with light weapons but had eight Soviet armored personnel carriers and two scout cars with 14.5 mm machine guns. They also had several kinds of anti-aircraft guns, but they lacked radar-assisted fire control.

The Lebanon Bombing

Of more concern were the 700 Cuban "construction workers" stationed at Point Salines. Cuba's Fidel Castro had supposedly ordered the Cuban workers not to interfere with US forces "if the Yankees land on the runway section near the university or on its surroundings to evacuate their citizens." However, Castro sent a Cuban Army officer, Col. Pedro Tortolo Comas, to direct the defense of southern Grenada.

The Cubans at the airfield were organized into quasi-military units. Many of them were veterans of Castro's campaigns in Angola and Ethiopia. They had AK-47 assault rifles and were dug in on the hills around Point Salines with machine guns, mortars, and recoilless rifles.

According to Schwarzkopf, the briefers at LANTCOM had asserted that the Grenadian forces would give up as soon as the invaders arrived, and that the Cubans were not going to fight. In fact, neither LANTCOM nor any other Americans had much reliable information on Grenada. The invasion force had no military maps and

no way of identifying the buildings and facilities in the target locations.

"We planned the operation in a very short period of time, in about 48 hours," Vessey said. The security lid was so tight that US Readiness Command was cut out of the planning loop and some of the critical supporting forces—such as the logisticians—were excluded until late in the process.

Two days before the invasion, Vessey's attention and that of other senior officials was drawn away from Grenada when terrorists in a truck loaded with explosives rammed into the US Marine Corps barracks in Lebanon, killing 241 US service members. There was some speculation that the Grenada operation was laid on to distract attention from the losses in Lebanon, but preparations for the intervention were well along by that time.

H-hour for the invasion—code-named Operation Urgent Fury—was 5 a.m. local time on Tuesday, Oct. 25. Army Rangers were to fly in and seize the Point Salines airfield. US marines, in a helicopter assault, were simultaneously to capture the other airfield at Pearls.

More than a dozen US Navy warships—including Metcalf's flagship, the helicopter carrier USS *Guam*—were on station in the waters around Grenada. Air Force MC-130 and C-130E transports were in a holding pattern offshore, having picked up two battalions of Rangers before midnight at Hunter Army Airfield near Savannah, Ga., and refueled twice in flight to Grenada.

The Marine Corps helicopter assault on the Pearls airfield went off on schedule at daybreak and met very light resistance.



DOD photo



Far left: A USAF C-141 takes off from Point Salines during Urgent Fury. C-141s brought in two battalions from the Army's 82nd Airborne Division to reinforce Army Rangers already on the island. Left: An aerial reconnaissance map of Point Salines Airfield on Grenada, with areas of the base identified. Below: US Army Rangers parachute into Grenada.

US Army photo



Defenses at Point Salines were more substantial. AC-130 gunship escorts passing over the field ahead of the airlifters discovered that the Cubans had blocked the runway with vehicles and various obstructions. It was not possible to land the transports, so the Rangers made ready to jump.

The MC-130s came in elements of two. The first aircraft over the drop zone was flown by the squadron commander, Lt. Col. James Hobson. As he approached, he was illuminated by a spotlight from the island. AAA guns opened up from the nearby hills and 23 mm tracers were visible on both sides. To reduce their vulnerability to ground fire, the Rangers jumped from the very low altitude of 400 feet. They reached the ground in about 12 seconds.

The Grenadian forces manning the AAA guns around the airfield were poor shots, but they managed to inflict some battle damage on the USAF transports before the gunships took the batteries out of action. The Rangers had cleared the runway by 6:30 a.m. and secured the strip shortly thereafter.

LANTCOM was wrong about the Cubans, though. They fought fiercely, at one point charging the Rangers with three BTR-60 armored personnel carriers. Fighting around the airfield continued. In fact, two battalions of the 82nd Airborne Division were flown in from Fort Bragg, N.C., by Air Force C-141s, to reinforce the Rangers.

Meanwhile, Navy SEALs and Army Special Forces troops had run into difficulty at Government House and other sites around St. George's. Outgunned, the SEALs were pinned down along with the

governor-general and his family until all of them were rescued by marines on the morning of Oct. 26. Elsewhere, Special Forces teams rolled up the opposition at several other locations.

Just in Time

Moving north and east from Point Salines, the paratroopers found a cluster of warehouses at Frequente, which were guarded by Cubans. The Cubans fled after an attempt to ambush the oncoming Americans. The warehouses contained enough Soviet and Cuban arms and military equipment to outfit six infantry battalions.

"Grenada, we were told, was a friendly island paradise for tourism," Reagan said. "Well, it wasn't. It was a Soviet-Cuban colony, being readied as a major military bastion to export terror and undermine democracy. We got there just in time."

At 9 a.m., several hours after the start of Urgent Fury, Rangers arrived at the True Blue campus at the end of the runway at Point Salines. They rescued all of the American students that

they found, but there were only 138 of them—far fewer than the number they expected to find.

The other Americans—more than 200 of them—were at Grand Anse to the north and Prickly Bay on the southern coast. US intelligence had not known these facilities existed. It would take several days to collect all of the students, but eventually, 564 of them would be evacuated to the United States.

Meanwhile, Navy A-7s mistakenly bombed a mental hospital on a hill overlooking the governor-general's house near St. George's city. The air planners and pilots had no military maps identifying the building as a hospital and Grenadian gunners were firing from that location at US helicopters and at the Navy SEALs pinned down in Government House. The Grenadians had given weapons to hospital staff and, incredibly, to some mental patients.

The operation was beset with other problems as well. Army and Navy radios could not communicate with each other. The Rangers and airborne troops could

see the ships offshore but had to send their requests for fire support to Fort Bragg, which relayed the messages by satellite to the ships.

Service parochialism also was at its worst. Schwarzkopf later reported, "Admiral Metcalf received an urgent message from the office of the Navy's comptroller in Washington warning that he should not refuel Army helicopters because the funds-transfer arrangements had not yet been worked out." Metcalf, declaring the message to be baloney (or words to that effect), told his chief of staff, "Give them fuel."

In another instance, a Marine Corps colonel refused to transport Rangers to Grand Anse to rescue the students held there because, as the marine put it, "We don't fly Army soldiers in Marine helicopters." He relented when Schwarzkopf threatened him with court-martial.

These lapses would be cited as prime examples of organizational dysfunction in the debates leading to adoption in 1986 of the Goldwater-Nichols reorganization act, which established sweeping new rules for joint operations. They did not matter that much in Grenada because of the overwhelming strength of the invasion force. Significant resistance was over by Oct. 28, and the operation's combat phase ended on Nov. 2. Yet the structural weaknesses of the system were only too apparent.

Forty-six-year-old Maj. Gen. Colin Powell, who was then Weinberger's military assistant (and later Chairman of the Joint Chiefs of Staff, national security advisor, and Secretary of State) called it "a sloppy success."

Britain, which had pulled out of Grenada in some haste in 1974 amid strikes, rioting, and political turbulence was embarrassed by US intervention in a commonwealth nation. Thatcher, stung by an opposition Labour Party gibe that she was "an obedient poodle to the American President," angrily denounced the operation.

Britain joined in a United Nations General Assembly resolution, adopted Nov. 2 without debate, "deeply deploring" the invasion of Grenada as "a flagrant violation of international law." Grenada's nearest neighbors and Israel voted with the United States against the resolution, which passed by a vote of 108 to nine.

Charles R. Modica, the founder and chancellor of the Grenada-based medical school, observed the operation from school headquarters on Long Island, N.Y. From that safe location, he told the *New*

York Times that the invasion was "very unnecessary" and that Reagan "should be held accountable" if anyone was hurt.

In Congress, Rep. Thomas P. O'Neill (D-Mass.), the speaker of the House, criticized Reagan for resorting to "gun-boat diplomacy." Vessey had reversed the no-press order on Oct. 28, acknowledging that it had been a mistake, but the operation was condemned by most of the American news media.

Television cameras from all three networks were on hand when the first aircraft bringing students back to the United States landed at Charleston AFB, S.C., Oct. 27. The first student out fell to his knees and kissed the ground.

A National Holiday

In a CBS poll conducted Nov. 3 in Grenada, 91 percent said they were glad the US troops had come. Eighty-five percent felt they or their families had been in danger, 76 percent believed that Cuba wanted to take control of Grenada, and 65 percent thought the Point Salines airfield was being built for Cuban-Soviet military purposes.

Almost 500 of the rescued students came to a reception at the White House Nov. 7, where they waved small American flags and cheered the President. On Nov. 8, with public opinion running strongly in favor of the intervention, O'Neill changed his mind, saying, "Sending American forces into combat was justified by these particular circumstances."

A year after the operation, school chancellor Modica was among those attending White House ceremonies commemorating the anniversary of the invasion. He gave Reagan a small replica of a memorial set up on the True Blue campus to honor US troops killed in the operation.

"I was probably the first person to voice reservations about your decision to go ahead with the rescue mission in Grenada last year," Modica said. "I know I certainly was the most publicized. During my State Department briefing the following day, I realized there were factors unknown to me which required that you make a tough and immediate decision. ... The very definition of strong leadership is exemplified by your decisive action in Grenada."

About 8,000 US military members participated in Operation Urgent Fury, along with 353 troops from allied Caribbean nations. It was essentially a

ground forces show, although 26 USAF wings, squadrons, and groups took part. Between Oct. 25 and Nov. 6, Military Airlift Command flew 750 missions.

US casualties were 19 killed and 116 wounded. The Cuban contingent suffered 25 killed, 59 wounded, and 638 captured. The Grenadian forces sustained 45 killed and 358 wounded.

The St. George's Medical School in Grenada reopened in January 1984.

"The following April, a million rounds of ammunition were found under a false floor in the vacated Cuban Embassy," Shultz said. Also found were documents that revealed five military assistance agreements between the Bishop government, the Soviet Union, and Cuba, as well as a Moscow commitment to send some \$30.5 million worth of military equipment and supplies.

Austin, the rebel leader, was caught and given a death sentence, but he got a reprieve and instead spent the next 25 years in prison. Castro's man on the scene, Comas, escaped into the Cuban Embassy, where he was given diplomatic status and was returned to Cuba. Castro had him court-martialed and reduced in grade to private for his ineffective defense of Cuban interests in Grenada.

The plan to establish a red triangle in the Caribbean failed. In December 1984, Grenada held the first free elections since 1976. The new Prime Minister was Herbert Blaize of the conservative, pro-US New National Party.

In 2004, Scoon said Reagan had "saved us from chaos" and that US troops "came and established peace and the return of democracy, a democracy which we now enjoy. ... It was not an invasion, because Ronald Reagan came to Grenada on invitation—invitation by me and invitation by the OECS territories."

As for Thatcher's objections, Scoon said, "As governor-general, I owed no allegiance to the British government; I owed allegiance to the British crown. When you look at the end result, even the British people will now think it's a good thing the American and other Caribbean forces came when they did."

Commentaries in the news media and opinion journals continued for the most part to depict Operation Urgent Fury as reprehensible and unnecessary. That view has not been shared on Grenada, where Oct. 25 is celebrated as a national holiday in remembrance of the US intervention. ■

John T. Correll was editor in chief of Air Force Magazine for 18 years and is now a contributor. His most recent article, "High Noon," appeared in the October issue.

AIR FORCE ASSOCIATION
Professional Development

AIR FORCE ASSOCIATION'S
GLOBAL WARFARE SYMPOSIUM

November 15 - 16, 2012
Hyatt Regency Century Plaza
Los Angeles, CA



AIR FORCE ASSOCIATION'S ANNUAL
AIR WARFARE SYMPOSIUM
AND TECHNOLOGY EXPOSITION



FEBRUARY 21-22, 2013
ROSEN SHINGLE CREEK HOTEL, ORLANDO, FL

AIR FORCE ASSOCIATION'S
AIR & SPACE
CONFERENCE
AND TECHNOLOGY EXPOSITION
2 · 0 · 1 · 3

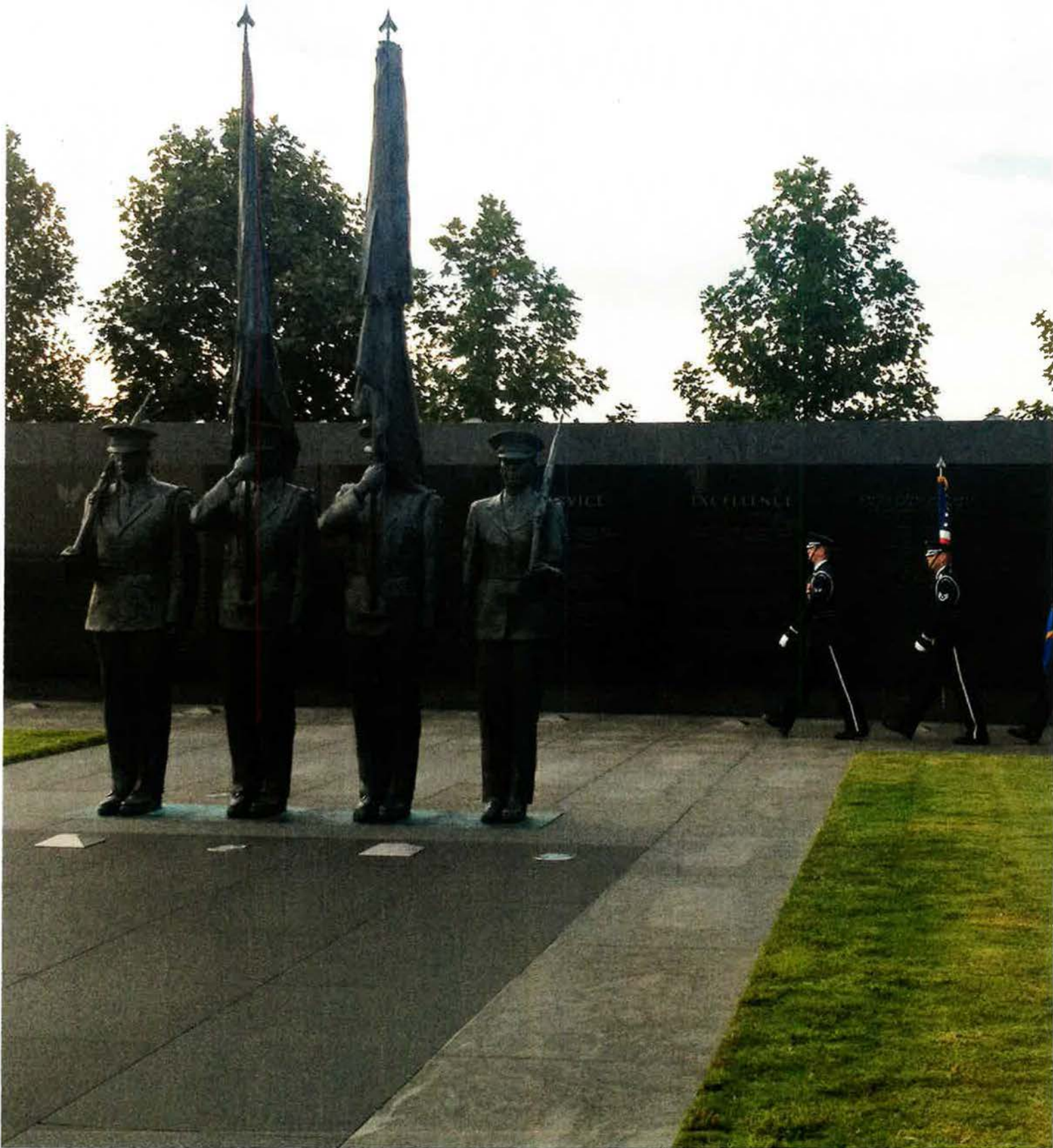


SEPTEMBER 16-18, 2013 | GAYLORD NATIONAL HOTEL
NATIONAL HARBOR, MD

For additional information visit us at www.afa.org



Air Force Association **National**



ROUGHLY 6,750 attendees flocked to the Air Force Association's 2012 Air & Space Conference and Technology Exposition this year. Newly appointed Air Force Chief of Staff Gen. Mark A. Welsh III headlined the conference, introducing his vision for the service's future. The conference broke all records for the sheer number of speeches and presentations by USAF leaders, academics, and technology experts, while the aerospace and defense industries put in a strong showing on the exhibit floor.

The conference ran Sept. 17-19 at the Gaylord National Resort and Convention Center in National Harbor, Md., along the Potomac River just outside of Washington, D.C.

First thing Monday morning, Air Force Secretary Michael B. Donley assisted in presenting AFA's National Aerospace Awards before his keynote address, formally commencing the three days of conference activities. AFA bestowed six Citations of Honor, in addition to Air Force crew and team awards, Air National Guard and Air Force Reserve awards, and civilian professional awards.

Chairman of the Joint Chiefs of Staff Army Gen. Martin E. Dempsey shared his perspective on the importance of air superiority and battlefield support to the current fight, as well as the future of joint warfare as the US turns to the Asia-Pacific region.

A sizeable contingent of foreign and allied visitors joined those attending a lineup of 78 professional development seminars, roundtables, technology briefings, and speeches. Programs covered everything from Chinese military modernization to prevention of post-traumatic stress after combat and the future of manned spaceflight.

The Technology Exposition bustled despite the budget crunch, as an increased number of efficiency-oriented enhancements and upgrades joined aircraft and big-ticket items on the display floor. The expo boasted 104 exhibitors and pioneered a Speaker's Corner on technology on the exhibit floor for the first time. Expo highlights included Boeing's KC-46A tanker avionics mock-up, AgustaWestland's AW101 Combat Rescue Helicopter

cabin display, BAE's Hawk jet trainer trailer, Alenia Aermacchi's T-100 jet training system, as well as the Esterline NexGen cockpit training simulator.

The combined Air & Space Conference and Technology Exposition attracted some 80 members of the press, along with representatives from Air Force Public Affairs.

AFA members and Air Force officials gathered at the Air Force Memorial in Arlington, Va., for a somber ceremony remembering the deceased on Sunday morning, Sept. 16.

AFA National Chaplain, retired Maj. Gen. William J. Dendinger, memorialized the deceased with a short message. Donley, Welsh, Command CMSgt. Denise Jelinski-Hall of the National Guard Bureau, and AFA Chairman of the Board S. Sanford Schlitt presented a wreath. A memorial tribute listing the names of the 71 people who died in the last year was read by Schlitt, Justin M. Faiferlick, Vice Chairman of the Board for Field Operations, and George K. Muellner, Vice Chairman of the Board for Aerospace Education.

AFA formally congratulated the Air Force's 12 Outstanding Airmen of the Year with a dinner following a reception sponsored by Northrop Grumman Sept. 17.

At the dinner, CMSAF James A. Roy congratulated USAF's "Golden Dozen," lauding their exemplary service and commitment to the service's core values. SrA. Laura Beckley acted as master of ceremonies, and Maj. Gen. Howard D. Stendahl, Air Force chief of chaplains, led the gathering in prayer. The United States Air Force Band entertained the audience during the evening's festivities.

Thanks to financial support from ATK Corp., the 12 Outstanding Airmen met with their congressional representatives on Capitol Hill and enjoyed the highlights of Washington, D.C. They toured the White House and the Pentagon, visited Arlington National Cemetery, and paid their respects at the Air Force and World War II memorials during their week in D.C.

AFA's Air Force Anniversary Dinner toasting the service's 65th birthday was Sept. 19. Guests enjoyed music by the Air Force Band's Strolling Strings from JB Anacostia-Bolling, D.C., and





Newly elected Chairman of the Board George Muellner speaks to conference-goers.



During his State of the Force address, USAF Chief of Staff Gen. Mark Welsh III (l) brought SrA. Shemiel Christopher on stage. Christopher manages the Fisher House at Dover AFB, Del., mortuary.



Gen. Larry Spencer (l), USAF vice chief of staff, walks through the Gaylord with AFA member Michael Peters.



TSgt. LaShasta Smitn and TSgt. Suezette Douglas look over the day's schedule during the Air & Space Conference.

Patrick Coulter served as master of ceremonies. AFA saluted:

- Retired Gen. Norton A. Schwartz, former Chief of Staff, US Air Force, with the H. H. Arnold Award, recognizing the year's most significant contribution to national security by a member of the military.

- Retired USMC Gen. James L. Jones, former national security advisor and former Supreme Allied Commander, Europe, with the W. Stuart Symington Award, recognizing the year's top contribution by a civilian in the field of national defense.

- The Boeing Co., Wideband Global SATCOM, Global Positioning System, and X-37B Orbital Test Vehicle builder, with the John R. Alison Award for the most outstanding contribution by industrial leadership to national defense.

- The Military Channel, with the AFA Chairman's Aerospace Education Award, for long-term commitment to aerospace education.

- Retired Gen. James P. McCarthy, Air Force Academy professor and Defense Science Board task force leader; Berlin Airlift aircrews; fighter pilots of World War II; Korean War airmen; and Vietnam War prisoners of war, with Lifetime Achievement Awards.

AFA Education Award

Lori B. Bradner received AFA's National Aerospace Teacher of the Year award for her work while she was a teacher at Central Florida Aerospace Academy of Kathleen High School in Lakeland, Fla. AFA bestows the award each year in recognition of an elementary to high school level educator who goes above and beyond the call of duty to mentor students in STEM subjects: science, technology, engineering, and mathematics.

DOD and USAF Leaders Attending

Many Air Force leaders attended the seminars and sessions, speaking with the press and giving airmen the chance to ask questions of them, culminating in Wednesday's Four-Star Forum.

Senior leadership speaking at the conference included Dempsey, Donley, Welsh, Schwartz, Ashton B. Carter, deputy secretary of defense, and Roy.

Other high-level leaders included Gen. Herbert J. Carlisle, commander, Pacific Air Forces; Gen. Douglas M. Fraser, commander, US Southern Command; Gen. G. Michael Hostage III, commander, Air Combat Command; Gen. Raymond E. Johns Jr., commander,

Air Mobility Command; Gen. C. Robert Kehler, commander, US Strategic Command; Gen. Edward A. Rice Jr., commander, Air Education and Training Command; Gen. William L. Shelton, commander, Air Force Space Command; and Gen. Janet C. Wolfenbarger, commander, Air Force Materiel Command.

A number of other senior officers took part: Lt. Gen. Eric E. Fiel, commander, Air Force Special Operations Command; Lt. Gen. Michael C. Gould, superintendent, US Air Force Academy; Lt. Gen. James Jackson, commander, Air Force Reserve Command; Lt. Gen. Larry D. James, deputy chief of staff, intelligence, surveillance, and reconnaissance; Lt. Gen. Darrell D. Jones, deputy chief of staff, manpower, personnel, and services; Lt. Gen. James M. Kowalski, commander, Air Force Global Strike Command; Lt. Gen. C. D. Moore II, commander, Air Force Life Cycle Management center; Lt. Gen. Harry M. Wyatt III, director, Air National Guard; Maj. Gen. William A. Chambers, assistant chief of staff, strategic deterrence and nuclear integration; Maj. Gen. Christopher C. Bogdan, deputy program executive officer, Joint Strike Fighter program; Maj. Gen. Steven L. Kwast, director, requirements, Air Combat Command; Maj. Gen. Earl D. Matthews, director, cyberspace operations and chief information officer; Maj. Gen. John F. Thompson, tanker program executive officer and KC-46 program director; Maj. Gen. Rowayne A. Schatz Jr., director, strategic plans and requirements, Air Mobility Command; Brig. Gen. Timothy J. Leahy, commander, 23rd Air Force; Brig. Gen. Eric G. Weller, deputy commander, mobilization and reserve affairs, US Special Operations Command; and Brig. Gen. Marshall B. Webb, director, plans, programs, requirements, and assessments, Air Force Special Operations Command.

Election of AFA Officers

George K. Muellner, Huntington Beach, Calif., was elected for a first term as Chairman of the Board. Scott P. Van Cleef, of Fincastle, Va., was elected for a first term as Vice Chairman of the Board for Field Operations. Jerry E. White, of Colorado Springs, Colo., was elected for a first term as Vice Chairman of the Board for Aerospace Education. Edward W. Garland, San Antonio, was elected for a second term as AFA Secretary. Leonard R. Vernamonti, Clinton, Miss., was re-elected AFA Treasurer for a third term.



Jemmarie Silva (l), a business development representative with Aeroscraft, speaks with a visitor during the well-attended technology exposition.



Joint Chiefs Chairman Gen. Martin Dempsey (l), Welsh (c), and AFA President Craig McKinley (r) head to a conference event.



L-r: SrA. Mohamed Jawar, A1C Kamiron Smith, and SrA. Brian Hulse stop at an interactive expo display.



Other AFA Elections

William R. Grider, Indianapolis, and Gilbert E. Petrino Jr., Williamsburg, Va., were elected National Directors at-Large, and Nora Ruebrook, Honolulu, was elected National Director West.

Newly elected Region Presidents are:

Joseph L. Hardy, Maryland, Central East Region; Kent D. Owsley, Ohio, Great Lakes Region; John D. Daly, Nebraska, Midwest Region; Victor C. Seavers, Minnesota, North Central Region; John R. Allen Jr., South Carolina, Southeast Region; and John Toohey, New Mexico, Southwest Region.

SMSgt. Kathleen McCool greets a Warrior Canine Connection dog, a future service dog for mobility impaired veterans.



Famed Berlin Airlift "Candy Bomber" Gail Halvorsen (c) and his wife Lorraine (l) visit with Capt. Sarah Kelly at a conference event.



The sun rises at the Air Force Memorial before the Sunday wreath-laying ceremony.

AFA Business

A total of 211 delegates represented 38 states, the District of Columbia, and overseas chapters at AFA's National Convention the weekend before, Sept. 14-15.

Delegates heard briefings on AFA's CyberPatriot program and on Arnold Air Society/Silver Wings and listened to a presentation by Frederick Gross, president of AFA's Chapter of the Year, the Hurlburt Chapter in Florida. AFA's National Teacher of the Year Bradner stressed the need for the association to provide greater support for the technological education of young people, and delegates were briefed on a recent initiative to update and simplify AFA's field operations guide.

The Air Force vice chief of staff, Maj. Gen. Larry O. Spencer, addressed the assembly, highlighting issues pertinent to the service today. Attendees were updated by Chairman Schlitt, Vice Chairman Faiferlick, and Treasurer Vernamonti on the association's key areas.

The assembly passed a board-approved change to the AFA constitution replacing the dual title AFA Chief Executive Officer and President with the abbreviated title of President. The delegates officially welcomed and accepted AFA's new President, retired Gen. Craig R. McKinley, and incoming Executive Vice President, retired Lt. Gen. Richard Y. Newton III. Delegates reviewed and unanimously approved AFA's annual Statement of Policy and Top Issues as presented.

Acknowledgments

The Air Force Association thanks supporting partners Northrop Grumman, Lockheed Martin, AgustaWestland, ATK, BAE Systems, Boeing Co., EADS North America, General Dynamics, IHS Aerospace & Defense, L-3 Communications, Pratt & Whitney, SES World Skies, Alenia Aermacchi, ARINC, Aurora Flight Sciences, Bombardier, Cisco, General Atomics Aeronautical Systems, IBM, and TASC for making this year's conference possible.

AFA National Convention Parliamentarian for the final time was Joan Blankenship. Inspectors of Elections were Arthur J. Rooney, Chairman, Lisa Hall, and Richard Holdcroft. Frederick Gross chaired the Credentials Committee, serving with Ellie Constantine, Geri Sutter, and Sharon White.

The Air Force Association sincerely thanks these volunteers and others for their work and generous support during the convention. ■

Air Force Association

TOP ISSUES for 2013

The Air Force Association is especially proud of Air Force men and women—Active, Guard, Reserve, retired, and civilian—for their sacrifices on behalf of our nation.

PREPARING AND SUPPORTING AIRMEN; CARING FOR VETERANS AND RETIREES

- Recognize military and veteran benefits are earned through years of service, sacrifice, and in many cases, personal injury and disability.
- Emphasize that TRICARE is an earned benefit that meets the unique demands of military service.
- Oppose the raising TRICARE fees at medical inflation rates, which exceed the annual cost of living adjustments to retired pay.

RECAPITALIZING THE AGING FLEET

- Recognize the vital nature of the KC-46A program and give it unqualified support. It must be fielded promptly and in effective quantity.
- Acquire a new long-range ISR/strike aircraft that can penetrate, survive, and locate adversary systems and engage them as soon as they are located.
- Recognize we need an advanced trainer platform to prepare our Airmen for conflicts and combat. We must invest in providing the necessary training equipment to adequately train our troops.
- Commit to a higher production rate of F-35s to prevent a fighter deficit.

SECURING SPACE AND CYBERSPACE

- Recognize that US power projection hinges on a robust, reliable, and responsive space enterprise. The Air Force must play a leadership role in ensuring US military security and freedom of action within the cyber domain.
- Stabilize production of critical satellites, devise a replenishment strategy, and continue to modernize its Joint Space Operations Center to preserve America's advantage.
- Advocate for fully funding and supporting space situational awareness, space protection programs, and assured access to space.
- Invest steadily and strategically on space capabilities and recognize the US must retain clear superiority in this critical mission area.

STRENGTHENING THE NUCLEAR MISSION

- Provide life extension programs that ensure safe, reliable, and secure nuclear weapons and the responsive production infrastructure to deter, assure, and provide stability.
- Sustain delivery systems and warheads for the foreseeable future, but just as importantly, the nuclear support equipment and infrastructure.

INVESTING IN AIRPOWER

- Promote the early learning in foundational studies, including science, technology, engineering, and math, to stimulate the development of the next generation of engineers, scientists, and technicians.
- Establish a strategic plan to identify the elements of a robust defense industrial base and the steps needed to maintain that robustness.
- Encourage strong, foundational aviation capabilities in our partner nations to enable successful, sustainable security within their borders and to contribute to regional stability.





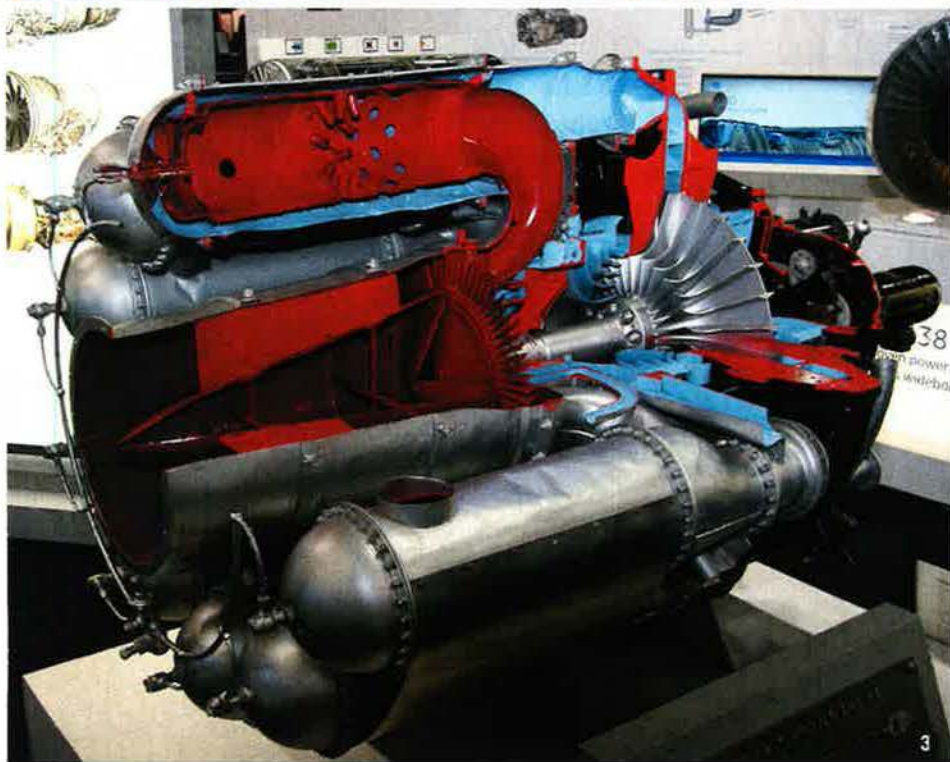
Aerospace technology of the highest order was on display at AFA's annual showcase.

Hardware, software, and integration concepts tailored for the Air Force's enduring and emerging missions greeted visitors to AFA's 2012 Technology Exposition, along with an array of personal protection equipment and services for USAF personnel. **1** Making his first visit to the expo as Chief of Staff, Gen. Mark Welsh III gets a briefing from Boeing Vice President Jack Catton. **2** Air Force Secretary Michael Donley, flanked by Douglas Raaberg of Northrop Grumman and AFA Board Chairman Sandy Schlitt (r), opens the technology expo. **3** MBDA displayed a trio of dual-mode Brimstone missiles—derived from the Hellfire—as potential armament for remotely piloted aircraft. **4** An artillery shell damaged by a high-power laser was one of the test artifacts displayed by the Air Force Research Lab.



Exposition 2012

Photos by Guy Aceto



111 Andrew Martin of Martin-Baker explains the F-35 ejection seat to CMSgt. Larry Malcolm, command chief master sergeant of the 2nd Bomb Wing. 121 It's BATMAN—the Battlefield Air Targeting Man-aided knowledge system, modeled by Air Force Materiel Command's Greg Burnett. The ensemble is a response to joint terminal attack controller requests for an integrated field system. 131 This cutaway of the historic Type I-A engine—which powered the first US jet fighter, the XP-59—was featured at General Electric's booth. 141 This flying car concept is being pursued by Carter Aviation Technologies and AAI.



111 Not a black ice shelter, this igloo at the Cubic Defense Applications booth is a portable simulation dome called a Joint Fires Integrated Training Environment. It can link with other domes for a variety of training exercises. 121 A model of the A400M Grizzly, a developmental airlifter sized between a C-130J-30 and a C-17, wore Air Force colors at EADS' booth. 131 Duke Ku, an air attaché and F-16 pilot from the Republic of Taiwan, gets a briefing from Emanuele Cassan on Alenia Aermacchi's T-100 training system.



141 Dogs of the Warrior Canine Connection earned smiles and pats as they were walked around the expo. Troops who have post-traumatic stress disorder train the pups to become service dogs for mobility-impaired veterans.



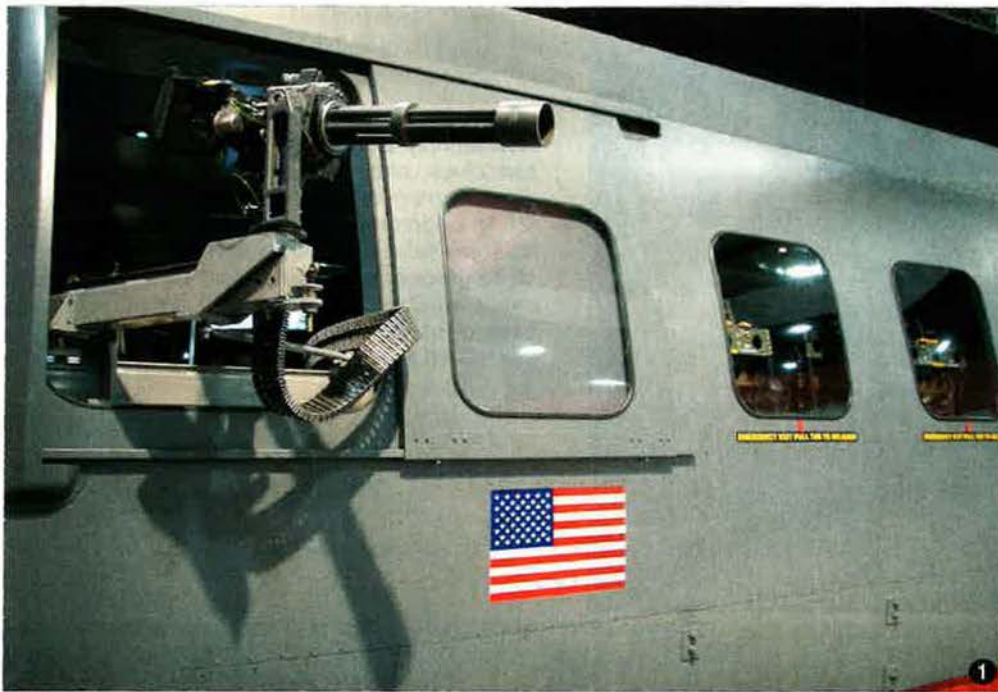


111 Siemens, mindful that USAF is increasingly energy cost-conscious, showcased an all-electric, plug-in car at its booth. 121 An upgraded-F-15 model, with an impressive load of air-to-air, air-to-ground, air-to-ship, and anti-radar munitions, and an AESA radar, graced Boeing's display. Behind is the KC-46 tanker systems trailer.



131 Gen. Janet Wolfenbarger, head of Air Force Materiel Command and the first female USAF four-star, visits the SAIC booth. Watching a brief with her is Charles Heflebower of SAIC. 141 From the Tobyhanna Army Depot came this Humvee carrying a

Lightweight Counter-Mortar Radar, to be used in base defense operations. The system spots mortar rounds and is able to determine where they came from, assisting in the timely interdiction of the attackers.

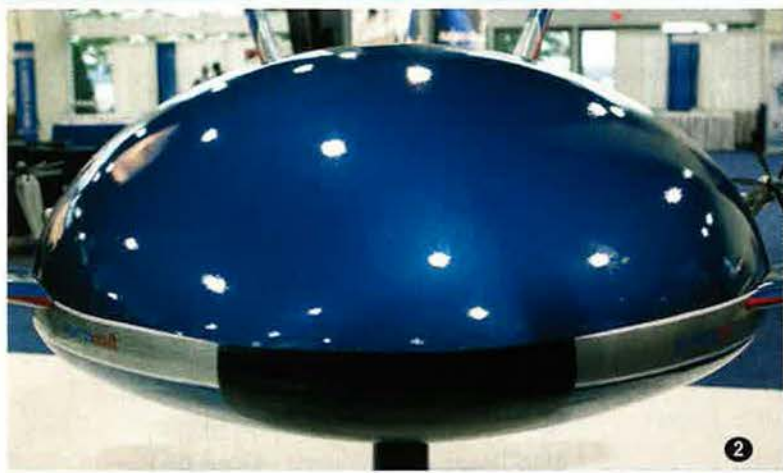


111 AgustaWestland's AW-101 offering for a new Air Force support helicopter was available as a walk-through mockup, bristling with weapons. 121 AAI's display featured two full-scale remotely piloted aircraft overhead: the Shadow M2 and, below it, the smaller, modular Model 229.



131 Mick Guthals of Textron demonstrates the BattleHawk squad-level loitering munition to CMSgt. Brian Hornback, command chief for Air Force Global Strike Command. 141 The seeker head of a Russian-made Archer air-to-air missile shows the effects of an energy beam fired in a test. AFRL showed a number of artifacts from tests of directed energy weapons.





111 A Lockheed Martin model shows how its “Cuda” concept for a small AMRAAM-class radar guided dogfight missile could triple the air-to-air internal loadout on an F-35. The missile is about the size of a Small Diameter Bomb and fits on an SDB-style rack. 121 Aeroscraft offered a glimpse of a possible future airship with this model. Airship concepts are gaining interest for loitering relays, ISR, or lift. 131 Michael Wooley, with ATK, speaks to Brig. Gen. Marshall Webb, director of plans, programs, requirements, and assessments, at Air Force Special Operations Command. 141 BAE Systems is making a push for the upcoming T-X competition with a variant of its Hawk trainer. The expo was well-attended by USAF airmen, ranging from junior enlisted to general officers. Many senior Air Force leaders made several trips through the exhibit hall. ■



Air Force Association National Awards 2012

NATIONAL AEROSPACE AWARDS

Award and Recipients

H. H. Arnold Award

For the most significant contribution by a military member to national defense

Gen. Norton A. Schwartz, USAF (Ret.), Former Chief of Staff, US Air Force

W. Stuart Symington Award

For the most significant contribution by a civilian in the field of national defense

Gen. James L. Jones, USMC (Ret.), Former National Security Advisor and Former Supreme Allied Commander, Europe

John R. Alison Award

For the most outstanding contribution by industrial leadership to national defense

The Boeing Company

David C. Schilling Award

Outstanding contribution in advancing flight activity

Advanced Extremely High Frequency Satellite Rescue Team

Theodore von Karman Award

Outstanding contribution in science and engineering

24th Air Force, JBSA-Lackland, Tex.

Gill Robb Wilson Award

Outstanding contribution in arts and letters

Gary Sinise, The Gary Sinise Foundation's work with wounded veterans

Hoyt S. Vandenberg Award

Outstanding contribution in aerospace education

USAF Weapons School, Nellis AFB, Nev.

Thomas P. Gerrity Award

Outstanding contribution in systems and logistics

Lt. Col. Eric G. Ellmyer, 439th Supply Chain Operations Squadron, JB Langley-Eustis, Va.

Department of Veterans Affairs Employee of the Year

Outstanding performance by VA employee

Maj. David F. Tharp, VISN 17 Center of Excellence for Research on Returning War Veterans, Waco, Tex.

Gen. George C. Kenney Award

Outstanding contribution in lessons learned

5th Air Force and 13th AF Det. 1 Lessons Learned Team, Hq. 5th AF, Yokota AB, Japan

Lt. Gen. Claire L. Chennault Award

Outstanding aerial warfare tactician

Capt. Michael P. Richard, 20th Operations Support Squadron, Shaw AFB, S.C.

Gen. Larry D. Welch Award

Outstanding contribution toward the nuclear mission

TSgt. Jennifer C. Fontenot, Hq. Air Education & Training Command, JBSA-Randolph, Tex.

CMSAF Thomas N. Barnes Award

Most outstanding crew chief in the Air Force

SSgt. Bryan R. Jernigan, 31st Test & Evaluation Squadron, Edwards AFB, Calif.

Gen. Billy Mitchell Award for C4 Excellence

Outstanding contribution toward warfighting capability

SMSgt. David A. Cox, 6th Communications Squadron, MacDill AFB, Fla.

AFA Chairman's Aerospace Education Award

Long-term commitment to aerospace education, making a significant impact nationwide

The Military Channel

PROFESSIONAL, CIVILIAN, MANAGEMENT, AND ENVIRONMENTAL AWARDS

Award and Recipients

Paul W. Myers Award for Physicians; Maj.

Laura M. Baugh, Hq. Air Force Medical Support Agency, Arlington, Va.

Verne Orr Award for Human Resources; 27th

Special Operations Wing, Cannon AFB, N.M.

Joan Orr Award for Air Force Spouse of the

Year; Amanda B. Chastain, McConnell AFB, Kan.

Juanita Redmond Award for Nursing; Capt.

Brian L. Scott, 18th Aerospace Medicine Sq., Kadena AB, Japan

Stuart R. Reichart Award for Lawyers; Col.

Thomas F. Zimmerman, Air Force Legal Operations Agency, JB Andrews, Md.

Chaplain Corps Award; SSgt. Andre Thomas,

61st Air Base Group, Los Angeles AFB, Calif.

Civilian Wage Employee of the Year;* An-

thony E. Hannula, 3rd Maintenance Sq., JB Elmendorf-Richardson, Alaska

Civilian Program Specialist of the Year;*

Jason R. Haddock, 11th Civil Engineer Sq., JB Andrews, Md.

Civilian Program Manager of the Year;*

Troy Andersen, 633rd Civil Engineer Sq., JB Langley-Eustis, Va.

Civilian Senior Manager of the Year; Michael

D. Payne, Chief, Integrated Warfare Analyses Div., Hq. USAF, Pentagon

AFMC Management Award—Executive Divi-

sion; Frank R. Washburn, 401st Supply Chain Mgmt. Sq., Wright-Patterson AFB, Ohio

AFMC Management Award—Middle Divi-

sion;* Lt. Col. Gary S. Johnson, Air Armament Center, Eglin AFB, Fla.

AFMC Management Award—Junior Divi-

sion;* Capt. Matthew C. Wroten, 461st Flight Test Sq., Edwards AFB, Calif.

Gen. E. W. Rawlings Environmental Award—

Mgmt.; Not awarded

Gen. E. W. Rawlings Environmental Award—

Tech.; Not awarded

AFROTC Cadet of the Year; Cadet 2nd Lt.

Margot C. Wolfersberger, Det. 910, University of Washington

CAP Aerospace Education Cadet of the Year;

Cadet Lt. Col. Michael R. Poussard, Fairfax Composite Sq., Manassas, Va.

**Presented at recipient's location*



Retired Maj. Gen. William Lyon (l), among those who accepted a Lifetime Achievement Award on behalf of Korean War airmen, speaks with Gen. Norton Schwartz, retired USAF Chief of Staff and recipient of the H. H. Arnold Award.



Retired Marine Corps Gen. James Jones received the W. Stuart Symington Award for most significant contribution by a civilian in the field of national defense.

CITATIONS OF HONOR

For the outstanding contribution of an individual or organization to the development of aerospace power.

Recipients and Achievements

Gen. Gary L. North, Former Commander, Pacific Air Forces

Enlisted airmen inducted General North into the Order of the Sword because of his dedication and leadership, his improvements to the quality of life, and his fostering of commandwide Total Force integration. In his 35 years in the Air Force, he has personified "Mission First, People Always."

55th Electronic Combat Group, Davis-Monthan AFB, Ariz.

The 55th ECG provided nonkinetic offensive strikes for Operations Enduring Freedom, Odyssey Dawn, and Unified Protector, surpassing 8,000 combat missions. The group has entered its eighth year of continuous combat operations.

352nd Special Operations Group, RAF Mildenhall, UK

The air commandos of the 352nd SOG responded courageously in the face of direct enemy fire during numerous missions supporting Operations New Dawn, Enduring Freedom, Odyssey Dawn, and Unified Protector. For one mission, they were the first US military boots on the ground during the crisis in Libya, secured the US ambassador, and surveyed infiltration zones.

94th Intelligence Sq., 70th Intelligence, Surveillance, Reconnaissance Wing, Fort Meade, Md.

The 94th IS performed 1,751 operations supporting National Security Agency and Air Force missions worldwide. They supported 91 joint service capture/kill operations; led coalition forces to 184 improvised explosive device makers; tracked more than 960 targets; and worked to fuse the MC-12 and U-2 signals intelligence collection processes.

747th Communications Sq., 15th Wing, 13th Air Force, JB Pearl Harbor-Hickam, Hawaii

The 747th CS provided a 99.9 percent network uptime rate, providing long-haul circuit management and integrated data, voice, and video services to more than 30,000 users in the Pacific theater. Among numerous accomplishments, the squadron shaped command and control operations with the Navy for Operation Tomodachi, ensuring uninterrupted service.

Joint POW/MIA Accounting Command, JB Pearl Harbor-Hickam, Hawaii

JPAC continues its search for the more than 83,000 American military personnel still missing from past conflicts. To aid its efforts, JPAC personnel routinely conduct technical negotiations and talks with representatives of foreign governments. At any time, there are more than 1,000 active cases under investigation.

AFA LIFETIME ACHIEVEMENT AWARD

The award recognizes a lifetime of work in the advancement of aerospace.

Gen. James P. McCarthy, USAF (Ret.)

After a 39-year USAF career, he continues to serve, including teaching at the Air Force Academy and leading several Defense Science Board task forces.

Vietnam War POWs

Some US servicemen spent eight years as Prisoners of War in Vietnam, many enduring unbelievably cruel treatment, before Operation Homecoming began in February 1973.

Berlin Airlift Aircrews

USAF aircrews flew more than 89,000 sorties, totaling more than 600,000 flying hours to help sustain Berliners against the 1948 Soviet Blockade.

Korean War Airmen

USAF airmen—on ground and in the air—were vital in holding the line against communist expansion at the opening of the Cold War.

Fighter Pilots of WWII

Army Air Forces airmen established the fundamentals of modern air superiority during World War II, exhibiting skill, bravery, and determination.

CREW AND TEAM AWARDS

Airborne Battle Management Crew: Combat Crew 2, 16th Airborne Command & Control Sq. (JSTARS), 461st Air Control Wing, Robins AFB, Ga.

Brig. Gen. Ross G. Hoyt Award: Crew of Blue 32, 351st Air Refueling Sq., RAF Mildenhall, UK

Gen. Curtis E. LeMay Award: Crew of Bone 34, 34th Bomb Sq., 28th Bomb Wing, Ellsworth AFB, S.D.

Gen. Jerome F. O'Malley Award: Crew of Olive 22, 38th Reconnaissance Sq., Offutt AFB, Neb.; 95th Reconnaissance Squadron Det. 1, Naval Support Activity Souda Bay, Greece; 488th Intelligence Sq., RAF Mildenhall, UK

Gen. Thomas S. Power Award: Capt. Andrew J. Stevens and 1st Lt. Ross V. Millard, 30th Missile Wing, F. E. Warren AFB, Wyo.

Best Space Operations Crew: Charlie Crew, 2nd Space Warning Sq., Buckley AFB, Colo.

Lt. Gen. William H. Tunner Award: Crew of Fever 11, 71st Rescue Sq., Moody AFB, Ga.; 79th RQS and 38th RQS, Davis-Monthan AFB, Ariz.; 308th RQS, Patrick AFB, Fla.; A Company, William Beaumont Army Medical Center, Tex.

Lt. Gen. Howard W. Leaf Award: 846th Test Squadron Large Aircraft Infrared Countermeasures (LAIRCM) Test Team, Holloman AFB, N.M.

AIR NATIONAL GUARD AND AIR FORCE RESERVE COMMAND AWARDS

Award and Recipients

CMSgt. Dick Red Award

Best ANG maintainer

CMSgt. Raymond J. Phillips, 163rd Aircraft Maintenance Sq., California ANG

Earl T. Ricks Award

Best ANG unit airmanship

Combat Crew One (JSTARS), 128th Airborne Command and Control Sq., Georgia ANG

Outstanding ANG Unit

Top ANG unit of the year

148th Fighter Wing, Minnesota ANG

George W. Bush Award, Officer

Outstanding civilian employer, Not awarded

George W. Bush Award, Enlisted

Outstanding civilian employer, Not awarded

President's Award for AFRC

Best AFRC flying unit of the year

Maj. David A. DeAngelis, 466th Fighter Sq., Hill AFB, Utah

AFRC Unit Award

Best AFRC unit of the year

910th Airlift Wing, Youngstown ARS, Ohio

AFRC Citizen Airman Award, Officer

Outstanding civilian employer

Lt. Col. Robert J. Sweet, 476th Fighter Group, Moody AFB, Ga., and Southwest Airlines Company

AFRC Citizen Airman Award, Enlisted

Outstanding civilian employer

SMSgt. Kenellias C. Smith, 301st Maintenance Sq., NAS Fort Worth JRB, Tex., and The Boeing Company

2012 AFA FIELD AWARDS

D. W. Steele Sr. Memorial Award

(AFA Unit of the Year: Hurlburt, Fla. President Frederick Gross)



Frederick Gross, president of the Hurlburt, Fla., chapter, speaks at the National Convention. His chapter was named AFA Unit of the Year.

Outstanding State Organization

Florida - *President Michael H. Emig*

Outstanding Chapters by Size

Small Chapter

Mel Harmon, Colo.

President Richard A. Follmar

Medium Chapter

Lincoln, Neb.

President Mary A. McGahan

Large Chapter

Not awarded in 2012

Extra Large Chapter

Wright Memorial, Ohio

President Shiela Wallace

Unit Exceptional Service Awards

Best Single Program

Central Florida, Fla.

President Mike Liquori

Communications

Hurlburt, Fla.

President Frederick Gross

Community Partners

Enid, Okla.

President Scott Northcutt

Community Relations

Eglin, Fla.

President Shannon M. Farrell

Overall Programming

Central Florida, Fla.

President Mike Liquori

Veterans Affairs

Paul Revere, Mass.

President Keith M. Taylor

Aerospace Education Achievement Award

Presented to chapters for outstanding achievement in aerospace education programming.

Albuquerque, N.M.

Blue Ridge, N.C.

Cheyenne Cowboy, Wyo.

C. Farinha Gold Rush, Calif.

Fort Dodge, Iowa

Gen. David C. Jones, N.D.

Gen. E. W. Rawlings, Minn.

Hurlburt, Fla.

Langley, Va.

L. D. Bell Museum, Ind.

Lincoln, Neb.

Montgomery, Ala.

Scott Berkeley, N.C.

Thomas W. Anthony, Md.

Tidewater, Va.

Wright Memorial, Ohio

Aerospace Education Excellence Award

Presented to one chapter in each of the AFA size categories annually for excellence in aerospace education programming. To qualify, a chapter must have received the Aerospace Education Achievement Award this year.

Small Chapter

Fort Dodge, Iowa - *President Deann Faiferlick*

Medium Chapter

Tidewater, Va. - *President William M. Cuthriell*

Large Chapter

Blue Ridge, N.C. - *President Alicia Hughes*

Extra Large Chapter

C. Farinha Gold Rush, Calif. - *President Paul H. Bonnier*

Arthur C. Storz Sr. Membership Award

Presented to the AFA chapter or individual member producing the highest number of new members during the 12-month period ending June 30, 2012, as a percentage of total chapter membership as of July 1, 2011. This award is based on both the quantity of new members as well as sustained new member recruitment.

Individual Award

2011-12 Membership Committee

Chairman Stephen G. Wood and Vice Chairman Tim Brock

Chapter Award

MiG Alley, South Korea

Vice President Donald Button

Jack Gross Awards

Presented to the chapter in each size category with the highest number of new members as a percentage of chapter size at the beginning of the membership year. A minimum number of 10 is required.

Small Chapter

MiG Alley, South Korea
Vice President Donald Button

Medium Chapter

Dacotah, S.D.
President David E. Holman

Large Chapter

John C. Stennis, Miss.
President Bradley McAlpine

Extra Large Chapter

Paul Revere, Mass.
President Keith M. Taylor

Chapter Larger Than 1,100

Montgomery, Ala.
President Larry G. Carter

Member of the Year

S. Sanford "Sandy" Schlitt

Distinguished Sustained Aerospace Education Award

Gregory Bruce White, Texoma Region

Chairman's Citation

Fred DiFabio, N.Y.
Louis A. Emond, N.C.*
Joseph B. Magnone, Mass.
Charles W. Myers, S.C.
Richard M. Stultz, Calif.
Richard Taubinger, Calif.

Special Chairman's Award

James F. Bromley
Stephen P. Condon
John Corley
Larry Lawson

*Denotes posthumous award.

Individual Awards by Region

Presented for outstanding service.

Central East Region

Medal of Merit

Kevin Fuccella, Va.
Harley Hammond, Va.
James Higginbotham, Md.
David Koontz, Md.
Gary Metzinger, Va.
John Tagnesi, Va.

Exceptional Service Award

Gina Giles, Va.
Cheryl A. Nagel, Md.
Ken Rizer, Md.
Kenneth Spencer, Va.

Far West Region

Medal of Merit

David L. Fields, Calif.
Dennis Keohokalole, Hawaii
William G. McCarroll, Calif.
John F. Murphy, Hawaii
Harry Talbot, Calif.
Glen Walder, Calif.
Kenneth Wilce, Calif.

Exceptional Service Award

Phil Barger, Calif.
Randolph Kelly, Calif.
Don Vanhook, Calif.

Florida Region

Medal of Merit

Larry Belge, Fla.
Howard Burke, Fla.
Shannon Farrell, Fla.
Robert Hicks, Fla.
Michael Richardson, Fla.

Exceptional Service Award

Mark Chapman, Fla.
Michael J. Liquori, Fla.
Glenn Rutland, Fla.

Great Lakes Region

Medal of Merit

Jessica Derr, Ohio

Thomas Studebaker, Ohio
Tom Virgallito, Ohio
Steven Weaver, Ind.

Exceptional Service Award

Charles E. Hassel, Ind.

Midwest Region

Medal of Merit

Jason Kolacia, Iowa
David Ott, Iowa

Exceptional Service Award

Diane Bartels, Neb.
Richard Holdcroft, Neb.
William Mavity, Neb.
Vicki Swingle, Neb.

New England Region

Medal of Merit

Eileen Heller, Mass.
Stephen E. Henning, Mass.
Diane James-Poole, Mass.
Fred Webster, Mass.

Exceptional Service Award

Heidi Aronofsky, Mass.
Daniel Caron, N.H.

North Central Region

Medal of Merit

Ken Fox, N.D.
Joyce Goodvin, N.D.
Thomas P. Schellinger, Minn.
April D. Spicciati, N.D.
Thomas W. C. Wilson, Minn.
Carol J. Wolosz, Minn.

Exceptional Service Award

Bonnie Goldschmidt, N.D.

Northeast Region

Medal of Merit

Richard F. Ball, N.J.
Ron Campbell, N.Y.
John H. Householder, N.Y.

Patrick T. Kon, Pa.
Dominick J. Mullaney, N.J.
Christopher R. Valle, Pa.

Exceptional Service Award

Jennifer L. Condon-Pracht, N.J.
James Kirkstadt, Pa.
Alphonse A. Parise, N.Y.

Northwest Region

Medal of Merit

Jim Malingowski, Alaska
Greg Miller, Alaska
T. J. O'Connell, Wash.
Melissa Reiser, Alaska
Bill Striegel, Wash.
Anna M. Sullivan, Wash.

Exceptional Service Award

Gary Brackett, Wash.
Tommy Carson, Wash.
Donna Haines, Wash.
Frederick Sine, Wash.

Rocky Mountain Region

Medal of Merit

Lacy Bizios, Utah
Andrew Clark, Utah
Kathi Dysert, Utah
Stephen Gourley, Colo.
Christopher Hassett, Colo.
Michael Peterson, Colo.

Exceptional Service Award

Brian Andrew Binn, Colo.
R. J. Schultz, Colo.
Leslie Swidecki, Wyo.
Sharon White, Colo.

South Central Region

Medal of Merit

Charles Bowker, Tenn.
Sue Glass, Tenn.
Patrick J. McCoy, Ala.
Pauline Morrissey, Tenn.
Ralph Pubillonnes, Tenn.
Jack A. Royster, Ala.

Jack Skaggs, La.

Exceptional Service Award

Larry Carter, Ala.
Lawrence E. Boese, Ala.
Paul LaFlame, Ark.

Southeast Region

Medal of Merit

John Harbison, N.C.
Joe Hardman, N.C.
Patrick Yanke, N.C.

Exceptional Service Award

George Silver, N.C.

Southwest Region

Exceptional Service Award

Robert D. Anderson, Ariz.
Joseph W. Marvin, Ariz.

Texoma Region

Medal of Merit

Thomas Arko, Tex.
Deborah Bates, Okla.
Brent Boller, Tex.
Thomas Hanes, Okla.
Jim Putnam, Okla.
James R. Rainey, Tex.
Larry K. Ratliff, Tex.
John Shroyer, Tex.
Paul Weseloh, Tex.
James L. Wolfe, Tex.

Exceptional Service Award

Mary Feightner, Okla.
John Murray, Tex.*

*Denotes posthumous award.

Community Partner Membership Awards

GOLD AWARD

Presented to chapters whose Community Partners represent at least six percent of overall chapter membership, with a minimum number of Community Partners. The minimum number is determined by chapter size.

Altus, Okla.	McChord Field, Wash.
Cheyenne Cowboy, Wyo.	Mel Harmon, Colo.
Col. H. M. "Bud" West, Fla.	Mercer County, N.J.
Enid, Okla.	Meridian, Miss.
Fairbanks Midnight Sun, Alaska	MiG Alley, South Korea
Fort Wayne, Ind.	Montgomery, Ala.
Gen. David C. Jones, N.D.	Northeast Texas, Tex.
Hurlburt, Fla.	Paul Revere, Mass.
Lance P. Sijan, Colo.	Swamp Fox, S.C.
Leigh Wade, Va.	Ute-Rocky Mountain, Utah

ACHIEVEMENT AWARD

Presented in the field to chapters whose Community Partners represent at least three percent of overall chapter membership, with a minimum number of Community Partners. The minimum number is determined by chapter size.

Central Oklahoma (Gerrity), Okla.	Lloyd R. Leavitt Jr., Mich.
Dacotah, S.D.	Steel Valley, Ohio
David D. Terry Jr., Ark.	Shooting Star, N.J.
Eglin, Fla.	Tennessee Valley, Ala.
Happy Hooligan, N.D.	Wright Memorial, Ohio
John C. Stennis, Miss.	

Special Recognition

SUSTAINED NEW MEMBER RECRUITMENT

These chapters have attained the quarterly new member recruitment goal for three consecutive quarters, extending from October 2011 to June 2012.

David D. Terry Jr., Ark.	Mel Harmon, Colo.
Fort Dodge, Iowa	Miami-Homestead, Fla.
Frank Luke, Ariz.	MiG Alley, South Korea
Hurlburt, Fla.	Northeast Texas, Tex.
Iron Gate, N.Y.	Paul Revere, Mass.
John C. Stennis, Miss.	Shooting Star, N.J.
Langley, Va.	Ute-Rocky Mountain, Utah
Leigh Wade, Va.	

REGION GROWTH

These regions have realized a growth in total membership from June 2011 to June 2012.

Central East	Northeast
Europe	Northwest
Far West	Pacific
Florida	Rocky Mountain
Great Lakes	South Central
Midwest	Southeast
New England	Southwest
North Central	Texoma

STATE GROWTH

These states have realized a growth in total membership from June 2011 to June 2012.

Alabama	New Hampshire
Arizona	New Jersey
California	New Mexico
Colorado	New York
Connecticut	North Carolina
Florida	Ohio
Georgia	Oklahoma
Illinois	Pennsylvania
Indiana	South Carolina
Iowa	South Dakota
Kentucky	Tennessee
Louisiana	Texas
Maryland	Utah
Massachusetts	Vermont
Michigan	Virginia
Minnesota	Washington
Missouri	West Virginia
Montana	Wyoming
Nevada	

CHAPTER GROWTH

These chapters have realized a growth in total membership from June 2011 to June 2012.

AggieLand, Tex.	Eglin, Fla.	Hurlburt, Fla.	Pocono Northeast, Pa.
Alamo, Tex.	Everett R. Cook, Tenn.	Inland Empire, Wash.	Red Tail Memorial, Fla.
Albany-Hudson Valley, N.Y.	Falcon, Fla.	Keystone, Pacific	Richard D. Kislring, Iowa
Albuquerque, N.M.	Flying Yankees/Kenney, Conn.	Lance P. Sijan, Colo.	Richmond, Va.
Austin, Tex.	Fort Worth, Tex.	Leigh Wade, Va.	Roanoke, Va.
Brig. Gen. H. R. Thyng, N.H.	Frank Luke, Ariz.	Lexington, Ky.	Sal Capriglione, N.J.
Baltimore, Md.	Frank P. Lahm, Ohio	Liberty Bell, Pa.	Salt Lake City, Utah
Brig. Gen. F. W. Castle, N.J.	Gen. Bruce K. Holloway, Tenn.	Lindbergh/Sikorsky, Conn.	San Diego, Calif.
Big Sky, Mont.	Gen. Charles A. Gabriel, Va.	Llano Estacado, N.M.	Sarasota-Manatee, Fla.
Birmingham, Ala.	Gen. Dan F. Callahan, Tenn.	Long Island, N.Y.	Savannah, Ga.
Blue Ridge, N.C.	Gen. Doolittle LA Area, Calif.	Lufbery-Campbell, Germany	Scott Memorial, Ill.
Cape Fear, N.C.	Gen. E. W. Rawlings, Minn.	McChord Field, Wash.	Seidel, Tex.
Central Indiana, Ind.	Gen. H. H. Arnold Mem., Tenn.	Mel Harmon, Colo.	Steel Valley, Ohio
Central Maryland, Md.	Gen. James R. McCarthy, Fla.	Maj. Gen. Oris B. Johnson, La.	Strom Thurmond, S.C.
Central Okla. (Gerrity), Okla.	Gen. Joseph W. Ralston, Ohio	MiG Alley, South Korea	Tarheel, N.C.
Charlemagne, Germany	Gen. Robert E. Huyser, Colo.	Mile High, Colo.	Tennessee Valley, Ala.
Charleston, S.C.	Gen. Russell E. Dougherty, Ky.	Minuteman, Mass.	Thomas W. Anthony, Md.
Chattanooga, Tenn.	Gold Coast, Fla.	Mount Clemens, Mich.	Thunderbird, Nev.
Cheyenne Cowboy, Wyo.	Golden Gate, Calif.	Northeast Iowa, Iowa	Tidewater, Va.
Chuck Yeager, W.Va.	Greater Seattle, Wash.	Northeast Texas, Tex.	Tucson, Ariz.
Columbus-Bakalar, Ind.	Green Mountain, Vt.	No. Shenandoah Valley, Va.	Tulsa, Okla.
Concho, Tex.	Grissom Memorial, Ind.	Olmstead, Pa.	United Kingdom, UK
Dacotah, S.D.	Hangar One, N.J.	Orange County/LeMay, Calif.	Ute-Rocky Mountain, Utah
Denton, Tex.	Harry S. Truman, Mo.	Palm Springs, Calif.	Wright Memorial, Ohio
Dobbins, Ga.	Heart of Illinois, Ill.	Paul Revere, Mass.	York-Lancaster, Pa.
D. W. Steele Sr. Memorial, Va.	High Desert, Calif.	Pioneer Valley, Mass.	

AFA National Report

natrep@afa.org

By Frances McKenney, Assistant Managing Editor

Teacher of the Year

Lori B. Bradner, a science teacher from Lakeland, Fla., became the 27th recipient of the Air Force Association's National Aerospace Teacher of the Year award during the AFA National Convention at National Harbor, Md. The **Central Florida Chapter** had originally named her as their 2011 Teacher of the Year.

At the time of her selection, Bradner taught honors classes in chemistry, biology, and earth science and the advanced placement class in environmental science at the Central Florida Aerospace Academy of Kathleen High School. Bradner now teaches fifth-graders at Valleyview Elementary School in Lakeland.

Bradner grew up in Flint, Mich., where her father was an engineer for General Motors and her mother a teacher. Before combining her parents' career fields to become a science teacher, Bradner went to college: Ringling Bros. and Barnum & Bailey's Clown College.

Bradner traveled with the circus for a season before pursuing a more formal education at Michigan State. She earned a bachelor's degree in zoology and began graduate studies. Later, she moved to Lakeland and, while raising four children, earned a teaching certification in science. She began substitute teaching in 2008, and the next year, the newly created CFAA hired her.

Within three years of joining the faculty, she had attended Space Camp in Huntsville, Ala., received a NASA Endeavour Fellowship, and landed nearly a dozen teaching awards.

Has a BFA—"Bachelor of Fun Arts"—degree from Clown College helped?

"I use acting skills every day in class," Bradner wrote in her AFA application for the Teacher of the Year award. "Teachers, in reality, are actors whose role is to encourage students to observe and analyze the world around them."

A Project With Merit

Miami-Homestead Chapter's Ramon E. de Arrigunaga calls it "among the most difficult" to earn of all merit badges awarded by the Boy Scouts.

It is the aviation merit badge. To acquire it, a scout must explain piston, turboprop, and jet engine operations and how an aircraft's control surfaces



AFA's National Aerospace Teacher of the Year Lori Bradner (far right) with a group of students.

work. He must build a model airplane and figure out the education and training needed for a career in aviation. Then come more hurdles: reading an aeronautical chart, for example.

A few years ago, de Arrigunaga's former AFA chapter in Homestead, Fla., proposed the idea of conducting a class to help local Boy Scouts earn this badge. Backed by volunteers from the 482nd Fighter Wing and their facilities at Homestead Air Reserve Base, de Arrigunaga conducted the inaugural all-day merit badge class in January 2009. Thirty-eight scouts attended that first Saturday morning session on base.

The program now takes place three times a year, with enrollment limited to 35. The slots fill up quickly, de Arrigunaga said.

The most recent class, in September, began with a continental breakfast at the base's all-ranks club, followed by several hours of the academic component, led by de Arrigunaga. He covered everything from the history of aviation to principles of flight. Chapter President Rodrigo J. Huete and a local Boy Scouts official

helped de Arrigunaga guide the scouts in a tabletop exercise using visual flight rules sectional aeronautical charts.

After lunch, the scouts toured the base's control tower and an F-16 on static display. Huete then conducted a contest to see which scout's styrofoam-plate glider could fly the farthest. The program concluded with the youngsters taking an open-book test to earn their badges.

De Arrigunaga reported that he has conducted 11 sessions in the past three years, with some 345 Boy Scouts earning the Aviation Merit Badge.

Welcome Back

In South Carolina, **Columbia Palmetto Chapter** members turned out in good numbers for a chapter meeting welcoming back one of their own: Lt. Col. E. G. Shuler III.

He is not only chapter president, but wears a couple of other hats as well: In his full-time job, Shuler is the plans and programs officer for the 169th Fighter Wing, McEntire JNGB, S.C. He also flies C-130H3 aircraft

More photos at <http://www.airforce-magazine.com>, in "AFA National Report"

with the 145th Airlift Wing, located some 100 miles north at Charlotte/Douglas Arpt., N.C.

Shuler addressed his chapter's latest quarterly meeting, describing his recent deployment to Bagram Airfield, Afghanistan, with the 455th Air Expeditionary Wing.

Shuler deployed as a squadron scheduler but ended up flying for half of his two-month rotation, filling in for a pilot who had a medical emergency.

Shuler spoke to the chapter about the problems faced in C-130 combat airlift missions that resupply forward operating bases and small, remote airfields: winter weather, extremely mountainous terrain, and enemy threats.

"Unlike most of my squadron mates that have deployed numerous times for Operation Enduring Freedom," Shuler wrote later in an e-mail, "this was my first deployment since Desert Storm in 1991. It was some of the most challenging flying I have done in my 28-year career."

First in the State

The New Jersey State Convention—hosted again by the **Thomas B. McGuire Jr. Chapter** and 305th Air Mobility Wing at JB McGuire-Dix-Lakehurst, N.J.—honored a group of young people who have become familiar to Garden State AFAers.



At New Jersey's State Convention, AFA Executive VP David Buckwalter (left) and Northeast Region President Eric Taylor present McGuire Chapter President Jennifer Condon-Pracht with an AFA Citation congratulating her on an Exceptional Service Award.

During the convention's awards ceremony, six students from Red Bank Regional High School in Little Silver, N.J., received recognition for their state-level first-place finish in CyberPatriot IV: Richard Connors, Alec Jasanovsky,

Jared Katzman, Luke Matarazzo, Ryan McVeety, and Michael Terpak, along with teachers Amanda Galante and Jeremy Milonas. Twenty-six teams from the state had originally registered for this national high school cybersecurity competition.



AirForce-Magazine.com

Online Journal of the Air Force Association



For air and space power professionals who must stay informed

The online home to:

- **AIR FORCE Magazine's Daily Report**—presenting current, credible, timely news coverage of aerospace and national security issues
- **The Daily Report's In More Depth**—providing enhanced coverage of the day's most topical airpower and defense issues
- **The digital AIR FORCE Magazine**—offering the magazine's monthly in-depth articles and a growing collection of select historical articles
- **So much more**—including wallpaper versions of USAF-in-action photos, Air Force documents and Congressional testimony, monthly tally of air sorties in Afghanistan ...

Red Bank's team was only one from New Jersey to get into the third round.

AFA members might recall the Red Bank students. Nicknamed "Team Mantrap," they won last year's CyberPatriot III's Open Division outright. The summer 2011 state convention featured them with pride, and they received a tour of a C-17 and KC-10 parked on the flight line at McGuire.

This year, Dominick J. Mullaney, president of the **Hangar One Chapter**, presented the Red Bank team with a state-level-win award plaque, decorated with a CyberPatriot IV challenge coin unique to this year's competition.

Mullaney himself received an AFA Citation at the convention. The award congratulated him on receiving a national-level 2012 Medal of Merit. McGuire Chapter President Jennifer L. Condon-Pracht similarly received an AFA Citation noting her selection for a national-level Exceptional Service Award.

In other convention highlights, the **Sal Capriglione Chapter** named retired Maj. Charles M. Taylor as its Teacher of the Year. Taylor is the senior aerospace science instructor for AFJROTC unit NJ-761 at Piscataway High School. Chapter President Anthony Devino and Chapter Membership VP Joseph Capriglione were on hand for the ceremony.

Northeast Region President Eric P. Taylor, New Jersey State President



The Hawaii Chapter hosted a reception for Gen. Gary North (holding framed memento) and his wife, Shelley (left), marking the end of tour and retirement for the Pacific Air Forces commander. At right is Chapter President John Murphy Jr.

Howard Leach, and AFA Executive VP David T. Buckwalter made the award presentations.

Alabama: All About Education

"Our state convent on this year was all about education for the future," wrote Alabama State President James E. Dotherow in an e-mail describing the

gathering hosted by the **Tennessee Valley Chapter** in Huntsville, Ala.

Michael Kersjes was among several teachers invited as guest speakers for the gathering in August. Kersjes talked about his book, *A Smile as Big as the Moon* and the recent Hallmark Hall of Fame movie based on it. The book chronicles how he worked to get his

Visit the "Hangar" & Show Your Air Force Pride!

AFA & AFM's Apparel & Merchandise Store

Ladies & Mens Apparel, Pens,
Hats, Mugs & More!

Prices reduced on most items!



VISIT US ONLINE AT
www.afa.org/store



special education students accepted into Space Camp, the US Space and Rocket Center's program in Huntsville that promotes the study of science, technology, engineering, and math.

Kersjes' Michigan high school students had disabilities ranging from emotional and eating disorders to Down syndrome and Tourette syndrome. They performed so well at the 1989 camp they finally attended that they opened the door for more than 2,000 special needs children who have been through the program since then.

Kersjes wrote his book in 2002. Actor John Corbett, most recently known for the "Sex in the City" TV series, starred in the movie version of this story. It aired in January.

Two other teachers addressed the Alabama convention: Sylvia Dean, current State Teacher of the Year, and Lynn Toney, who held the title in 2009. They had traveled to Edwards AFB, Calif., earlier in the summer as part of a field trip organized by the **Montgomery Chapter's** aerospace education VP, Susan Mallett, and spoke to the convention about the week-long trip, including the highlight: visiting the NASA Jet Propulsion Laboratory in Pasadena, Calif., where they saw a full-size model of the rover that only a few weeks later would land on Mars.

Dotherow reported that their remarks promoted the AFA-Civil Air Patrol tie. CAP supports AFA by providing aerospace education materials for chapter-sponsored teachers, for example. AFA in turn provides several CAP education grants and recognition awards for cadets.

More AFA News

- The **Hawaii Chapter** hosted two tables at the Air Force Anniversary Ball in Honolulu on Sept. 14. Chapter Executive VP Newton Wong hosted a table full of chapter members, including Maj. Gen. Darryll D. M. Wong, the state's adjutant general; 10 USAF personnel and spouses sat at the second.

- During the AFA National Convention, Central East Region President Scott Van Cleef presented **Thomas W. Anthony Chapter** President John L. Huggins Jr. with the regional Chapter of the Year award. Maryland State President Joseph L. Hardy accepted the regional State of the Year award from Van Cleef.

- Florida Region President Michael H. Emig and Edward H. Hance, president of the **Waterman-Twining Chapter**, presented the 2012 AFA Florida Legislative Staffer of the Year Award to Shirley Anderson. She works as district director for US Rep. Richard Nugent (R-Fla.), who was on hand for the presentation in his office in September. ■

Reunions

reunions@afa.org

55th & 58th Weather Recon Sq. June 5-8, 2013, in Branson, MO. **Contact:** Conrad Layton (918-446-6945) (conradlay@aol.com).

Super Sabre Society. April 9-12, 2013, at the Gold Coast Hotel in Las Vegas. **Contact:** Dewey Clawson, 611 Anderson Rd., Enon Valley, PA 16120 (724-336-4273) (dewey-clawson@hotmail.com) (www.supersabre-society.com/reunion2013.htm). ■

E-mail unit reunion notices four months ahead of the event to reunions@afa.org, or mail notices to "Reunions," *Air Force Magazine*, 1501 Lee Highway, Arlington, VA 22209-1198. Please designate the unit holding the reunion, time, location, and a contact for more information. We reserve the right to condense notices.



Your competitors are here selling to
YOUR customers!
WHY AREN'T YOU?

**THE ANNUAL TECHNOLOGY EXPOSITIONS
OF THE AIR FORCE ASSOCIATION**

AIR WARFARE SYMPOSIUM

February 21-22, 2013 - Orlando, FL

AIR & SPACE CONFERENCE

September 16-18, 2013 - Washington, DC



For more information contact:
DENNIS SHARLAND, CEM

Manager, Industry Relations & Expositions
(703) 247-5838 | dsharland@afa.org

Air Force Association and Affiliates Consolidated Statement of Activities

Year Ended Dec. 31, 2011

	Unrestricted	Temporarily Restricted	Permanently Restricted	Total
Revenue and Support				
Contributions:				
Calendar	\$165,231	\$-	\$-	\$165,231
General	600,972	158,620	4,425	764,017
CyberPatriot	-	919,681	-	919,681
Air Force Memorial Foundation	673,803	-	-	673,803
Lape Pin	250,830	-	-	250,830
Mailing Labels	73,599	-	-	73,599
Visions	96,662	-	-	96,662
Survey and Year-End Appeal	112,388	-	-	112,388
Decals	15,210	-	-	15,210
Los Angeles Ball	33,830	-	-	33,830
Fellowships	22,500	-	-	22,500
Total Contributions	2,045,025	1,078,301	4,425	3,127,751
Investment Earnings	897,931	79,219	-	977,150
Aerospace Technology Expo & Conference	3,683,044	-	-	3,683,044
Membership Dues	2,349,080	-	-	2,349,080
Member Group Insurance Programs	1,358,409	-	-	1,358,409
Magazine	1,527,397	-	-	1,527,397
Building Operations	1,962,132	-	-	1,962,132
Royalties	1,032,662	-	-	1,032,662
Symposia	892,767	-	-	892,767
Corporate Members	395,469	-	-	395,469
Other	135,827	-	-	135,827
Net Assets Released From Restrictions	1,395,952	(1,395,952)	-	-
Total Revenue and Support	17,675,695	(238,432)	4,425	17,441,688
Expenses				
Program Services:				
Membership	2,679,047	-	-	2,679,047
Member Group Insurance Programs	1,114,817	-	-	1,114,817
Magazine	3,783,660	-	-	3,783,660
Professional Development	1,700,628	-	-	1,700,628
Aerospace Technology Exposition	622,613	-	-	622,613
Aerospace Education	686,648	-	-	686,648
Field Operations and Communications	622,575	-	-	622,575
CyberPatriot/CyberFutures	1,562,030	-	-	1,562,030
Mitchell Institute	117,087	-	-	117,087
Air Force Memorial	425,144	-	-	425,144
Total Program Services Expenses	13,314,249	-	-	13,314,249
Supporting Services:				
Building Operations	2,112,595	-	-	2,112,595
General and Administrative	1,536,736	-	-	1,536,736
Total Supporting Services Expenses	3,649,331	-	-	3,649,331
Fundraising Expenses	762,865	-	-	762,865
Total Expenses	17,726,445	-	-	17,726,445
Change in Net Assets Before Other Items	(50,750)	(238,432)	4,425	(284,757)
Change in Pension Liability	(6,729,391)	-	-	(6,729,391)
Unrealized Loss on Marketable Securities	(1,654,654)	(76,789)	(7,626)	(1,739,069)
Fair Value Loss on Interest Rate Swap Agreement	(181,820)	-	-	(181,820)
Change in Net Assets	(8,616,615)	(315,221)	(3,201)	(8,935,037)
Net Assets - Beginning of Year	25,615,564	999,547	951,497	27,566,608
Net Assets - End of Year	<u>\$16,998,949</u>	<u>\$684,326</u>	<u>\$948,296</u>	<u>\$18,631,571</u>

Air Force Association and Affiliates Consolidated Statement of Financial Position

**Dec. 31, 2011
Assets**

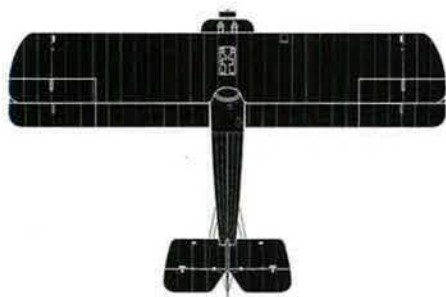
Cash and Investments	
Cash and Cash Equivalents	\$5,658,946
Certificates of Deposit	1,225,000
Marketable Securities	18,975,152
Total Cash and Investments	25,859,098
Receivables	
Trade, Net of Allowance for Doubtful Accounts of \$6,647 for 2011 and 2010	646,852
Pledges Receivable	217,447
Insurance Experience Refunds	92,286
Accrued Interest	72,355
Total Receivables	1,028,940
Prepaid Expenses	310,213
Inventory	503
Property and Equipment	
Land	929,491
Building and Improvements	21,748,399
Furniture, Equipment, and Software	1,777,782
Leased Property	92,538
	24,548,210
Less Accumulated Depreciation	11,822,826
Total Property and Equipment	12,725,384
Other Assets	1,708,393
Total Assets	<u>\$41,632,531</u>

Liabilities and Net Assets

Liabilities	
Accounts Payable	\$1,823,336
Premium Refund Payable	12,321
Accrued Expenses	540,402
Deferred Revenue:	
Membership Dues	2,060,155
Magazine Subscriptions	107,119
Meetings	791,900
Total Deferred Revenue	2,959,174
Notes Payable	6,037,989
Capital Lease Obligation	50,292
Interest Rate Swap Agreement	588,456
Accrued Pension Liability	10,988,990
Total Liabilities	23,000,960
Net Assets	
Unrestricted	16,998,949
Temporarily Restricted	684,326
Permanently Restricted	948,296
Total Net Assets	18,631,571
Total Liabilities and Net Assets	<u>\$41,632,531</u>

Treasurer's Note: The statements presented here consolidate the financial activities of AFA, VBA, and the Air Force Memorial Foundation. While the three organizations operate as separate entities, their financial activity is required to be consolidated since they share a common Board of Directors. The consolidated format is in compliance with SOP 93, *Reporting of Related Entities by Not for Profit Organizations*.

Camel



The Camel F.1, the most famous British fighter of World War I, acquired its vaunted reputation as a result of 2,790 victories, including 1,543 aircraft destroyed and 1,086 driven out of control. The Camel was a descendent of the Sopwith Aviation Co.'s highly successful Triplane and "Pup." The nickname "Camel" came about as a result of the pronounced hump in the fuselage.

The Camel was an inherently unstable aircraft, but that feature only added to its maneuverability and deadly combat prowess. Its short wingspan and concentration of pilot, fuel, engine, and guns in one compact area made the Camel extremely agile. This, combined with strong gyroscopic ef-

fects of the rotary engine, also made the Camel susceptible to vicious spins. The immediate need to adjust the delicate fuel control after takeoff led to many training accidents. Nearly 1,800 Camel pilots died in combat and another 365 in accidents.

Once mastered, the Camel was a supreme dog-fighter. It was far superior to German types in 1917, when it was introduced on the Western Front, and held its own throughout the war. It served in many missions: air superiority, close air support, night fighting, and home defense. It was featured in many famous battles, including the dogfight that claimed the life of the renowned German pilot Manfred von Richthofen, the "Red Baron."

—Walter J. Boyne

This aircraft: Royal Flying Corps Camel—#B3882—as it looked in 1917 when it was assigned to RNAS 10 Naval Squadron in France.



In Brief

Designed by Sopwith Aviation ★ built by Sopwith and others ★ first flight Dec. 22, 1916 ★ crew of one or two (trainer) ★ number built 5,490 ★ one Clerget 9B rotary engine (standard power plant) ★ armament two Vickers .303-caliber machine guns, up to four 20-lb Cooper bombs ★ **Specific to F.1:** max speed 113 mph ★ cruise speed 90 mph ★ max range 250 mi ★ weight (loaded) 1,500 lb ★ span 26 ft 11 in ★ length 18 ft 9 in ★ height 8 ft 6 in.

Famous Fliers

Notables: Roy Brown and Wilfred May, combat with Manfred von Richthofen, "Red Baron." **Aces:** William Barker, Raymond Collishaw, Field Kindley, Donald MacLaren, Clifford McEwen, Elliott Springs, George Vaughn, H. W. Woollett. **Test pilot:** Harry Hawker.

Interesting Facts

Known originally as "Big Pup" ★ piloted by fictional twins John and Bayard Sartoris in William Faulkner novel *Flags in the Dust* ★ executed 270-degree turns to the right more swiftly than 90-degree turns to the left (effect of engine torque) ★ modified as night fighter called "Sopwith Comic" ★ featured in films "The Great Waldo Pepper" (1975) and "The Red Baron" (2008) ★ flown by air arms of Britain (RFC/RAF, RNAS), US (Army Air Service, Navy), Australia, Belgium, Canada, Estonia, Greece, Latvia, Netherlands, Poland, Russia, Sweden ★ designated as Camel 2F.1 aboard ships ★ suffered heavy casualties when strafing German positions ★ mentioned regularly in the Charles Schulz comic, "Peanuts."



Sopwith Camel of the Royal Air Force.



USAA is proud to be the
Preferred Provider
of Financial Services for
the Air Force Association



Mine was earned in
Vietnam. By my dad.

Marc M., USAA Member

USAA Auto Insurance. Earned Once. Cherished from generation to generation.

At USAA, our commitment to serve the financial needs of our military members, veterans who have honorably served and their families is without equal. In fact, families regard USAA Auto Insurance so highly, 95% of USAA members plan to remain with USAA for life.*

Begin your legacy. Get a quote.

usaa.com/afa | 877-618-2473



Insurance Banking Investments Retirement Advice

We know what it means to serve.®

USAA means United Services Automobile Association and its insurance, banking, investment and other companies.

*Based on 2011 Member Communications Trend Survey. Use of the term "member" does not convey any legal, ownership or eligibility rights for property and casualty insurance products. Ownership rights are limited to eligible policyholders of United Services Automobile Association. The term "honorably served" applies to officers and enlisted personnel who served on active duty, in the Selected Reserve or National Guard and have a discharge type of "Honorable." Adult children of USAA members are eligible to purchase auto or property insurance if their eligible parent purchases USAA auto or property insurance. Property and casualty insurance products are available to current and former military members and their former dependents who meet certain membership eligibility criteria. To find out if you are eligible, contact USAA. Underwriting restrictions apply. Automobile insurance provided by United Services Automobile Association, USAA Casualty Insurance Company, USAA General Indemnity Company, Garrison Property and Casualty Insurance Company, USAA County Mutual Insurance Company, San Antonio, TX, and is available only to persons eligible for P&C group membership. Each company has sole financial responsibility for its own products. AFA receives financial support from USAA for this sponsorship. © 2012 USAA. 137763-0912



SIDE BY SIDE, 100% CONCURRENT.

Boeing's KC-46 Aircrew Training System (ATS) will be fully integrated and 100% concurrent with the aircraft's development. With training teams working side by side with the aircraft program, the expertise and information flow is immediate, in-depth and continual, far beyond a data package. The result is the highest fidelity training and the optimum low-risk solution.

