

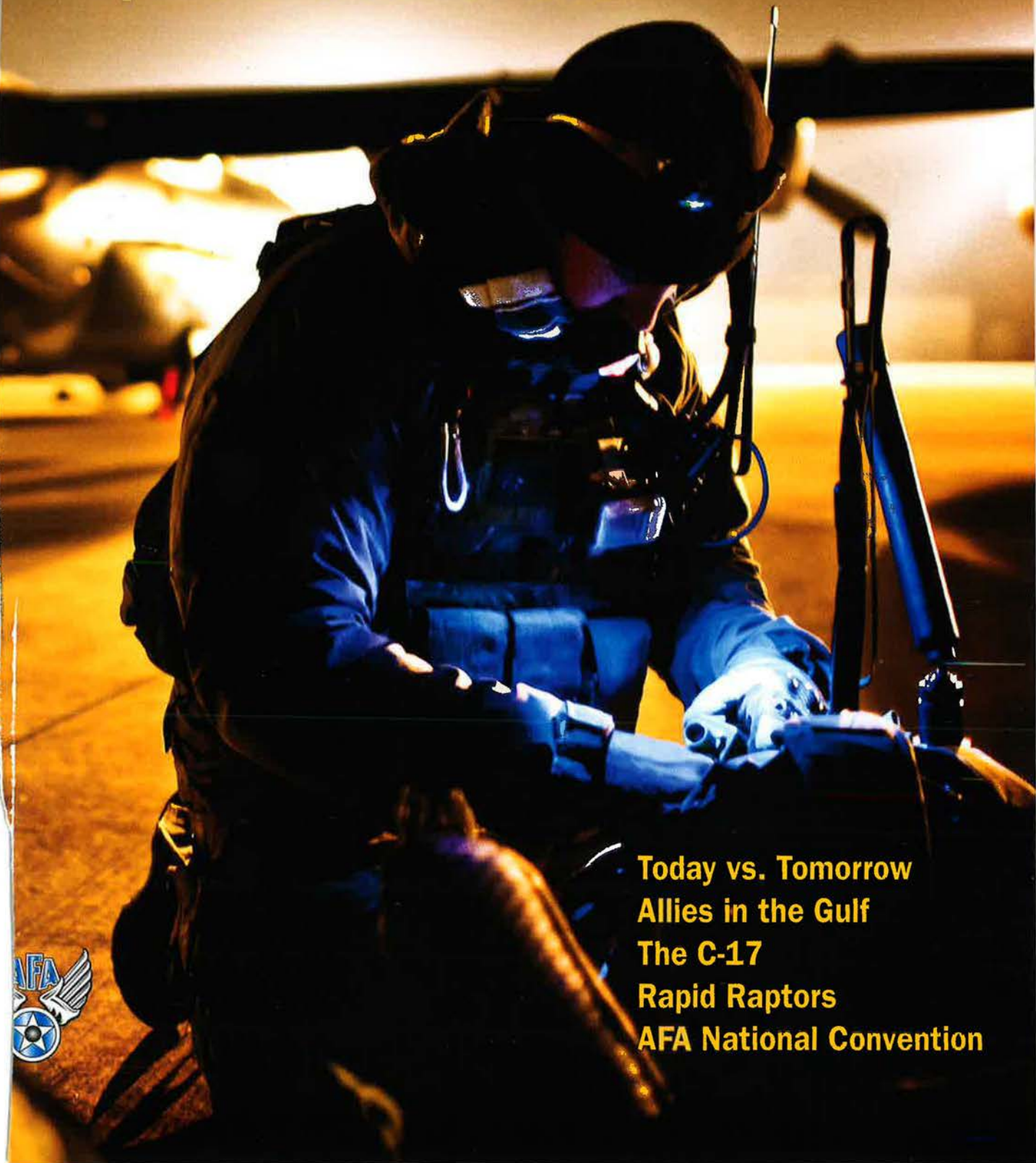
November 2013/\$5

Journal of the Air Force Association

AIR FORCE

MAGAZINE

er & Space Conference 2013



Today vs. Tomorrow
Allies in the Gulf
The C-17
Rapid Raptors
AFA National Convention





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November 2013, Vol. 96, No. 11

FEATURES

4 Editorial: Preserving a National Asset: Air Force Airpower

The Air Force Association 2014 Statement of Policy was adopted by the delegates to the AFA National Convention Sept. 15, 2013.

24 Today vs. Tomorrow

By John A. Tirpak
At AFA's Air & Space Conference, top Air Force leaders described the tense balancing act between immediate requirements and future relevance.

32 Fresh Looks at the Total Force

By Amy McCullough
The Active Duty, Guard, and Reserve are working to overcome last year's hostility.

40 Allies in the Gulf

By Marc V. Schanz
America's allies around the volatile Persian Gulf are low key, but have high importance.

46 Mission to Mali

By Gabe Starosta
The French got a big boost from USAF tankers and airlifters in this year's fight against Islamic extremists.

52 Noble Eagle Flies On

By John A. Tirpak
The Iraq war is over. Afghanistan is ending. Operation Noble Eagle must continue.

57 Rapid Raptors

By Marc V. Schanz
A new PACAF concept gets F-22s to the fight fast.

58 The C-17 Reaches the End of the Line

After a 20-year production run, Boeing has delivered the Air Force's final Globemaster III.

60 The JTAC Imperative

By Carlo Muñoz
Who will call in air strikes in Afghanistan after 2014?

66 Glenn Miller's Air Force Odyssey

By John T. Correll
He was the leader of the most popular band in the nation and too old to be drafted, but he felt a personal obligation to serve.



24



At the cover: TSgt. Ray Decker res his rucksack before boarding an 30P in Sendai, Japan. See "Today tomorrow," p. 24. DOD photo by USAF Samuel Morse.



32

Journal of the Air Force Association **AIR FORCE** MAGAZINE



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- 72 **Air Force Association National Convention 2013**
By Merri M. Shaffer
- 77 **Air Force Association Top Issues for 2014**
- 78 **Air Force Association Technology Exposition 2013**
Photography by Guy Aceto
Aerospace technology of the highest order was on display at AFA's annual showcase.
- 84 **Air Force Association National Awards 2013**

DEPARTMENTS

- 8 **Letters**
- 12 **Air Force World**
- 22 **Index to Advertisers**
- 31 **Chart Page:** *The Biggest Loser*
- 51 **Verbatim**
- 65 **Keeper File:** *Appointment at Gettysburg*
- 90 **AFA National Report**
- 94 **Reunions**
- 96 **Airpower Classics:** *Buccaneer*

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Preserving a National Asset: Air Force Airpower

THE US Air Force is America's indispensable instrument for dealing with a turbulent, threatening, and uncertain future. Air, space, and cyber power offer unmatched range, speed, flexibility, and combat punch worldwide. These attributes have given our nation military options that do not require large force commitments on foreign soil or in contested waters.

The Air Force will continue to provide these capabilities into the foreseeable future. However, that task is becoming more and more difficult. The nation must understand that years of underinvestment, and continuous wartime operations since 1991, have severely taxed this world-class capability and placed its future capability in jeopardy.

The need for change is manifest. Several times during its more than 100-year history (predecessor organizations included), the Air Force has transformed itself to meet demands of a suddenly changed environment. It did so at the end of World War II and, more recently, in transitioning at the end of the Cold War from a force largely in garrison to a rotational force frequently operating from temporary bases throughout the world—while maintaining its strategic nuclear capability. Now, USAF must change again.

The United States Air Force is still the world's strongest and most respected air and space force. However, sequestration has hit the armed services hard. In the latter part of Fiscal 2013 (ending Sept. 30), sequestration will have forced an overall defense cut of \$41 billion. The Air Force share of this was \$10 billion—a huge number. That cut came on top of a nearly \$2 billion war-funding shortfall. For the Air Force, the sudden reduction in funding produced serious deficits in readiness accounts affecting its ability to carry out its assigned missions.

Americans cannot take for granted the Air Force's significant contribution to US military might. Possession of a powerful air and space force is not a birthright. The operational supremacy we have long enjoyed in the air is threatened by the emergence abroad of advanced integrated air defenses, fifth generation fighters, long-range

ballistic and cruise missile forces, cyber weapons, and space systems. The US generally and the Air Force specifically face challenges from heavily armed and unpredictable rogue states, nuclear-weapons states, and transnational terrorist groups.

The Air Force Association (AFA) believes that maintaining the best Air Force in the world is vital to our national interests and security. There is no choice but to carry through on buying the cutting-edge capabilities already

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developed but not yet fielded, including the F-35, Long-Range Strike Bomber (LRS-B), and KC-46. China and Russia are catching up fast. They are gaining greater access to advanced defensive systems and offensive capabilities. They are not standing still, and neither should we.

For Airmen, the common thread in the past decades of action has been the determination to achieve military goals in the most effective, efficient manner possible while exposing US forces to the least extent required to meet the country's goals. In an era of austerity, air and space power is precisely the type of cost-effective capability in which the nation should invest.

AIR FORCE CHALLENGES

The question is how long the nation can count on having this kind of capability. Today, our Air Force faces numerous readiness challenges. Cuts from the Budget Control Act of 2011 coupled with additional across-the-board cuts from sequestration have had a devastating effect on the Air Force. Because of restrictions on where cuts can be made, and the inability of the service to move funds from low to higher priority needs even

where funds are not fenced by statute a disproportionate impact is felt in readiness and training.

The Air Force is now taking a huge amount of risk in this area. The Air Force's operation and maintenance budget came in \$4.4 billion short because of the sequester. Air Force depots have deferred the induction of more than 100 aircraft and engines for required maintenance, creating backlogs that will take years to work off, even if the money needed is available—and chances are, it will not be.

Sequestration-related cuts are also causing hardship for Air Force civilians, who have been furloughed approximately six days in 2013. Moreover, many of the uniformed men and women who support the Guard and Reserve are dual-status civilians who have been furloughed even though they are the backbone of readiness for Guard and Reserve forces. The sequester will result in a loss of millions of man-hours of labor in 2014 alone. Civilian Airmen are mission critical in many areas, especially in the reserve components at the maintenance depots. Other sequestration impacts included:

- Elimination of some 200,000 hours from USAF's flying program—a cut of about 18 percent.

- Termination of some classes at the Weapons School at Nellis AFB, Nev., and cancellation of Red Flag, the premier US and international airpower training exercise series, for the remainder of the year, along with several other international exercises.

Reduced flying hours, lost exercises, and the related curtailment of flying operations is causing severe, rapid, and long-term combat readiness degradation. Estimates are that will take between six and 12 months to bring curtailed units to mission-ready status. We have been down this way before, and we have paid the price in terms of reduced readiness, increased accident rates, and the unnecessary loss of lives.

The Air Force Association believes that Congress must end sequestration and strengthen USAF air, space and cyber forces by passing a budget which Air Force planners can in-



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 **BOEING**

Editorial

adequate funds in training to avoid increasing mission risk.

One unnecessary drain on resources is the excess infrastructure the Air Force is directed to maintain; as the Air Force shrinks in manpower and forces, the number of bases it operates on must also shrink. The Air Force submitted, as part of its budget submission, a request for a Base Realignment and Closure (BRAC) Commission. According to a 2004 study, there was at the time, 24 percent excess infrastructure within the Air Force. If the Air Force budget is to continue to get smaller, the Air Force must be given the flexibility to spend its scarce resources where it will do the most good. Modernization cannot be sacrificed, especially at the cost of maintaining unneeded infrastructure.

AFA supports a BRAC Commission to reduce unnecessary infrastructure and help pay for needed modernization.

INDUSTRIAL BASE CRISIS

The nation requires a healthy and thriving private aerospace industry. Today's aerospace industrial base is a major national asset. It not only produces weapons and other systems to support a superpower's military needs but also creates an annual trade surplus of some \$53 billion and creates hundreds of thousands of jobs in the United States.

Even so, the defense industry is no longer the great "Arsenal of Democracy" that churned out vast quantities of aircraft, tanks, warships, guns, and other materiel in the past. As a result of America's massive post-Cold War military drawdown, the defense industry has contracted and consolidated. Today, the US has fewer than 10 major aerospace companies (down from more than 50) that are capable of competing for large programs.

Defense industry jobs, skills, and capabilities once lost can only be recovered with a huge outlay of money when a modest ongoing investment could keep them thriving. The US is becoming increasingly dependent on other countries for all sorts of parts and capabilities. Foreign competitors are starting to edge out US companies for some US contracts because they have more robust capabilities, better technology, and lower prices.

The near-term future of our military industry base is grim. The US cannot afford defense cuts that result in irreversible damage to our industrial base.

AFA urges the Administration and Congress to work together to establish a strategic plan to identify the most vital elements of a robust defense industrial base and the steps, to include funding, needed to maintain its strength.

TOTAL FORCE: MORE IMPORTANT THAN EVER

Looking ahead, it has never been more important for the Air Force to maximize the strength of the Total Force. Active, Guard, and Reserve components are increasingly integrated—training, deploying, and conducting the full range of missions together as a Total Force. We must continue to ensure that our Active, Guard, and Reserve mix correctly balances the

As the Air Force shrinks in manpower and forces, the number of bases it operates on must also shrink.

strengths of each component and meets our strategic requirements and fiscal demands.

This commitment extends past the Air Force, for it is important to recognize that successful employment of the joint team demands the global vigilance, global reach, and global power Airmen bring to the fight. The Air Force faces many challenges, but, working as one team, it will continue to provide effective, efficient policy options for our nation's leaders.

The Air Force Association highly values these citizen Airmen members of the Guard and Reserve and acknowledges that, without their sacrifice and contributions, American airpower would be far less capable than it is today. We support all reasonable initiatives that will further capitalize on the caliber of this Total Force team.

EDUCATION IS THE FOUNDATION

AFA continues to support a comprehensive national strategy for strengthening science, technology, engineering, and math (STEM) education in the United States. AFA's National Youth Cyber Defense Competition—CyberPatriot—is the most ambitious of its kind in the nation, attracting young people to STEM through an exciting competition. More than 1,200 teams of high school students in all 50 states, DOD Dependent Schools in Europe and the Pacific, and students from Canada registered

for last year's competition, learning valuable cyber security skills and being drawn to a meaningful STEM activity. At the request of educators nationwide, AFA is expanding its CyberPatriot program to include middle school students for the first time. We believe reaching students sooner will allow us to shape their academic and career paths sooner and it will allow us in particular to draw females and other underrepresented populations to STEM more successfully.

AFA supports the promotion of good citizenship and community development through strong support of Air Force Reserve Officers' Training Corps (AFROTC), Junior ROTC, and Civil Air Patrol (CAP). These groups foster citizenship development and service to our nation and also provide valuable aerospace education and training to young American men and women. We believe strongly that funding for these critical programs—upon which a strong future for our nation is predicated—must be sustained.

We encourage the creation of public/private partnerships that support and sustain such programs, which are needed to educate, excite, and motivate students to pursue studies and careers in the military, cyber world, and other STEM disciplines.

Education is a key element of AFA's mission. We urge government, industry, and AFA's peer organizations to increase this focus on the future need for STEM professionals.

Americans have always believed that our armed forces will be capable of defeating adversaries across all domains—air, space, cyber, sea, and land. Further, Americans expect its Air Force to be the best in the world. AFA firmly believes the nation must support the needs of our 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 Air Force Association will continue to unapologetically promote the dominant United States Air Force and a strong national defense, to demand respect for Airmen and for our Air Force heritage, and to help in any way possible to make sure we provide for the common defense. That is our pledge.

This editorial is extracted from the Force Association's full 2014 Statement of Policy, which is available in its entirety at <http://www.afa.org/Publications/StatementofPolicyToSues>.

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Bet They Want Our Business, Though

I suggest Eglin [AFB, Fla.] do a survey like F. E. Warren AFB, Wyo., did back in the '50s when residents were complaining about airmen walking on their streets and posted signs: "Dogs and airmen, stay off my lawn" [*Air Force World: Lightning Strikes Twice*, September, p. 38]. The base commander advised the mayor and his officials that he was going to pay the troops in two dollar bills and restrict them to the base for two months, to open their eyes to how much the troops contributed to their local economy. Within a month the mayor begged the base commander to lift the restriction, and that was the end of their complaints. Money talks.

MSgt. Joe Martinez,
USAF (Ret.)
Langhorne, Pa.

A Grease Pencil and a Protractor

I found parts of your article "Old Lessons, 'New' Domain" [September p. 86] a bit humorous because of my personal experiences. Somehow, having a light bomber/troop transfer AFSC, I was assigned to a SAGE (Semi-automatic Ground Environment) site at BOADS (Boston Air Defense Sector) in 1961. In its usual wisdom, the Air Force sent me to the manual radar school at Tyndall AFB [Fla.], in spite of my assignment to a computer controlled site. There, I was trained in the grease pencil and telephone method of intercept mentioned in the article. For the next two years, I had absolutely no reason to use that training, and I had to OJT at the SAGE site.

My next assignment, in 1963, was to POW Main, a surveillance site on the

DEW Line at Barrow, Alaska. One day I got a call from the Alaskan Air Command. Their long-range radar at Cap Lisburne had picked up two Russian bombers that were headed our way. They asked if we could somehow control a couple of F-102s out of Galena AFB [Alaska] to an intercept. I told them that we would try, but of course, we didn't have intercept radar. Fortunately, I still had my grease pencil and protractor from the manual radar school. I had the radar techs (civilians) crank the antenna to its maximum rotation speed (still slower than a control radar) and then tilt it so I could get an approximate altitude reading on the bombers using simple geometry. In the end, with a radio-telephone in one hand to the fighters and the grease pencil on the screen, we intercepted them just a



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Air Force Association

They made landfall into US territory. In spite of the urgent pleas of the fighter pilots, Alaskan Air Command refused to allow a shootdown, so the 102s had to content themselves with shooting pictures instead as they escorted them across 120 miles of northern Alaska. The Russians responded in kind—they took photos of the fighters.

So, World War II technology worked. It apparently made the Soviets believe that we had over-the-horizon radar well before we did. I realized that this was a big event when I was visited the next day by a general and an admiral and their staffs, who had come for a briefing. Everything was kept quiet to make it all appear to be a routine event. By the way, if it's still classified (which I doubt), I guess you may not want to print this!

Jules Lepkowsky
Novato, Calif.

The article by Rebecca Grant, "Old Lessons, 'New' Domain," brought back memories of McChord AFB [Wash.] in the late 1950s. I was fire marshal when the SAGE project was brought on line and became operational. I recall the principal Western Electric project engineer remarking that someday "this whole project will fit on the back of a truck." That was hard to believe as it was a massive program. Power was provided to the tube-type A and B computers by six Enterprise diesel engines, [the kind used] on large ships. Their excitor motors were the size of a pickup truck. The computer tubes were cooled by ducted air and were in large trays that were enclosed in cabinets. A one-star general was in command and told me if I ever found anything out of compliance with Air Force Fire Protection Manual 92-1 to advise him immediately and he would see that corrective action was taken. He did as he said, with no discussion.

Rex Jordan
Kennewick, Wash.

Compare Like to Like

The number of tons for the Berlin Airlift was 1,780,000 vs. 690,000 for the Kandahar Airlift [*"Air Force World: By the Numbers,"* September, p. 30]. This is a little over a two-to-one edge for the Berlin Airlift. But if you [examine] the distance traveled (Berlin, 200 miles vs. Kandahar, 7,000 miles), you come up with nearly a two-to-one advantage for the Kandahar lift. Both airlifts are impressive, but Kandahar surely demonstrates USAF global reach.

William Thayer
San Diego

Long as It's the Other Guy

The editorial by Adam J. Hebert left me wondering: How do we reduce our

national deficit if we can't gain control of our spending [*"Sequestration's Destructive Decay,"* September, p. 6]?

We can argue if our taxation is too low or our spending too high, but the result is an out of control deficit. Reduced spending is popular as long as it is someone else who gets the cut. Historically our agencies have spent all their budget because if they didn't they would be penalized next year! This must stop! Our national debt is too important to ignore.

I believe it is important enough to enlist the help of all our fine officers, airmen, and civilian employees to target the costs of all programs while maintaining our excellence. These are the people who know when we're wasting money and could reduce our expenditures with little effect on our mission. Give them a chance and let this be a consideration for performance reporting and promotions. Discourage the "empire builders" of the past and give it a try. The Air Force has the best people there are, so give them a chance to reduce our costs without mission degradation.

CMSgt. Donald E. Perry,
USAF (Ret.)
Sacramento, Calif.

Dressing a General

I have never met General Piotrowski face-to-face, but in late 1981 or early 1982 I was called upon to help him out [*"Piotrowski,"* September, p. 112].

At the time, I was chief of current operations in the 513th Tactical Airlift Wing at RAF Mildenhall. I worked directly for the 513th TAW DCO, but we were between DCOs. The old DCO had moved on, but his replacement had not yet arrived on station. The new DCO was a newly minted colonel and had worked for General Piotrowski on the E-3A program. I already had a few telephone discussions with the new DCO, mostly answering questions he had about what we were doing. In fact, what we were doing had not a thing to

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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.

do with tactical airlift; we ran the flying operation for the USCINCEUR airborne command post.

The new DCO called me and told me to expect a call from General Piotrowski and that he needed a favor. As it turned out, General Piotrowski was somewhere in the Middle East, probably in Saudi Arabia because that is where the E-3As were deploying to.

Wherever the general was, the laundry and dry cleaning services were nil and some local national had ruined his blue service uniform while trying to clean it. Worse than that, there were no replacement uniforms in a thousand nautical miles of wherever

he was. When the General called, he explained the situation, gave me his suit size and inseam length, and asked that I get that put together in time to be put on an E-3A that would be passing through RAF Mildenhall a couple of days hence. I called the clothing sales store at RAF Lakenheath, just a few miles from Mildenhall, and inquired about a blue service uniform of a particular size. They had them in stock. With the uniform in hand, I had a local tailor hem the pants to the proper length and stitch the general's braid on the cuffs of the jacket. With the receipts for the uniform and tailoring services in the uniform pocket, I turned the

uniform over to the crew of an E-3A headed for Saudi Arabia. A couple of days later, the crew of a redeploying E-3A passed along an envelope to me. It contained a check and a thank-you note from General Piotrowski.

Glad to have helped out, General
Gerald P. Hann
Papillion, Neb

No Offense Intended, Ladies

I am a retired Army officer, graduate aerospace engineer, Life Member of the Air Force Association, and would like to make some observations concerning your August 2013 story entitled "Women in Combat" [p. 30]. As is to be expected from your magazine, the article is well-written, timely, and provocative. However, from my perspective of a Army officer with command experience from platoon to battalion level, it raises troubling questions about the wisdom of placing women alongside men in dedicated combat units.

As I begin, let me make clear that do not doubt the ability of our female service members to carry out their duties with skill, courage, and if required, deadly force at point-blank range. What concerns me is your perception of "combat." The situations in Iraq and Afghanistan have exposed even rear echelon service troops to short, sharp combat engagements where our female service members have performed admirably and courageously. I have no doubt that the airman pictured on the cover of the August issue is physically fit, motivated, and fully trained and capable of doing her duty, irrespective of her sex.

My concern rests with women exposed to sustained combat operations: Armed reconnaissance, movement to contact, and a concentrated campaign to close with, kill, and capture the enemy will require female service members to remain in the field for days or weeks, under tension and stress without the relative safety and amenities—food, a bed and a shower and clean clothes at a base camp awaiting a day or two away, as is the situation in Afghanistan. Field sanitation becomes an issue of primary importance. Jessica Buchanan, held captive by Somali pirates for three months, described her struggle with field sanitation and hygiene in graphic detail in her book *Impossible Odds*.

Despite the hype, women are physically, physiologically, or emotionally merely little men with different plumbing. To think this way does them a disservice. Cleanliness, privacy, and a woman's natural response to sustained violence must be addressed.

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would women be affected emotionally and mentally, facing sustained violent situations which go against their natural inclinations? What will happen when sexual desire, jealous competition, or a man's innate desire to dominate women arises in the unit? Based on the shameful sexual violence and assaults which have occurred in our service academies and at basic training, I am not optimistic about the results. What will happen if true love develops and when they see his or her beloved killed or maimed right before their eyes? How will the unit, and the general public, handle the situation where women begin to take significant casualties: dead, horribly wounded, maimed, or as prisoners of war? Will good discipline, self-control, and clear thinking prevail? How will mission accomplishment and unit efficiency be affected?

I would bet that there have been few clinical studies that address these issues. Any negative results must be vigorously investigated, even if they go against cherished and strongly held plans to carry out the placement of women in combat postings. This is not about political correctness, to satisfy the agenda of some well-placed men and women who never served a day in the armed forces, or about an equal chance to excel for promotion or being out to prove there is nothing a man can do that a woman cannot. Those cute shots of goose-stepping North Korean, Chinese, Russian, and Israeli armed women are all photo op propaganda. They are not integrated into combat units; no nation has done so yet.

My undergraduate studies at a Catholic university, where I minored in the philosophy of human nature, ethics, morality, human sexuality, and the psychology between the sexes, have made me sensitive to these issues. To be plain, from the earliest evidence of mankind's existence, women were just too valuable an asset to risk in violent dangerous activities such as hunting and warfare. Women faced enough risks from childbirth, disease, and serious accidents. The rush for false equality with men downplays a woman's role as complementary to a man's, with each sharing duties and responsibilities in making a family, rearing, and caring for children, AND still having time for a meaningful career. This may sound trite or sexist, but the real question is why? Why put a woman into a situation that causes her to act against her natural inborn inclinations? Women are nature nonviolent, caring, loving, giving, and nurturing. Why train them to kill, because, after all, this is their raison d'être for a combat formation. Shooting a rifle, riding in a tank, flying an armed aircraft or helicopter

can be exciting, but the reason you are there is to kill, and do it well.

At every level in my career, both on Active Duty and as a reservist, I have had the opportunity to serve with female troops. Just as with their male counterparts, there were excellent, good, and bad performers, but it was always based on attitude and training, not on their sex. Some tasks, like in the air defense missile artillery for example, women are just not physically able to handle: heavy lifting, the manhandling of heavy radars, cables, and launchers, and the rapid digging of entrenchments required. In other areas more suited to their physiology and mental skills, they excelled. In my last troop assignment, as the executive officer of an ammunition battalion that trained three weeks a year in Germany, three of my seven staff officers were women (adjutant, intelligence, and maintenance/supply). We also had many female enlisted members. We operated for up to two weeks in the field with minimal disruption, while respecting the personal space of the many female members of the battalion, always handling it in an adult, mature manner, but it was not tactically correct, as would be required in wartime.

In closing, I salute the contribution of women to all the armed services. They definitely have a vital role to play in the defense of our nation, but not in combat.

Lt. Col. Joseph M. Lupa,
USA (Ret.)
Oswego, N.Y.

I am up to here with this endless talk about the battle over and between the sexes beginning in basic or boot training. I mean, come on now, folks. Enough is enough. My military experience included service in the Marines and later the Air Force, and I have opinions concerning both that should be considered carefully before plunging deeper into a problem that can best [be] avoided through early learning at home in one's family.

My Marine Corps service was long before we had women serving side-by-side, but I have had the opportunity of watching these problems unravel over the years and frankly I'm moved to say that "in my day," all marines were looked upon as gentlemen unless proved otherwise, and women generally were looked up to. A true gentleman, military or not, would never, ever, physically assault a woman, "lady" or not! Even if it was one-sided, the same thing applied and women generally accepted it. This may have been a carryover from old Western traditions but should still apply under most conditions.

I'm living in the past? Well, we did a lot better then, with none of the present

problems! The Rx is really quite simple: Act like a lady and be treated like one! Same for men. Bottom line: Hands off—period—unless invited!

I agree that the sexes should be separated, at least during pre-basic or boot camp. Then, for both sexes, there should be a comprehensive training requirement on proper military decorum, and those who can't readily adjust to it should not be accepted for service.

Let's also quit hearing and passing along adverse stories about women serving in combat. Many are, in actual fact, better suited to a given job than a male counterpart and can be relied upon equally as any other marine, soldier, or sailor. Needless to say, this is very comforting knowledge, especially when the chips are down.

Like all the rest of us, women are as good as their training. My point is simply that ANY service person should be able to do a job without harassment or concerns about being molested violently or otherwise. ANY violations should be dealt with quickly, decisively, and equally. In foreign countries, foreign law should never be used against an American soldier because the UCMJ always applies, and justice should be swift and fair. This also applies to foreign prisoners.

Rolland S. Freeman
Longboat Key, Fla.

First Things First

Robert S. Dudley's excerpt of a house editorial in the *Washington Post*, Aug. 3, in ["*Verbatim: Some Commander in Chief*," September, p. 20] cites that Secretary Hagel reported on "deep funding problems" in the Pentagon to fulfill President Obama's strategic mission for national defense. It appears that Secretary Hagel is placing funding restrictions at the Pentagon, based on President Obama's direction to reduce defense funding vis-à-vis other social funding. What ever happened to developing the national defense strategy, funding, current capabilities, and future systems based on the threat? If funding is going to drive defense, we will have to cut forces, capabilities, and future systems and ultimately downsize the national strategy, which may or may not meet the threat. American interests and Americans living, working, studying, traveling, and assigned overseas would ultimately be at risk. President Obama's reductions of defense over the past four-and-a-half years have already been reflected in attacks on Americans and American interests at home and abroad. It can only get worse with additional defense reductions.

Lt. Col. Russel A. Noguchi,
USAF (Ret.)
Pearl City, Hawaii

Airman Killed in Crash in Colombia

MSgt. Martin L. Gonzales, 39, died in the crash of a US-contracted DH-8 aircraft in Colombia, announced US Southern Command.

The aircraft was monitoring for drug smugglers near the Panamanian border on Oct. 5 when it went down, reported the *Miami Herald*. The cause of the crash is under investigation; there is no evidence someone shot down the airplane, according to the newspaper.

Gonzales, who was reportedly an interpreter on the mission, was one of six persons aboard the airplane, only two of whom survived the crash. Two unnamed American defense contractors and Panamanian National Air-Naval Service Lt. Elroy Nunez also died.

Colombian military forces rescued two other US contractors from the crash site and brought them to a hospital in Bogota where they were in stable condition after surgery, said SOUTHCOM.

"Our hearts remain with the families of the men who lost their lives in this tragic crash," said Marine Corps Gen. John F. Kelly, SOUTHCOM commander. "It is a terrible tragedy, but we remain committed to finding out what happened and hopefully bring some sort of peace to the families."

Aggressors Stay at Eielson

The Air Force has changed course and decided to keep the 18th Aggressor Squadron at Eielson AFB, Alaska, near Fairbanks, and not alter the size of the remaining base operating support functions, announced service officials.

"Given what we've learned about the strategic rebalance to the Pacific in the last year, the reaffirmation of the importance of Air Force presence in Alaska, and the decrease in expected savings, the Air Force has elected to retain the 18th AGRS at Eielson while we finalize our long-range plans for this region," said Acting Air Force Secretary Eric Fanning in an Oct. 2 release.

Eielson's F-16 aggressor aircraft serve as adversary forces in training exercises such as Red Flag. Air Force officials had originally estimated the move to JB Elmendorf-Richardson, near Anchorage, coupled with curbing other activity at Eielson, would save some \$240 million.

Alaska's congressional delegation had fought the proposal

KC-135 Emergency Landing

A KC-135 tanker assigned to McConnell AFB, Kan., had to make an emergency landing on the Spanish island of Mallorca on Sept. 30 due to a suspected fuel leak, reported *Stars and Stripes*. The tanker touched down at Sol San Juan airport in Palma de Mallorca on the Mediterranean Island off Spain's eastern coast.

There were no reported injuries and the airplane was expected to leave the airport on completion of repairs, according to the newspaper's Sept. 30 report. It cited an Air Force official and a statement from the US Embassy in Madrid. The tanker had taken off from Moron Air Base in southern Spain, outside of Seville.

Airman's Medal

Chief of Staff Gen. Mark A. Welsh III presented SSgt.

Edward Grant, a member of the 902nd Security Force Squadron at JBSA-Randolph, Tex., with the Airman's Medal for his heroism following a fuel storage tank explosion at Kandahar Airfield, Afghanistan, last year.

★ screenshot


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SrA. Larry Webster, a loadmaster with the 774th Expeditionary Airlift Squadron, scans for potential threats using night vision goggles after a cargo airdrop in Ghazni province, Afghanistan.



"This is about somebody choosing to put himself in danger to save a life," said Welsh during the Sept. 12 award ceremony.

On Nov. 21, 2012, Grant sprang into action after the tank exploded on base, according to a Randolph news release. He entered a compound near the explosion and began to evacuate personnel. In all, Grant and a team liberated 35 people. "I was just being human," Grant said. "I saw people who needed help."

 www.airforcemag.com. Search "Edward Grant."

Order of the Sword

The Air Force's enlisted force inducted former Air Force secretary Michael B. Donley into the Order of the Sword.

CMSAF James A. Cody led the Sept. 13 ceremony at JB Anacostia-Bolling, D.C.

Donley, who retired in June, became the ninth person in Air Force history to enter the order at the service's headquarters level, stated the service's news release.

The order is the highest honor the enlisted force can bestow on an individual. "I am sincerely touched and humbled to be placed in the company of the many great Air Force leaders who have been honored to receive this award," said Donley.

Cashing Out

President Obama relieved Vice Adm. Timothy M. Giardina of his post as deputy commander of US Strategic Command amid a Navy investigation into allegations Giardina used \$1,500 in counterfeit chips at a casino in Iowa.



Vigilance in the Skies

WARSAW, POLAND—NATO and Russia responded cooperatively to mock hijacked airliners along their shared border during Exercise Vigilant Skies 2013, a sign the two sides are building trust in areas of their security relationship. During the four-day event, which concluded on Sept. 26, NATO and Russian personnel practiced detecting, tracking, intercepting, and handing off control of mocked hijacked commercial aircraft traversing NATO's Polish and Turkish borders with Russia.

The exercise included simulated computer activities and two days of live-flight drills with Polish and Turkish F-16s and Russian Su-27s. During the exercise, NATO and Russian air controllers put to the test the NATO-Russia Council's Cooperative Airspace Initiative Information Exchange System that's designed to enable data-sharing between the two sides' air control operations centers so that they could effectively coordinate the control of a hijacked airliner in a real-world situation.

Air Force Magazine was one of the media organizations invited to observe the exercise from NATO's coordination center in Warsaw, Poland.

On the morning of the first live-fly event on Sept. 25, a Polish Casa 295, serving in the role of a civilian aircraft in the exercise scenario, took to the sky from Krakow, Poland, headed for Oslo, Norway. Shortly after takeoff, air traffic controllers lost communication with the aircraft, causing officials to initiate a set of procedures to deal with such situations. Eventually a radio message came from hijackers aboard the Casa 295, informing that they intended to divert the aircraft to St. Petersburg, Russia.

Two Polish F-16s then scrambled. They intercepted and followed the hijacked airplane to Poland's border with Russia.


At that point, two Russian Su-27s originating from Kaliningrad, Russia, assumed responsibility for following the aircraft as it entered Russian airspace some 20,000 feet above the Baltic Sea. The crew aboard the hijacked aircraft eventually regained control, after which controllers redirected the airplane back to Poland. Throughout the nearly three-hour drill, NATO and Russian operators openly communicated these movements with each other using the IES.

"Our cooperation is going very, very well," said Col. Sylwester Bartoszewski, deputy director for the Warsaw coordination center, in response to a reporter's question on possible barriers to progress due to past and current tensions in the overall NATO-Russia relationship caused by events like Russia's 2008 invasion of Georgia and NATO's ballistic missile defense plans. "We are not working on political levels," he said.

"Common goals and common tasks and common aspirations unite us," said Lt. Gen. Yevgeni Potapov, Russia's event director, through an interpreter during a video teleconference from Moscow with reporters in Warsaw on Sept. 25. Speaking on the importance of cooperation, Potapov said "only joint efforts may yield results" for combatting such serious threats as terrorism.

NATO project officer retired Lt. Col. Michal Kalivoda said, looking ahead, officials seek to continue refining the IES for greater effectiveness, expanding the coordination into greater portions of European airspace, and attracting the participation of more non-NATO nations.

—Merri M. Shaffer

 [Read the full story in www.airforcemag.com's "In More Depth" section.]

Obama made the decision on Oct. 3 based on recommendations from Defense Secretary Chuck Hagel and STRATCOM Commander Gen. C. Robert Kehler, reported ABC News. Giardina has been reassigned to the Navy staff while the Naval Criminal Investigative Service continues to investigate, reported the *Des Moines Register* Oct. 9. There have been no criminal charges filed against him at this point, according to the press reports.

Kehler reportedly suspended Giardina on Sept. 3, but Giardina remained with the command until the President dismissed him. Giardina has also lost one star, falling in rank to rear admiral, as a result of what has transpired. He had held STRATCOM's No. 2 post since December 2011 and was scheduled to leave the command.

Back in July, Obama nominated Lt. Gen. James M. Kowalski, who heads Air Force Global Strike Command, to replace Giardina. The Senate confirmed Kowalski's nomination on Oct. 12.

Relieved of Duty

Air Force Global Strike Command chief Lt. Gen. James M. Kowalski relieved Maj. Gen. Michael J. Carey of duty as 20th Air Force commander "due to a loss of trust and confidence in his leadership and judgment," announced the command. The numbered air force, headquartered at F. E. Warren AFB, Wyo., oversees the Air Force's three Minuteman III ICBM wings, constituting one leg of the nation's nuclear triad.

Kowalski said he based his decision on information that came to light in an inspector general's investigation into Carey's behavior during a temporary duty assignment, according to the command's Oct. 11 news release.

"It's unfortunate that I've had to relieve an officer who had an otherwise distinctive career spanning 35 years of commendable service," said Kowalski. "20th AF continues to execute its mission of around-the-clock nuclear deterrence in a safe, secure, and effective manner."

AFGSC did not offer additional details on the allegations as of Oct. 15, other than they were "not related to operations."

QF-16 Flies Remotely

The Air Force and Boeing completed the first unmanned flight of a QF-16 full-scale aerial target.

Two Air Force test pilots in a ground control station flew the QF-16 remotely during the Sept. 19 test mission at Tyndall AFB, Fla., stated Boeing's Sept. 23 release. The mission profile included auto takeoff, a series of simulated maneuvers, supersonic flight, and an auto landing, according to the release.

"It was a little different to see an F-16 take off without anyone in it, but it was a great flight all the way around," said Lt. Col. Ryan Inman, commander of Tyndall's 82nd Aerial Targets Squadron.

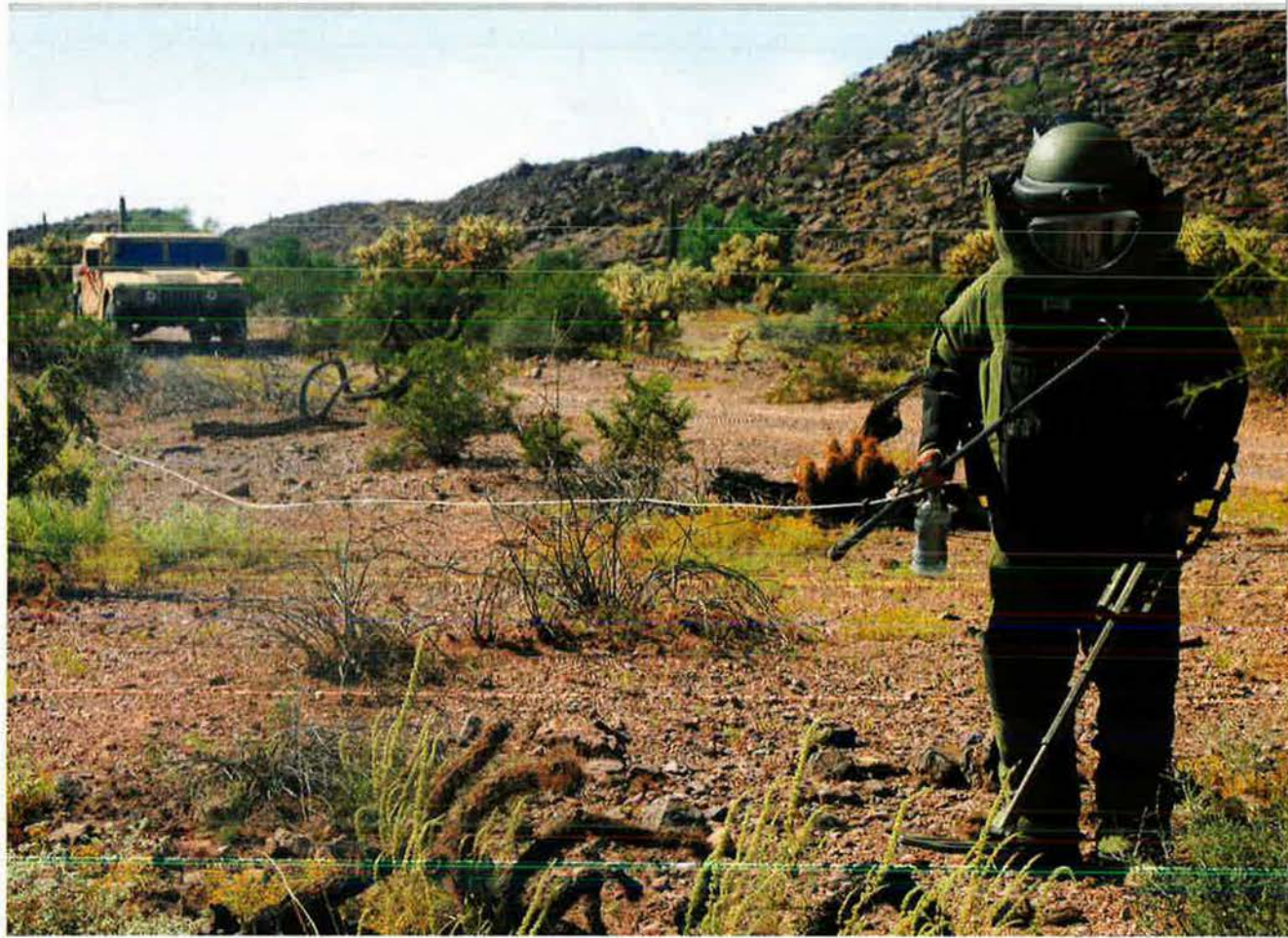
Boeing is under contract to modify up to 126 retired, early model F-16s to the QF-16 standard for use as aerial targets in weapons testing and air-to-air combat training. They will succeed QF-4s in those roles. Boeing has produced six QF-16s so far. The first QF-16 destined for use in developmental testing arrived at Tyndall last November.



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readiness or the inspection results of any 20th AF unit, nor do they involve sexual misconduct." Carey had led 20th Air Force since June 2012. Maj. Gen. Jack Weinstein, AFGSC vice commander, is serving as the 20th's interim commander. The Air Force has reassigned Carey to Air Force Space Command headquarters, a service spokeswoman told *Air Force Magazine*.

12th Air Force

Lt. Gen. Tod D. Wolters assumed command of 12th Air Force (Air Forces Southern) from Lt. Gen. Robin Rand during a Sept. 24 ceremony at Davis-Monthan AFB, Ariz. Wolters previously served as the director of the Air Force's legislative liaison office at the Pentagon.

Rand, who had led 12th Air Force since December 2011, will put on a fourth star for his next assignment as commander of Air Education and Training Command at JBSA-Lackland, Tex. The Senate approved Rand for the post in August. Rand will succeed Gen. Edward A. Rice Jr. as AETC commander.

Scaparrotti Takes Reins

Army Gen. Curtis Scaparrotti assumed command of US Forces Korea from Army Gen. James Thurman during a ceremony in Seoul, South Korea, on Oct. 2. South Korean Defense Minister Kim Kwan-jin, Defense Secretary Chuck Hagel, and Joint Chiefs Chairman Army Gen. Martin E. Dempsey participated in the ceremony. Scaparrotti also took charge of United Nations Command and the Combined Forces Command.

V-22 as Aerial Tanker

A V-22 recently completed an initial test in the role of an aerial refueling tanker, announced Bell Boeing.

Mind the Gap: SSgt. Adam Clement clears a path to place a disruption charge on a suspected IED during predeployment training at Luke AFB, Ariz. When terrain precludes using an explosive ordnance disposal robot to reach an IED, EOD airmen must go in on foot.

During the demonstration over north Texas, a V-22 fitted with a prototype aerial refueling system safely deployed, held stable, and retracted a refueling drogue as an F/A-18 and an F/A-18D aircraft flew just behind and to the side.

Former Soldier Receives Medal of Honor

President Obama on Oct. 15 awarded the Medal of Honor to William D. Swenson, a former Army captain, for his conspicuous gallantry in Afghanistan in 2009. Swenson earned the MOH for his courageous actions in thwarting the enemy and saving the lives of comrades after an ambush by a large, well-armed insurgent force on Sept. 8, 2009, in Kunar province, Afghanistan. He was serving as an embedded trainer and mentor of the Afghan National Security Forces.

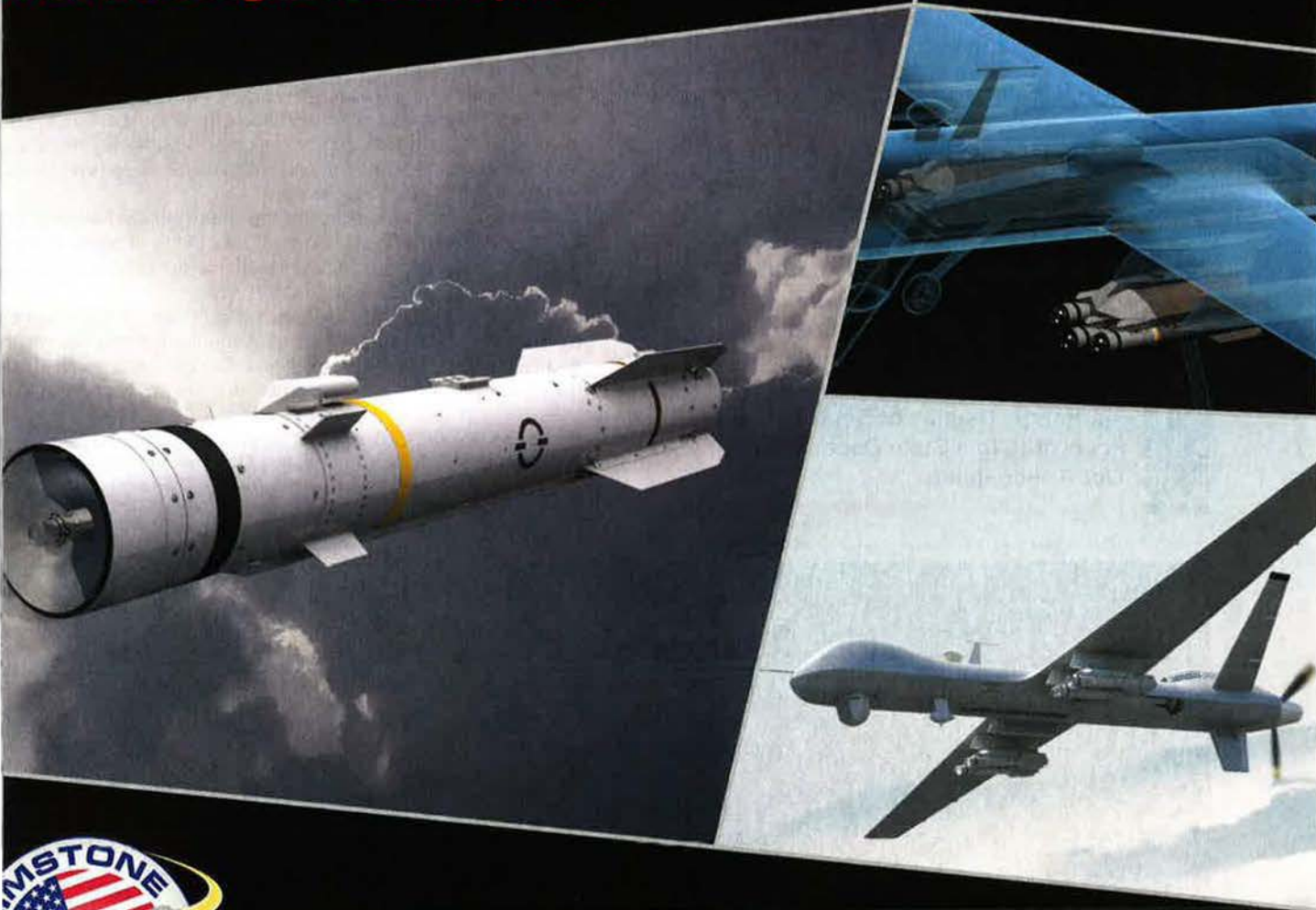
The nomination statement reads in part that Swenson "braved intense enemy fire and willfully put his life in danger against the enemy's main effort, multiple times in service of his fallen and wounded comrades, his unit, his country, and his endangered Afghan partners."

At the time, Swenson was a member of the Army's 10th Mountain Division. He became the sixth living MOH recipient from actions in Afghanistan or Iraq. Swenson separated from the Army in February 2011.

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the V-22, according to the industry team's Sept. 5 release.

"Adding aerial refueling tanker capability to the V-22 will enable operators to execute a wider variety of missions with greater flexibility and autonomy," said Vince Tobin, Bell Boeing V-22 program director. The test activities began in August.

Bell Boeing said it would incrementally build in scope until the V-22 demonstrates the ability to refuel a variety of aircraft in flight.

GPS Launch-Readiness Exercise

Lockheed Martin and Raytheon completed the first launch-readiness exercise for the Air Force's next generation GPS III satellites, according to a Lockheed Martin news release.

"Completion of our first GPS III launch-readiness exercise is a major milestone for the entire GPS enterprise and is a solid indicator that our space and ground segments are well-synchronized," said

By the Numbers

1,688 The current number of deployed US nuclear warheads, according to New START counting rules. New START requires that the US and Russia possess no more than **1,550** each by February 2018. Russia has **1,400** deployed warheads. Data as of Sept. 1, 2013, according to a State Department Oct. 1 fact sheet.

Col. Bernard J. Gruber, who oversees the Air Force's GF directorate.

Lockheed Martin is building the GPS III satellites, while Raytheon is supplying the ground-based GPS Operation Control System, known as OCX, to run them.

The exercise, completed over a three-day period by missile operations personnel, validated the basic satellite command and control functions, tested the software and hardware interfaces, and demonstrated basic on-console procedures, stated the Sept. 5 release.

The exercise showed that the companies remain on schedule to support the first GPS III launch as early as 2014.

Special Duty

Changes to the Air Force's special duty program went into effect Oct. 1 and now require airmen to receive a nomination and go through a vetting process, announced Air Combat Command officials. Under the new procedures, commanders and those in leadership roles will recommend top performing airmen for positions previously filled on a volunteer basis, such as military training instructors, airman and family readiness noncommissioned officers, and enlisted accessions recruiter, stated ACC's Sept. 5 release.

"The Air Force is looking for the best-qualified airmen who have qualities of a leader and will be able to prosper in these positions," said CMSgt. Michael Helfer, chief enlisted manager for manpower, personnel, and services.

Airmen nominated for these special duty positions will still have to meet basic eligibility requirements and specific criteria for the position, stated the release. The Air Force will still take qualified volunteers, in some cases, if there are vacancies to fill.

It's Been Real: SSgt. David Billings preflights a C-130 on Sept. 28 at Bagram Airfield, Afghanistan. This was the last load of cargo moved from Forward Operating Base Sharana before the base was transferred to the Afghan Ministry of Defense.

USA photo by MSgt. Benjamin Biokar





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The War on Terrorism

Operation Enduring Freedom

Casualties

By Oct. 22, a total of 2,284 Americans had died in Operating Enduring Freedom. The total includes 2,281 troops and three Department of Defense civilians. Of these deaths, 1,793 were killed in action, while 491 died in noncombat incidents.

There have been 19,415 wounded in action during OEF.

Last Out of Sharana

A C-130J aircrew assigned to the 774th Expeditionary Airlift Squadron at Bagram Airfield brought the last US personnel and cargo out of Forward Operating Base Sharana in Paktika province, Afghanistan, on Sept. 28, according to US Air Forces Central Command.

US and coalition partners transitioned the base to the Afghan government's control three days after the end of mission, stated an Oct. 6 AFCENT release. The handover is part of the phased pullout of US and coalition combat forces from Afghanistan by the end of 2014.

"It's a big milestone for what we've been doing out here, finally shutting down something," said SSgt. Nick Sanborn, a loadmaster on the mission. The last US soldiers at Sharana had been training and advising the Afghan National Army in the region.

Moving On

The drawdown of forces and equipment at FOB Salerno, Afghanistan, is in full force. C-130 Hercules are moving between 80,000 to 100,000 pounds of cargo a day, and the 19th Movement Control Team—a small squadron of Air Force surface movement controllers and aerial porters—bears the responsibility of being the last team there.

"There's nobody else to make up for what we don't do. ... We're the last," said 1st Lt. Nicholas Gustafson, 19th MCT commander. "We have to account for every person, every bit of cargo."

The base, nicknamed "Rocket City" because of a history of rocket attacks, is located in Khost province and is right in the middle of retrograde, stated the Sept. 30 release. But at this point in the process, few luxuries are allotted the crew. Even Salerno's dining facility is only providing one hot meal a day and there are no stores.

Teamwork and partnership have been a strong factor in their success thus far, said Gustafson. "We reach out to other organizations throughout the FOB and Regional Command East for assistance," he said. "Without that team we wouldn't be able to overcome" the challenges associated with the transitioning efforts.

Bridge To the Future

The Afghan Air Force has come a long way since 2007, said Brig. Gen. John E. Michel, commanding general of NATO Air Training Command-Afghanistan.

"One of the things we're trying to overcome is many, many decades of more of a dependency mindset" within the AAF that the Soviets instilled years ago, he said, speaking Sept. 17 at the Air Force Association's 2013 Air & Space Conference in National Harbor, Md. This led to the Afghans not having "all the capability they need to stand alone," said Michel.

USAF has 39 months to complete the training mission to build the AAF in capability and in capacity to sustain itself, he said. The advisors Michel seeks must have versatility, cultural competence, and emotional intelligence as they interact and guide Afghans. The advisors are the "desired bridge" for the future, he said, and "if you don't have the ability to manage yourself and manage relationships," you won't be able to succeed in this area.

—June L. Kim

Afghanistan Lessons From Iraq

The head of US Central Command, Army Gen. Lloyd J. Austin III, said he's applying some of the lessons learned in Iraq to complete the Afghanistan drawdown—something he referred to as a "herculean undertaking." Austin served as commander of US forces in Iraq when Operation New Dawn concluded in December 2011. Now he oversees the drawdown of the "largest coalition campaign in modern history," according to a Sept. 30 news release.

"The biggest challenge is simply coordinating the many different activities involved in the transition," Austin said. Another complication lies in the unstable security environment.

President Obama has ordered 34,000 troops home by February and a complete drawdown by the end of 2014. "Transitioning from a theater of war represents a complex undertaking that, unfortunately, does not have a 'one size fits all' solution," said Austin.

Still, US officials gleaned valuable logistical insights from Iraq. "The process of moving a mountain of equipment and tens of thousands of people out of that country, gradually reducing our physical footprint and transferring responsibilities to our Afghan and US State Department partners, is a carefully orchestrated effort," Austin said.

The challenge in many ways is "even more difficult than Iraq." The "major difference," he said, "can be summed up in two words: geography and infrastructure."



Pacific Air Forces @PACAF

"Drones get shot at for target practice. We are not drones," said Capt. Blain, a 29th Attack Squadron MQ-9 Reaper instructor. *Excerpt from Airman Magazine.*



George Little @PentagonPresSec

#SecDef #Hagel: #shutdown casts "a very significant pall over America's credibility with our allies." *Pentagon Press Secretary George Little referring to the 16-day partial government shutdown.*

South Korea Reboots F-X Competition

Despite news reports in August that Boeing's F-15SE Silent Eagle was the last contender standing in South Korea's F-15 fighter competition, South Korean defense acquisition officials have reportedly opted against procuring the jet and reopening the competition.

This development seemingly breathes life into Lockheed Martin's offer of its fifth generation F-35 strike fighter. Concern that the F-15SE was not stealthy enough to meet South Korea's future needs drove the decision, reported South Korea's Yonhap News Agency in late September.

South Korean defense officials said they would "restart the project to minimize the security vacuum by suiting related organizations to revise the total budget requirements," according to Yonhap.

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In addition to Boeing and Lockheed Martin, Eurofighter has been offering its Typhoon in the competition.

Vietnam War Airmen Identified


Defense Department forensic scientists have identified the remains of four airmen who had been missing in action since the Vietnam War.

The remains of Maj. James E. Sizemore of Lawrenceville, Ill., and Maj. Howard V. Andre Jr., of Memphis, Tenn., were laid to rest with full military honors on Sept. 23 at Arlington National Cemetery, according to DOD's website. The burials took place four days after DOD officially announced their identification.

On July 8, 1969, Sizemore and Andre died in the crash of their A-26A Invader in Xiangkhoang province, Laos, during a night armed reconnaissance mission, according to DOD's release.

The identification of the remains of Lt. Col. Robert E. Pietsch, 31, of Pittsburgh, and Maj. Louis F. Guillermin, 25, of West Chester, Pa., also were announced in late September. The remains corresponding to both airmen, but not individually identified, were to be interred on Oct. 16 in a single casket at Arlington National Cemetery.

Guillermin and Pietsch went missing on April 30, 1968, during an armed reconnaissance mission when their A-26A crashed in Savannakhet province, Laos.

 [Discover more about the recovery efforts on our website at www.airforcemag.com. Search "A-26A."]

Remains of Two World War II Airmen Laid to Rest

The remains of Army Air Forces 2nd Lt. Vernal J. Bird, 26, an airman who had been missing in action since World War II, were laid to rest with full military honors in Springville, Utah, on Sept. 28. Bird, a native of Lindon, Utah, was an A-20G Havoc pilot whose aircraft did not return to base from an attack mission on March 12, 1944, over the island of New Guinea, according to the Defense Department's Sept. 25 news release announcing the identification of his remains.

In 2001, DOD investigators located an aircraft crash site in a remote area of Papua New Guinea after a local resident

Index to Advertisers

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turned in human remains and aircraft data plates that correlated to Bird's aircraft. This led to his identification.

Defense Department forensic scientists also identified the remains of 1st Lt. Robert G. Fenstermacher, 23, of Scranton, Pa., an airman who died in a crash in Belgium during World War II, announced the Pentagon. DOD officials returned Fenstermacher's remains to his family and he was buried with full military honors on Oct. 18 in Arlington National Cemetery. According to the Pentagon's Oct. 11 release, Fenstermacher's P-47D Thunderbolt went down near Petergensfeld, Belgium, on Dec. 26, 1944, during an armed reconnaissance mission against targets in Germany. A US military officer recovered Fenstermacher's identification tags from the burning wreckage at the crash site and the US military declared Fenstermacher killed in action.

In 2012, a group of local historians excavated a private yard in Petergensfeld, recovering human remains and aircraft wreckage that they turned over to DOD. The forensic scientists used circumstantial evidence and forensic identification tools such as dental comparisons, to help identify the remains.

Airpower After Sequestration

USAF Chief of Staff Gen. Mark A. Welsh III and CMSAF James A. Cody visited airmen in the Asia-Pacific region in August. There's no getting around it, they repeated often: The institutional and operational Air Force will look much different from what anyone had planned.

Air Force Magazine covered the trip firsthand.


"We're going to get smaller, and we're not going to get a whole lot more new stuff," said Welsh bluntly to airmen and in private calls with wing leadership at stops in Japan and South Korea. The service must commit to the F-35 strike fighter, the KC-46 tanker, the long-range strike bomber, and other core programs. Overall, however, few programs will be immune from budget reductions.

The Air Force now faces some of the starkest force structure decisions in years, said Welsh. Elimination of whole fleets of airplanes—from mobility to intelligence, surveillance, and reconnaissance to the combat types—are on the table for the program objective memorandum now unfolding in the Air Staff. That's where the real savings are, noted Welsh. He's now forced to assume budget sequestration will not go away over its planned 10 years. This is the impetus behind the "Air Force 2023" project that calls for reshaping the Air Force for the worst-case budget scenario.

Welsh shied away from using the word "turmoil" to describe the changes the Air Force is now experiencing, but conceded that the force is experiencing a number of changes and shifts all at once. They are: the end of more than two decades of constant war footing and the transition to a "peacetime Air Force"; the blunt instrument of sequestration wreaking havoc on operations and maintenance of every mission area; and the uncertainty created by the military's need to confront its ballooning personnel costs.

"But the most important thing is, I'm incredibly proud of our airmen," said Welsh in Japan. "Everywhere you go, they are just good. They are trying to do the right thing, they are working hard, and they are proud of what they do." Speaking with *Air Force Magazine* during some downtime in Tokyo, Welsh said he was reassured about the force's resilience from his conversations with junior enlisted personnel, NCOs, group commanders, and wing commanders at installations across the Pacific.

"At the unit level, they are taking good care of each other. So, despite the issues we sometimes deal with, where this breaks down at an individual level, it is such a positive experience to go out amongst our airmen," said Welsh.

 [Read the full article at www.airforcemag.com. Search "Airpower After Sequestration."]



HYPERSONIC INNOVATION AND RECOGNITION.

The X-51A Waverider team has received the 2013 John R. Alison Award from the Air Force Association for most outstanding contribution by industry to national defense. The scramjet-powered aircraft recently flew the longest air-breathing hypersonic flight in history. Its success signals an era of advancement no less dramatic than the beginning of the Jet Age. Boeing, the Air Force Research Laboratory and Aerojet Rocketdyne are honored to share this prestigious award.



TODAY VS. TOMORROW

By John A. Tirpak, Executive Editor



At AFA's Air & Space Conference, top Air Force leaders described the tense balancing act between immediate requirements and future relevance.



ANG photo by MSgt. David Kujawa

An A-10 peels away after refueling from a KC-135. Both aircraft are assigned to the Michigan Air National Guard.

If sequestration, debt ceiling uncertainty, and continuing budget resolutions press on into Fiscal 2014, Air Force leaders will be forced to choose between near-term sufficiency and long-term capability. They are clearly opting for the latter.

Consequently, at the Air Force Association's 2013 Air & Space Conference held in National Harbor, Md., in late September, top Air Force leadership pledged to protect—as much as possible—the projects they believe will guarantee the future relevance of the Air Force: the F-35 fighter, the KC-46 tanker, and the Long-Range Strike Bomber.

If the money is found, USAF will also fund a replacement for the E-8 JSTARS ground moving target radar airplane and buy a new trainer to replace the T-38.

The lingering question is how the Air Force will pay for these things. Acting Air Force Secretary Eric Fanning, at a press conference, said ongoing sequestration

would compel USAF to take “vertical cuts”—meaning the elimination of entire fleets of aircraft—to achieve sequestration spending levels that, by law, demand virtually instant savings.

Among the programs possibly on the budgetary chopping block are the A-10 fighter, KC-10 aerial tanker, MC-12 surveillance aircraft, and upgrades for the F-16—along with large numbers of airmen associated with those fleets.

“You can't get your money out of installations,” Fanning said, because Congress has already ruled out another round of base closings. Moreover, “you can't get money out of ‘people’ fast enough” because there are rules affecting personnel reductions in force, and there would likely have to be buyouts and other incentives. Fencing off the top priority programs also “puts a lot of pressure on that small ... wedge of your budget pie that's left.”

The necessary savings can't be obtained simply by “reducing all your fleets,” Fanning elaborated, because

whether a fleet is large or small, the logistics enterprise that supports it stays about the same size. Only by eliminating the “tail,” he said—the depot, the parts inventory, the contractor logistics support, and the maintenance capability of entire inventories—can USAF get down to mandated spending levels.

Service leaders also warned that even if sequestration was unexpectedly reversed, the Defense Department is still expected to provide a hefty additional package of budget cuts because of the nation’s fiscal condition. President Obama’s Fiscal 2014 budget proposal offered spending levels about midway between sequester and the previously forecast defense budgets, so USAF—under any circumstances—will get smaller.

At any potential spending level, the Air Force is facing “painful cuts that are really damaging, in my view, to readiness and to national security,” Fanning said. “It will be very expensive to fix later.”

As the conference took place, Gen. Mark A. Welsh III, USAF’s Chief of Staff, testified before Congress about the effects of continuing sequestration. He said the Air Force “could be forced to cut up to 25,000 Total Force airmen”—Active Duty, Guard, and Reserve alike—“which is about four percent of our people,” along with 550 aircraft, about nine percent of the inventory.

USAF leaders said that within the flexibility they’ll have—something completely uncertain as of September—they’d try to preserve a force that is ready to fight, at whatever size the Air Force winds up being on the other side of the fiscal crisis. They also promised best efforts to avoid further

furloughs of civilian employees like those imposed this past summer.

Last year, top leaders said USAF would invest heavily in modernizing current systems to mitigate the near-term risk posed by rapidly advancing military technology in the hands of potential adversaries. That approach is no longer feasible.

“There are some things we can’t modernize to keep ... viable against the threat after five or 10 years from now,” Welsh said in his address to the conference. For example, simply updating the legacy fighter fleet won’t work.

“You can’t compete with the fifth generation aircraft” now being developed in other countries “unless you have a fifth generation aircraft. It’s that simple. You can’t dress up an old one and make it a new one,” Welsh insisted. The Air Force won’t be able to operate against “the advanced air defense systems of the future” without the F-35.

Recapitalization vs. Modernization

His remarks were echoed by Air Combat Command chief Gen. G. Michael Hostage III, who in his Sept. 17 address said that “upgrading the existing fleet ... will be more cost efficient,” but a fourth generation fighter “will be dead” if it comes up against modern air defenses.

Hostage said the full complement of 1,763 F-35s for the Air Force is “not a luxury; it is a national security imperative.” Moreover, he insisted the F-22 inventory—which he called “pitifully small”—*must* be updated to ensure that it remains a world-beater for decades to come.

In all other programs, “our current fiscal environment will likely force me to make



USAF photo by TSgt. Jerome S. Taylor

the hard decision between recapitalization and modernization,” Hostage said. “If the department says it can no longer support both, I must pick one or the other, and for me, recapitalization is what ... makes the most sense.”

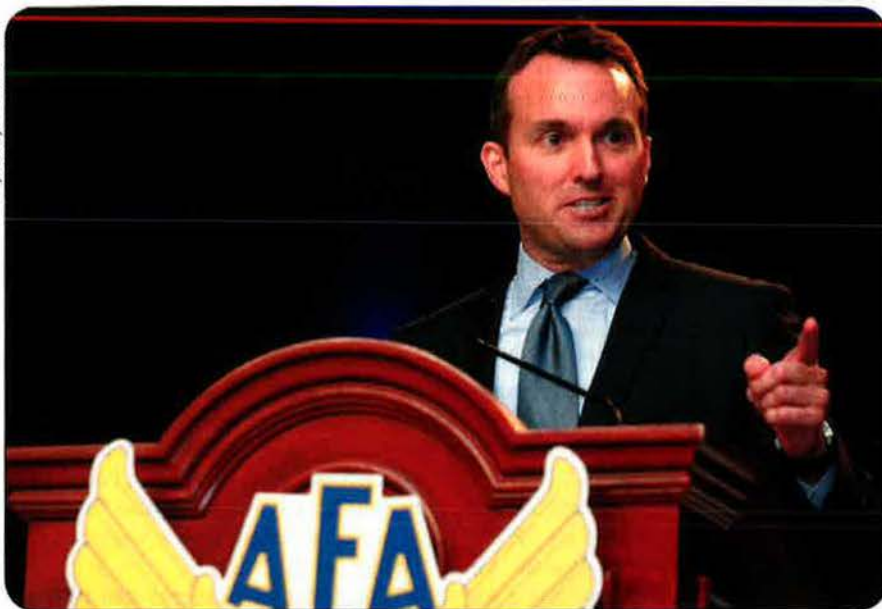
If he were to put the limited monies available into simply upgrading the legacy fleet, that would mean “arriving in the middle of the next decade with a no-45-year-old fighter fleet and most likely no remaining domestic fighter production,” he said. Depriving future Commanders in Chief of a credible combat capability isn’t an option.

“That means accepting risk in the near term,” Hostage admitted, but without the new gear, ACC “will eventually cease to be a relevant combat force.”

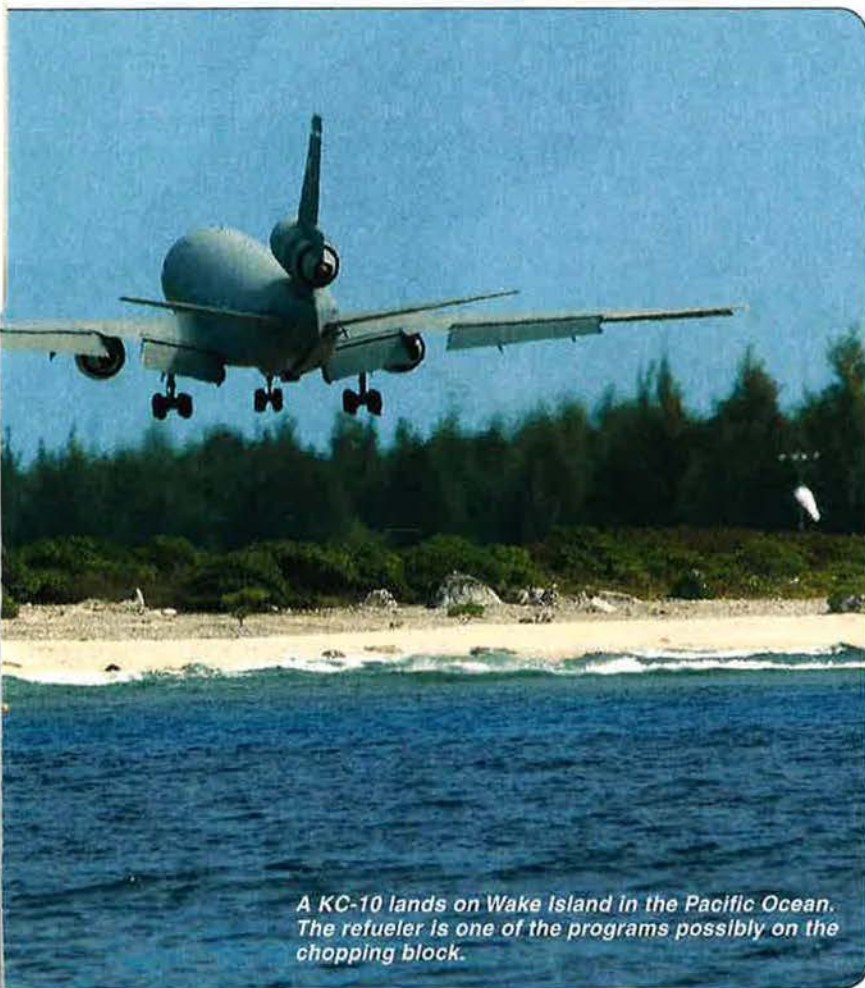
The A-10, dedicated mostly to close air support, would have to give way to F-35s, which, though “expensive” as a CAS platform, can perform other highly demanding roles, such as air superiority and deep attack, that the A-10 can’t. The future force must be multirole capable, he said.

Hostage also wants relief from orders to build the MQ-1 and MQ-9 remote piloted aircraft to a capability of 65 or more. Appropriate for Afghanistan and Iraq

USAF photo by A1C. Aaron Stout



Acting Secretary of the Air Force Eric Fanning said ongoing sequestration would compel USAF to make “vertical cuts”—that is, cutting entire fleets of aircraft.



A KC-10 lands on Wake Island in the Pacific Ocean. The refueler is one of the programs possibly on the chopping block.

vo aircraft are “useless” in a high-end fight, here they would promptly be shot down. Similarly, the MC-12, while valuable for “partnering” with a nascent air force, is imply a capability he can’t afford under pected budgets.

“If our future force must be smaller, then it must be vastly more capable,” ostage said.

While direct confrontation with powers ow developing fifth generation aircraft—mely, China and Russia—may be deemed small risk, more than “50 countries ound the world” field Chinese or Rus-an military hardware, Hostage pointed it. Both countries say they’ll export their test stealth aircraft when ready.

Hardware is only one part of the dculus of how to apportion USAF’s tricted resources, however. Having edible equipment only works if the rce is practiced and skilled at using the ar, and readiness has been hard-hit by e sequester and years of inadequately nded combat operations.

Hostage declared his belief that it would e “morally corrupt” to send airmen into bat who are “less than fully combat y.” Consequently, he sees probable nuation of the tiered readiness he put in

place last summer: giving only those units in, or soon to be in, combat top priority for training time and flying hours, while other units did not fly.

That means “accepting that some of our units may not be immediately available, requiring some amount of time to get fully

trained for combat.” USAF has traditionally maintained the ability to “fight tonight,” but tiered readiness is the only way to manage the situation.

“Put simply, to deal with the sequester, our training focus will be placed on those airmen filling our most critical mission sets, regrettably leaving many others only partially prepared,” Hostage said.

At the same time, “every indication I see tells me that the high operations tempo of the past two decades will remain the norm” as USAF transitions to the post-Afghanistan era.

The Air Force has been unable to practice for the “high-end fight” because of the permissive air environment over Afghanistan. Welsh pledged to get the service back up to speed in that regard. “Full-spectrum training is something that fell off the table for us about six or seven years ago,” he admitted. “We’ve got to get it back on the table,” he said, as future fights are likely to be far more demanding than Afghanistan or Iraq.

USAF must find a way to afford crucial training events, like Red Flag—which also prepares allies for combat—and Weapons School classes, because they bestow the service’s “Ph.D.s” in combat operations, he argued.

“Our job as an Air Force is to be ready to fight the high-end fight against a well-equipped, determined, well-trained foe. I don’t know how big a force we’ll have to do that, but whatever we have better be able to do that. At least, some of it better be able to. So that’s where we’re going,” Welsh said.

In his House Armed Services Committee testimony, Welsh said full-spectrum train-



USAF photo by MSgt. Benjamin Bloker

The Army’s 101st Airborne soldiers make their way to a C-130 at Forward Operating Base Salerno in Afghanistan. Defense Secretary Chuck Hagel has said USAF has more C-130s than it needs, but many reside in the Guard.

ing is crucial because “if we’re not ready for all possible scenarios, we’ll be forced to accept what I believe is unnecessary risk. ... We may not get there in time, it may take the joint team longer to win, and our people will be placed at greater risk.”

Toward that end, Hostage said he’s made it mandatory that his forces practice under conditions they can expect to find in a fight with a near-peer. That means assuming network communications; comprehensive intelligence, surveillance, and reconnaissance; or things like Global Positioning System navigation and timing will be compromised or denied.

“Our airmen practice routinely how to deal with momentary or prolonged interruption of any or all of these unique capabilities,” he said. “Our adversaries should know that such asymmetric attacks will not stop us; they will only make us mad. We will not be stopped and will continue to bring lethal combat power.”

Varying Effects

Sequestration was not catastrophic for Air Mobility Command in 2013, said Gen. Paul J. Selva, AMC commander.



Gen. Mike Hostage, ACC commander, said it's vital that airmen train under conditions they can expect to find in a fight with a near-peer.



An airman helps load a tank onto a C-5M at Dover AFB, Del. USAF is keeping the Super Galaxy upgrades off the table in favor of other cost-saving cuts.

However, if sequestration continues, AMC will feel the effects promptly. Fully a quarter of the pilots who need to upgrade to instructor or aircraft

commander won't be able to do so for some time, and that will wreak havoc with AMC's leadership progression as time passes, Selva said. The comman-

No Radical Transformation on the Horizon

The armed services are racing to complete the Quadrennial Defense Review by February, armed with the freshly completed Strategic Choices Management Review ordered by Defense Secretary Chuck Hagel in April. Hopes have been high that this QDR, coinciding with strategic milestones such as the drawdown in Afghanistan, a new Pacific-centric defense strategy, and unprecedented budget paralysis in Washington, D.C., offers the opportunity for a truly innovative restructure of service roles and missions.

Alas, the QDR may not turn out to be a revolutionary document offering a radical transformation of service functions. So said Maj. Gen. Steven L. Kwast, USAF's representative to the QDR, at the Air Force Association's Air & Space Conference in September.

While this QDR demands innovation and may deliver some, "it will be politically constrained. ... There is a lot at stake," Kwast told the audience. "The only way you take big, bold steps is if Congress is able to take risk with you, and there is not a huge appetite right now for that kind of risk."

Nevertheless, the debate is critical to what the Air Force wants to be in the coming years. Kwast said the Air Force has a lot more authority to make big changes than it may realize—and shouldn't take lightly the opportunity to be brave and bold.

In previous iterations, the QDR "went deep, and it covered every subject area that was extensive" and produced an excellent report invariably ignored by Congress, Kwast observed. Fiscal pressures are accelerating the process this time, however, he said.

"We will not take a full year. The deep work will happen over the next few months," he said.

One big reason is the SCMR. Work on the QDR was halted while the SCMR was carried out, but Kwast sees value in the exercise, as it compels the services to take a deep dive into their budgets.

"The nice thing about the [SCMR] is that it ... gave us insight" into where things stand with the other services, Kwast told reporters. It revealed how the other services spend their money and the magnitude of that spending over time. It's "a good starting place for this kind of work," Kwast said.

With the SCMR completed, the QDR won't try to "crack open" matters or missions that the President and the Office of the Secretary of Defense have now decided are policy priorities. That's a break from past QDRs, which looked at the full spectrum of missions in DOI, Kwast said.

Instead, the QDR is scrutinizing turn on investment and capabilities whether the current strategy is executed

busy returning people and gear from Afghanistan, but as that activity winds down, pilot and maintainer proficiency will become a bigger issue.

Defense Secretary Chuck Hagel has said the Air Force could reduce its C-130 force because the service has more than it needs. Selva said the number of potentially "excess" C-130s is about 40 airframes, but because so many Hercs reside with the Air National Guard, it is uncertain how such a reduction would play out.

"My position is that the fleet ... is affordable" at its current size, he said, if managed carefully and properly distributed among the Total Force.

The C-5M is achieving an 80 percent reliability rate, is a "magnificent" performer, and AMC has no plans to put that upgrade—with about 40 airplanes to go—on the table as a potential cut. To pay for it, though, Selva said AMC might

then-Brig. Gen. Steven Kwast (second from right) briefs a general from the Afghan National Army Air Corps at Bagram Airfield, Afghanistan. A new USAF representative to the QDR, says Congress has no appetite for taking bold transformational risks.

accelerate the rate that underperforming C-5As are withdrawn from service. This would require congressional approval.

Selva also said the requirement for 479 tankers is solid, but he may take out the KC-10s as KC-46s deliver, to rapidly achieve a vertical cut.

Welsh said the KC-46 tanker is not an optional program. When the last KC-46 is delivered, there will still be "200-plus tankers" in the fleet—mostly KC-135s—that will be more than 65 years old. "We just have to recapitalize this fleet," he said.

The long-range strike bomber (LRS-B) "is another mandatory recapitalization

program for us," he added. To underline his point during the Air & Space Conference, Welsh showed a photo of a B-52H when it was new in 1962—and then the same tail number aircraft today, counted on to perform combat missions.

In a press conference, Welsh said the LRS-B, to be bought in numbers ranging from 80 to 100 aircraft, will fix a glaring USAF force structure problem: the ability to bring high capacity strikes with stealth at range and "operate continuously throughout the conflict." The existing fleet of B-1Bs, B-52s, and B-2s "just won't age that



USAF photo by Capt. David Faggard

The 2012 Defense Strategic Guidance didn't take account of the sequester, Kwast noted, and that fact "makes the affordability part of the strategy work a real problem. That's why you hear it more," he said.

The Air Force's facility with "global power, global reach, and global vigilance" will be in high demand in the coming years, Kwast said. "We have truly become indispensable to every other joint partner out there," he told reporters after his speech.

While the Air Force has a great deal of authority to make institutional change, Kwast said, he conceded to reporters that no serious intraservice roles and missions scrub—a new "Key West Agreement," for example—can happen without political will. There's likely to be debate about the breakdown of functions within the services and about the return on investment per cost of effect—looking at submarines, long-range strike, naval aviation, and ground forces. But anything "transformational" will probably be elusive, Kwast predicted.

"The only way that happens is if you're given the permission to do that," he said of a notional new "Key West"-style deal on service responsibilities. The Joint Chiefs of Staff want to see expectations during the debate, both from Congress and the

general public. That duty falls to Adm. James A. Winnefeld Jr., the JCS vice chairman, who delivered his own remarks at the AFA conference. Because the military has little idea how much money it will have to spend in coming years—or what it will be obliged to spend the money on—leadership and strategy will be critical to the services getting their priorities right, he told the audience.

"Those who would suggest that we should just articulate our strategic ends and then simply demand the means to make it happen have never really seriously done strategy out there in the real world," Winnefeld observed. This approach risks leaving the military with a "bankrupt strategy," he added.

As a result, the Air Force and DOD need to prioritize missions, and the JCS have decided clearly the kinds of wars that won't get priority. Earlier, in another public venue, Winnefeld cautioned that the counterinsurgency capabilities built up over the last decade won't serve the new strategic or fiscal environment.

"I'd submit that we're more likely to see a Desert Storm-type of operation—ejecting a nation that has invaded an ally or a friend of the United States—than we are to see another decade-long counterinsurgency campaign," Winnefeld forecast. Instead, the US must be postured for high-intensity

warfare in the future, he emphasized at the AFA conference.

"When the next big fight comes ... I think that contest will be ... a much different fight—one that's faster and harder and dependent on capabilities brought to bear by American airmen," Winnefeld predicted.

He said, "We will not win that fight without dominant airpower." Future enemies will "use many of the tools we've employed so successfully, such as ubiquitous ISR, networks, stealth, and precision guided weapons, against us."

Winnefeld conceded that "there will be tough internal choices" as the Air Force makes its adjustments in the coming budget cycles. "Midgrade and senior leaders will have to look beyond the wars in which they grew up and beyond the service communities in which they grew up," he said.

The strongest QDR arguments, Winnefeld suggested, "will be tied to the ends of our national security interests." The most innovative solutions that "correspond to our ends will be the ones that must be most empowered to shape our ends."

If the services "get this right, emerging from the far side of all this complexity will be a smaller but more modern, faster, more lethal, and far more capable Air Force."

—Marc V. Schanz



An MC-12 Liberty aircraft prepares for takeoff from Kandahar Airfield, Afghanistan. The MC-12 is valuable for partnering with a nascent air force, but it may prove to be a capability USAF can't afford.

well," and the LRS-B needs to appear in the mid-2020s, he said.

Welsh further told reporters that if asked to name priorities beyond the top three, he would "recapitalize JSTARS" because ground moving target information is now considered a basic of intelligence, surveillance, and reconnaissance. "All the combatant commanders want it," so the issue becomes "how do we provide it at the best cost over time."

He predicted that the T-X—a trainer to replace the 50-year-old T-38—is "coming, and we've just got to figure out how fast we can get there from here." He seconded a comment from Gen. Edward A. Rice Jr., then Air Education and Training Command chief, that he's not worried the T-38 will "fall out of the sky tomorrow," but a new trainer program should be quickly pushed forward once there's budget space for it. "We should accelerate it, not slip it," he said. Nevertheless, it is not in the current budget.

Air Force Materiel Command boss Gen. Janet C. Wolfenbarger, asked about the effect of vertical cuts on her workforce, said she won't just lay off the people associated with the terminated programs, but will realign them to maintain a proper mix of manning at every level of management. Nevertheless, she anticipates there will be layoffs. That's hard, she said, because AFMC has been trying to rebuild its acquisition acumen by beefing up its workforce in recent years.

Shifting the R&D Money

In her speech, Wolfenbarger hit on the theme of preserving future capabilities. She's heard "consistent messaging" from top DOD and Air Force leaders that

basic science and technology research must be maintained. Without giving numbers, she said the next budget's S&T accounts will be "fairly constant" with the levels of the past few years, and she reported having "the endorsement of the senior leadership at every level" to make sure USAF maintains its technology edge.

However, Northrop Grumman Chief Executive Officer Wesley G. Bush, in his address, warned of danger in USAF's approach to new programs.

Bush said the Air Force—and DOD broadly—is emphasizing making new technologies "more mature so they're ready for procurement." That's a good idea, since pressing too fast with technologies that weren't yet ready for fielding has undone a number of high-profile programs. But Bush said such pressure inevitably means R&D money "gets shifted" away from basic S&T and toward risk reduction, starving "early stage development."

He said "my biggest concern" is "a very dangerous risk aversion" on the part of Pentagon technology managers. Occasional failures are part and parcel of "pushing technology to the maximum," he said, adding the Air Force must be "willing to take risks."

USAF's financial situation won't just hammer aircraft programs, but will create the prospect that "all programs will get broken," according to Gen. William L. Shelton, head of Air Force Space Command. The sequester, if it continues, would be devastating to US space and cyber capabilities, he said. Threats to American satellite constellations are emerging almost every day in jamming, lasers, space-based inter-

ceptors, and electromagnetic pulse.

"The threats are going up, the budgets are going down, but we've got some real priority choices we're going to have to make, and cyber is one of those," Shelton said. Cyber capabilities must grow and are "foundational" to everything the Air Force does, but static cyber budget will leave the U.S. vulnerable, he observed. Sequestration has meant Shelton has had to degrade capabilities by reducing maintenance accounts and sustainment capabilities.

Given all the intimidating talk about being "resource-limited, downsizing all those kinds of things"—as well as probable flatlining pay and benefits for service members—Welsh urged conference attendees, "Don't panic too quickly."

"You've got to step back every now and then and realize how big the enterprise still is," he said, describing the hundreds of thousands of airmen supporting combat operations, ISR, mobility, space and cyber. "This will still be a big Air Force." More important, no matter what happens with the defense budget, USAF is still "the best air force" in the world.

"This is a great time to lead," he said, because as they choose priorities today's airmen will have a huge role in shaping what the service looks like for decades to come. As for USAF's fiscal uncertainties, Welsh said he hoped they would be short-lived.

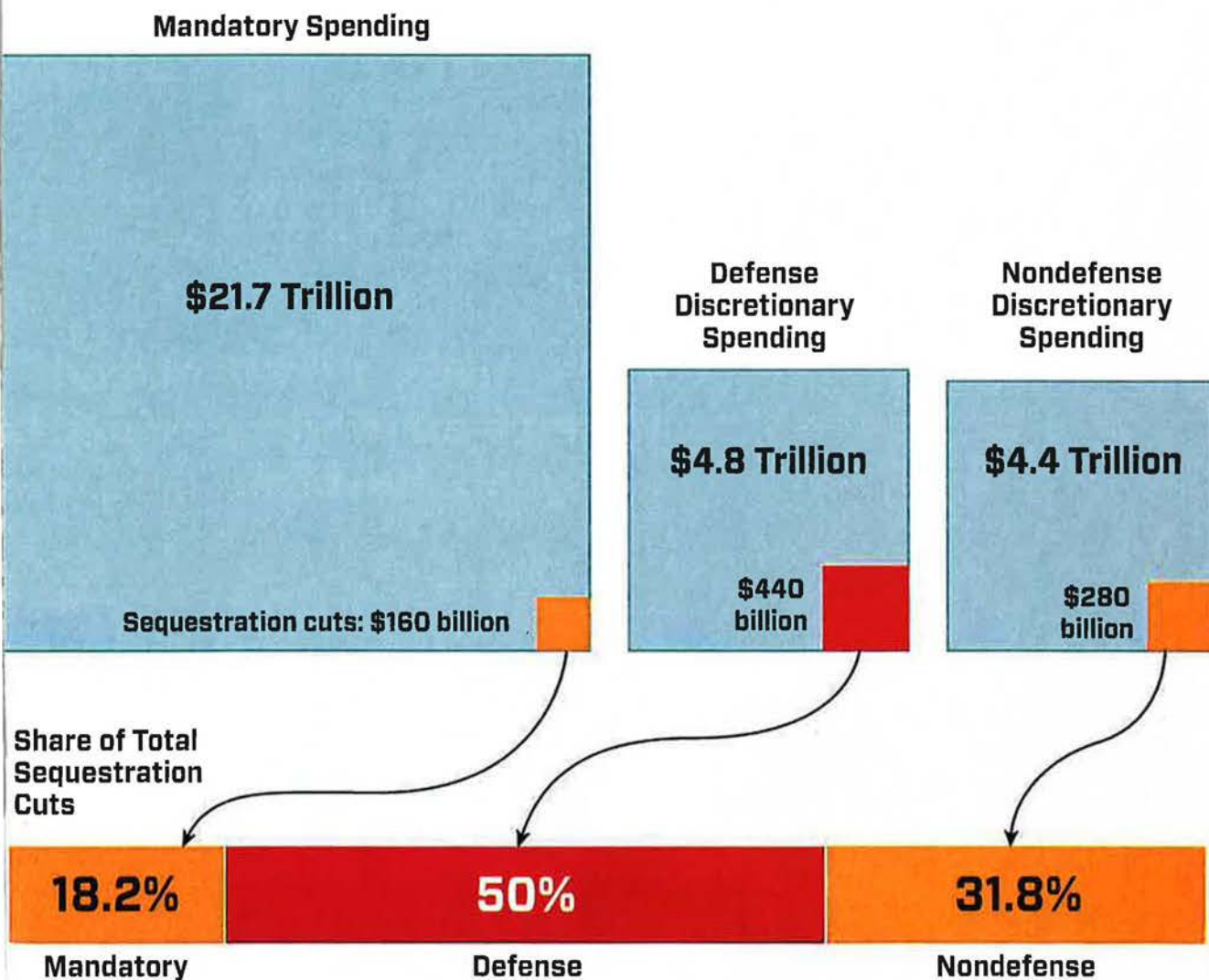
"I am an optimist," he said.

The Biggest Loser

Washington spent \$3.5 trillion this year, \$42 billion more than it took in. However, even drunken sailors can get religion, and the federal government now claims it has done so. Its means for salvation is "sequestration." The goal is to cut \$880 billion in spending over the next decade. The chart shows who (predictably) gets

it in the neck, and it will not be popular "mandatory" spending for Social Security, Medicare, Medicaid, and the like. Defense, which accounts for a mere 15.5 percent of the 10-year spending total, will be obliged to cough up 50 percent of the cuts. Some religion.

In Sequestration, Defense Takes Hardest Blow



"Federal Spending by the Numbers, 2013: Government Spending Trends in Graphics, Tables, and Key Points," by Romina Boccia, Alison Acosta Fraser, and Emily Goff, Heritage Foundation, Washington, D.C., Aug. 20, 2013.

A high-angle, close-up photograph of a military aircraft's wing and fuselage, showing various sensors and equipment. In the background, a helicopter is visible in flight, and the terrain below consists of rugged, snow-capped mountains and a valley. The overall color palette is dominated by blues and greys, with white highlights on the snow.

Fresh Looks at **THE TOTAL**

The Active Duty, Guard, and Reserve are working to overcome last year's hostility.

An Alaska Air National Guard HC-130 and an HH-60 helicopter rendezvous for aerial refueling.

USAF photo by MSgt Sean Michler



ORCE

By Amy McCullough, News Editor

Air Force leaders from all three components are busy working behind the scenes to map out a new approach to the Total Force.

It's a daunting challenge, they said at the Air Force Association's Air & Space Conference in September. It comes at a time of an uncertain budget environment, the likelihood of continued budget sequestration, the end of the wars in Iraq and Afghanistan, and the need to recapitalize or modernize an aging, war-worn fleet.

Today, however, is different from early 2012—when the then-Air Force leadership tried to tackle Total Force issues as part of the Fiscal 2013 budget process. Back then, the leadership presented the plan to retire 286 aircraft, more than half of them in the Air National Guard. The leadership also proposed cutting 9,900 personnel across the Total Force, with the heaviest reductions also falling on the Guard.

At the time, many in the reserve components said these proposals blindsided them; they felt they deserved to have a voice in the discussion. Congress also was not happy, resisting these moves and ultimately authorizing the Air Force to retire far fewer airplanes and reduce less than half the personnel positions, with most of the personnel cuts coming from the Active Duty component.

The Air Force still faces the same difficult decisions, and leaders say they can still feel the bruises left from the political backlash following that overhaul attempt. What's different now is that players across the three components are at the table, and there's good communication between the Air Force and National Guard Bureau.

In fact, NGB Chief Army Gen. Frank J. Grass said at the conference he couldn't ask for a better partnership than the one he has with Air Force Chief of Staff Gen. Mark A. Welsh III.

"General Welsh and I are committed to being full partners and to [doing] the best we [can] to try to bring together the Air Guard and the regular Air Force," said Grass during a roundtable discussion with reporters at the National Harbor, Md., conference venue.



An F-22 on the runway at Wake Island. Air National Guard and Active Duty members teamed up to perform a "rapid Raptor" deployment in June to the Pacific island.



SrA. Matthew Hunter and TSgt. Jonnedi Paule, aerial porters, shove a shipping container into a C-130 at FOB Salerno, Afghanistan.

USAF photo

Air National Guard Director Lt. Gen. Stanley E. Clarke III echoed that sentiment, though he alluded to some lingering differences as well.

"I have a great relationship with the regular Air Force and the Air Force Reserve," said Clarke. "Now, I have a great relationship with my wife also, but that doesn't stop us from having heated discussions ... about things."

Mitigate Damage

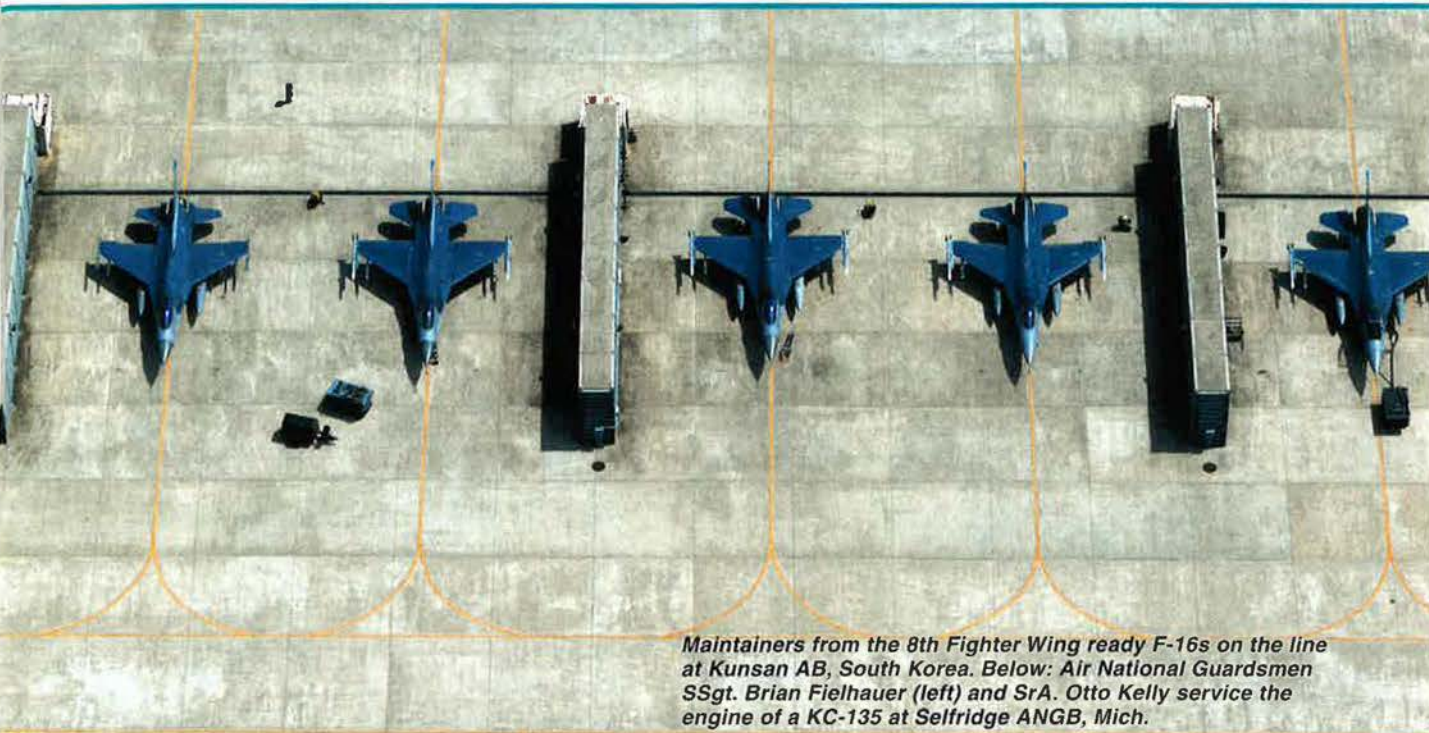
What's more important, added Clarke, is that the dialogue remains open, the discussions continue to take place, and then everyone shakes hands afterward and continues with the mission.

As of mid-September, Grass said he had testified alongside Welsh five times. The two leaders "see each other several times a week," and Welsh has included a couple of the adjutants general in all budget-related senior leaders' deliberations, including discussions on whether to divest entire fleets of aircraft—a move that will no doubt have a significant impact on the Air Guard.

During the conference, Welsh and other senior Air Force leaders said single-mission aircraft, such as the A-10 Warthog, B-1B Lancer, and MC-12W Liberty, are the most vulnerable to vertical cuts. Many of the A-10s and MC-12s are Air Guard-operated.

Welsh knows there are "certain systems we can't maintain," said Grass. "Our position is that if he has to divest, at least mitigate that in the States, which he has done every case. I couldn't be more positive."

Clarke said vertical cuts actually make "a lot of sense" from a "business case analysis." Like Grass, he said he would be on board with the decision to divest certain fleets as long as the Air Force softened the blow "by moving some airplanes around or doing something that supports not closing any of our bases."



Maintainers from the 8th Fighter Wing ready F-16s on the line at Kunsan AB, South Korea. Below: Air National Guardsmen SSgt. Brian Fielhauer (left) and SrA. Otto Kelly service the engine of a KC-135 at Selfridge ANGB, Mich.

That's the one way to get everyone to support any Total Force approach, he said.

Grass said Welsh also has personally visited many of the units that may be affected by upcoming force structure changes and talked to them about what that could mean for them. "So I'm totally comfortable," said Grass, when asked if the National Guard Bureau supports the possibility of vertical cuts.

"In fact, [in September] I hand-delivered him a letter that was drafted by two adjutants general who work force structure problems. ... It basically said, 'Thanks for your great partnership and, yes, we are concerned about modernization. We're concerned about recapitalization, but we want to look at whatever the Air Force looks like, so you let us know where you want us,'" he added.

At least for now, Grass said he is confident the Air Guard will be able to maintain a flying mission in every state. However, it doesn't necessarily mean it will be a manned mission. He highlighted a recent "unique" situation when the California Air National Guard's 163rd Reconnaissance Wing at March Air Reserve Base deployed an MQ-1 Predator in support of firefighters battling the Rim Fire near Yosemite National Park in the central part of the state.

The Predator began its mission on Aug. 28, taking off from Victorville, north of San Bernardino. Grass said the MQ-1 was able to hover over the fire for 23 straight hours, searching for hot spots. That allowed the US Forest Service direct teams or aircraft to the fire more quickly.

"That RPA [mission] flown by the California Air National Guard was a huge success," noted Grass, who said the National Guard Bureau is now looking at how to "take that capability [to] the homeland."

The Air Guard also is fighting for a piece of the cyber mission. Clarke said the Air Force must take an "enthusiastic, measured, approach" to growing its cyber force. He said



ANG photo by TSgt. Robert Hanert

that cyber requirements for combatant commanders are still being "developed and solidified."

"However, I'm confident that as this weapon system matures, the Air National Guard will be a significant contributor and partner," said Clarke.

Many Air Guardsmen already possess the high-demand skills that the Air Force and industry seek. Bringing those Air Force Specialty Codes into the Guard would allow USAF to capitalize on that talent, while partnering with industry—rather than competing—as it builds its cyber force.

The Air Force Reserve is contemplating similar questions as it tries to shape its force for the future fight, said Lt. Gen. James Jackson, Air Force Reserve chief, during his conference speech.

"There are a lot of mission areas that the Air Force Reserve and Air National Guard are involved in, but [are they] the right amount and [are they] the right mission areas for us to go ahead and make the best choices for the nation?" he asked.

Taking a Breather

During Welsh's speech, the Chief acknowledged the difficulty of integrating and balancing the Total Force, saying there are still many questions to answer. For example, how much can the Air Force push into the reserve components without affecting operational capability or responsiveness? What kind of force can the Air Force "reasonably afford" in five, 10, 15, and even 20 years? How should that force be organized? And how can the Air Force leadership keep a force engaged and challenged when aircraft are grounded due to sequestration?

Those are just some of the questions leadership will hash out at the next Corona meeting, the periodic gathering of Air Force four-star generals and senior leaders, said Welsh.

"There's nothing easy about what we are trying to do here, but I think the idea of moving forward in a way that's constructive is really going to be helpful for us," he said. "Everybody's working this really hard."

After the Air Force presented its initial Fiscal 2013 force structure proposal and Congress rejected it, lawmakers essentially halted any major movements in the Total Force and urged the Air Force instead to "take a couple-year breather and let this settle," said Acting Air Force Secretary Eric Fanning.

Now, two reports—slated for release in the coming months—will move the debate back into the spotlight. The Air Force's own Total Force Task Force, or TF2, is expected to deliver its findings by the end of November. A second set of recommendations, expected in February, will come from the congressionally mandated National Commission on the Structure of the Air Force.

Established for similar purposes, the internal task force and the external commission are operating independently, though they do share some information. They also have the same goal: to conduct an open, transparent debate that will determine "solutions that make sense for the states and make sense for the nation," said Welsh.

Fanning said neither TF2 nor the national commission are structured in a way that would allow them to significantly influence Fiscal 2015 budget planning decisions. The national commission won't even release its findings until the President's Fiscal 2015 budget request is submitted to Congress. However, because TF2 is expected to release its report by the end of this month, it will have some effect internally, said Fanning.

Still, the fiscal environment remains highly uncertain. The Budget Control Act that brought on sequestration is law—though just about everyone agrees it's a bad idea and lawmakers on both sides of the aisle are trying to repeal it. That means the Air Force must put together two separate budgets: one that builds off the President's Fiscal 2014 request and another budget at lower spending levels that assumes sequestration will continue for at least another year. Both will affect whatever Total Force decisions are made.

The Air Force, said Fanning, has a two-fold objective. First, it doesn't want to alter the overall balance too much as its end strength draws down. Second, leaders want to take the analysis from TF2 and ensure whatever rebalance is proposed crosses all three components while "still taking us in the direction of what we want to do" in Fiscal 2016 and 2017, said Fanning. Ultimately, the Air Force needs to make sure it's not "taking any steps in '15 that will ... unwind in the '16 budget," he said.

Air Force Reserve chief Jackson said budget issues are the biggest challenge for the Reserve today. All three components, he said, are striving to remain "tier one-ready" even though they continue to battle a readiness decline brought on by sequestration.

"Right now, we're in the hole. We're trying to dig our way out of it and I don't see a lot of money to allow us to do that," said Jackson.

Adding more associate units into the Air Force's force structure may be one way to bolster the Total Force and improve readiness, said Lt. Gen. Stephen L. Hoog, assistant vice chief of staff and Air Staff director, during a Total Force panel discussion with Clarke and Jackson.

The problem is that the lack of funding threatens the success of such partnerships.

"If you are a [Total Force integration] unit [and] you don't know if you have the man-days for the following tier to step up, it changes the overall dynamics," said Hoog.

Right: Lt. Gen. James Jackson, chief of the Air Force Reserve, speaks at the Air Force Association's Air & Space Conference in September. Far right: Lt. Gen. Stanley Clarke, director of the Air National Guard, is a Total Force airman who has served on Active Duty, in the Reserve, and in the Air National Guard.

Airman Development—a

Training and developing airmen to be the best professionals must continue as a top Air Force priority despite today's austere economic environment, senior leaders stressed at the Air Force Association's Air & Space Conference in September.

Gen. Edward A. Rice Jr., commander of Air Education and Training Command, said the looming contraction of the force requires USAF to consider switching from specialized pilot training back to a generalized training program.

Because the Air Force is shrinking, AETC must "look at future requirements and make adjustments to how we train," said Rice. The generalized training course—similar to one used in the 1990s—would channel all pilots through the same broad courses, making more economical use of resources and pipelines. Under today's specialized training curriculum, after basic pilot training, pilots go through a customized advanced training course specific to the operational aircraft they have been selected to fly.

Air Combat Command also plans a paradigm shift in training, said its commander, Gen. G. Michael Hostage II.

America's adversaries have spent "buckets of money" trying to disable the technology "that makes us truly unique," Hostage said at the conference. During fiscally constrained times, AETC is "looking at every possible innovative way to accomplish what we need to accomplish."

Not All Bells and Whistles

That includes training for contested environments. Hostage said pilots need to get used to regularly flying with disrupted technology, so they will be ready for the future fight.

Adversaries believe "that if they can [shutter our technology], we'll turn around and go home because we don't know how to fly without it," he said. Although Hostage said that never happens, he acknowledged the skill set has atrophied after more than a decade of fighting in Iraq and Afghanistan.

"The God's honest truth is [that for] the youngsters today, comms always work. The data link's always up. The radar, you can see forever. And the GPS is like the lights—they're always on," said Hostage. "I want my adversary to know that all t



USAF photo by Andy MacIntyre



Priority

By June L. Kim

magic he spent all that money for is not going to stop us. It's going to upset us. It's going to piss us off, but we're still coming." Airmen need to get to a point where they can fly instinctively without such technology to aid them, said Hostage. The challenge lies in making sure those opportunities exist despite budget uncertainties.

Gen. Janet C. Wolfenbarger, head of Air Force Materiel Command, said sequestration, and the resulting furloughs, delivered an especially harsh blow to AFMC.

"This was ugly for my command," said Wolfenbarger on Sept. 16. AFMC comprises 77 percent civilians and it "hit us hard," she said. "I do believe that we have broken faith with that portion of our team."

Some good, however, did come out of it: Airmen were forced to innovate. When Air Combat Command had to shut down some of its formal training units, airmen began "creating local training procedures [and] policies, ... trying to overcome some of those formal training venues," said ACC Command CMSgt. Richard A. Parsons during a forum Sept. 16.

At the conference, Air Force senior leaders repeatedly praised airmen for their innovation, describing it as a critical part of helping USAF discover the "new normal."

Keeping Airmen in the Force

Figuring out how to retain airmen when they return home from Afghanistan also will be key, said CMSAF James A. Cody. "The new normal needs to be 'dramatically different,'" he said at a media event Sept. 18. As the US military draws down after years of war, USAF leaders worry that airmen will lose the sense of adventure they found in the war zone.

Although the demand for airpower will be significantly reduced compared to wartime demands, the collected Air Force leadership assured conference goers there remains a great need for airmen to bring to the fight. USAF needs them trained and ready, but "bored airmen will go somewhere else," warned Cody. During his Sept. 17 conference address, Gen. Mark A. Welsh, USAF Chief of Staff, stated that this is already a concern, and sequestration has the potential to create a retention problem

for the Air Force. A maintenance airman at one base—idled by sequestration—told Welsh his maintenance job was boring.

"They're sitting around looking at airplanes on a ramp," Welsh said. Having long since accomplished all the needed maintenance on his aircraft, "he's bored as a two-striper. That's a little scary."

Airmen will "walk" if they aren't challenged and allowed to be fully capable in their mission, Welsh said, and this will be a problem reaching far beyond maintainers. "Expect the airlines to start hiring at the end of this year. Our rated force has options."

Cody also announced at the conference that he is bringing back "Roll Call" for the enlisted corps. The once weekly bulletin launched by CMSAF Rodney J. McKinley in 2006 endeavored to keep airmen informed on current issues and to promote communication between superiors and subordinates.

Those efforts, however, soon "petered out," said Cody, who hopes that restarting the publication and its attendant meetings will reinvigorate the corps.

The first Roll Call was released Sept. 18. This time, Roll Call will be monthly, but it will be up to squadron or flight leaders to determine whether airmen will gather daily or weekly to discuss issues it raises.

Cody emphasized the importance of face-to-face communication and noted the service loses that personal touch by communicating more and more through social media.

"I have Facebook ... and Twitter, [but] I don't consider that my mechanism of communicating with you," he told airmen.

The enlisted corps will have another significant change coming its way in the form of developmental special duties. Before, airmen volunteered for these duties. Cody told conference attendees the Air Force wants to reform its process by having supervisors and commanders nominate the airmen before placing them into special duty assignments.

"There are lots of questions [and concerns] because they used to be able to volunteer," he said during the media event. Cody said he believes the change will drive communication and good behavior. "We are investing in these folks because we want them to stay in and help lead the force."



A C-17 ascends over JB Lewis-McChord, Wash., as Mount Rainier towers in the distance.

That leaves the Air Force with three options. The first—full TFI mobilization—clearly is preferable. Plan Two is to have volunteers step up for certain missions. The third option is an Active Duty-only plan.

“Anytime you put a unit into a position where all three of those need to be contemplated, it just fundamentally changes the nature of this conversation,” said Hoog. “That’s part of the sand in the gears, if you will, about the TFI units out there.”

It’s also just one more issue on an institutional level that the Air Force must take under consideration.

A Starting Point

Jackson compared the Total Force debate to balancing the Reserve triad of civilian employment, military employment, and family.

“You can’t have them all happy at once, so I won’t stand ... here and tell you everyone will be totally happy with everything the Total Force Task Force has recommended, but it’s a starting point,” said Jackson. “It’s a good starting point with some good analysis that we can talk about.”

The Air Force gave the Total Force Task Force—which includes a major general from each of the three components—a daunting mission and a short period of time to complete its work. As such, task force members were only able to touch on 50 percent of the Total Force mission areas and roughly 55 percent to 60 percent of Air Force Specialty Codes, said Daniel B. Ginsberg, assistant secretary of the Air Force for manpower and reserve affairs.

“There is still another 50 percent of the total Air Force that probably should be looked at to see if there are opportunities here to find a place that can be more efficient,” he stated. “I think it worked out pretty well given the timeline.”

Welsh agreed. He said the Air Force’s emphasis on the Total Force would not go away when TF2 wraps up its work this fall. Although the task force itself might cease to exist, its lessons and the work will continue.

“We want to integrate [Total Force] into the whole Air Staff,” said Welsh. The idea is that officers in all three components will be “groomed over time, almost like a joint designator.”

Eventually an airman’s Total Force knowledge will play significant role in certain career progressions, though Welsh acknowledged this wouldn’t happen overnight.

ANG Director Clarke’s career path could be an example of how this new Total Force mindset might play out. Through the three decades he’s been in uniform, Clarke has served Active Duty, in the Air Force Reserve, and in the Air National Guard. He’s also been a wing commander in peacetime and during conflict.

Not once, said Clarke, did he ever question what authority he was operating under. “I was an airman. Period,” he said.

Welsh said it’s important for airmen to understand what that really means. More importantly, each of the three components needs to understand how it fits into the larger Air Force puzzle.

The TF2 review has caused some to ask whether the Air Force should consider merging the two reserve components. It’s an issue that rears its head every few years and is always shot down. This time is not likely to be different.

Jackson said he was asked that very question while testifying before the national commission. His answer was unequivocal no.

“We need to look for efficiencies and better integration between the three components, not assimilation,” said Jackson. “In order to do that, you’re going to [lose] combat capability for the nation for a long time and you may never get it back. So three components, in my mind, is still the best way to do business.”

Despite the challenges, Welsh said he is not concerned about the future of the Air Force. In fact, he’s looking forward to it.

“It’s a great time to lead in our Air Force at whatever level you’re at. We’ve got some things we’ve got to figure out. We’ll figure it out. Have you talked to these guys yet?” Welsh asked the audience during his address, referring to airman pictured in a slideshow. “They can figure anything out as long as we don’t get rid of them. So we’ve got to be worried about them staying. If we do that, we win. If we keep these guys on the job, the mission will get taken care of. We’ve just got to figure out how to get them the tools they need to get the job done. We can do that.”

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Allies in the Gulf

By Marc V. Schanz, Senior Editor

The Syrian civil war, having already cost more than 100,000 lives, took a dark turn in August, as a suburb of Damascus was hit with a gas attack, killing hundreds of men, women, and children. Forces aligned with President Bashar al-Assad were judged to be the culprits, and a coalition of voices rose up calling for military action to punish the regime.

Condemnations came from Washington, D.C., London, and Paris but also from the Gulf Cooperation Council, the six-member political and economic alliance of Arab states bordering the Persian Gulf: Bahrain, Kuwait, Oman, Qatar, Saudi Arabia, and the United Arab Emirates. The GCC called Assad's use of chemical weapons a "flagrant violation of international humanitarian law" and urged the UN Security Council to adopt a "deterrent resolution" to save the Syrian people from future "horrific crimes."

The situation was judged by many to be the precursor of a possible broader conflict—a military strike on the chemical weapons facilities was threatened by President Obama—and put in the spotlight the security capabilities of the US and its partners in the region.

The GCC played a significant role in the run-up to—and execution of—the 2011 air campaign in Libya. It issued similar activist language after Muammar Qaddafi's violent crackdown on dissent during the Arab Spring, and some GCC countries even contributed combat aircraft to that action—with Qatar becoming the first Arab country to fly combat missions over Libya. The group has grown increasingly assertive in regional security affairs in the aftermath of the Arab Spring. Several of its members, such as the United Arab Emirates, Qatar, and Bahrain, have been quiet partners with the US in the war in Afghanistan, serving as key locations for Air Force bases and military supply depots.

As the US pulls back from its war footing in the US Central Command area of responsibility, the strategic picture in the Gulf is changing. The UAE and Qatar have rapidly modernized their militaries, thanks to oil and gas wealth, and are viewed as vital partners to securing American interests in the broader Middle East.

America "will be engaged across the spectrum" in the region in the future, said Marine Corps Maj. Gen. William D. Beydler, CENTCOM's head of strategy, plans, and policy. "In some ways, we will be able to be more engaged than ever before, because after 10 or 12 years of sustained combat operations, we will have the capacity to do so."

In particular, senior US officials are lobbying Qatar, the UAE, and Bahrain about military partnerships. CENTCOM is emphasizing multilateral air and naval exercises and better coordination between the US and its Gulf allies. Modernization of regional partner militaries is also receiving a great deal of attention.

Air Force Brig. Gen. Jeffrey L. Harrigan is CENTCOM's deputy director of operations. He is now one of the key players in the effort to balance the command's Afghanistan combat efforts, the withdrawal of gear from that country, and increasing military engagement around the Gulf.

"We are working hard to quantify what exactly we want to do with a particular nation and also regionally," he said in an interview, "to pull together countries in an environment where we not only do bilateral training but multilateral ... to build real joint and coalition operations." He observed that "across our headquarters, if you look into [Fiscal 2014 and 2015], there is some real opportunity for us to expand those activities."

000 photo by MSgt. Beth Blake



America's allies around the volatile Persian Gulf are low key, but have high importance.

F-15E on a mission over the Persian Gulf. The strategic picture in the Gulf is changing, and the Gulf states are vital partners in securing US interests in the Middle East.

The geography of the Gulf (GCC members refer to it as “the Arabian Gulf”) poses unique military problems. It’s a more compact and dangerous neighborhood than the expansive Pacific Ocean and, in many ways, a tougher problem than the mountains and valleys of Afghanistan.

The Strait of Hormuz—the strategic choke point for the Middle East’s oil and gas trade—is only 24 miles wide at its narrowest point, separating Iran from Oman. About 20 percent of the world’s traded petroleum passes through the strait annually. Any crisis involving a confrontation with Iran’s military would look different from the wars in Iraq and Afghanistan—and air defense and airpower would play a critical role.

“The Department of Defense has bought a lot of capabilities to support operations in [CENTCOM] over the last decade,” said Mark Gunzinger, a senior fellow at the Center for Strategic and Budgetary Assessments.

However, “a lot of those capabilities are not what we need to operate in a contested environment like the Gulf,” he said in an interview.

Evolving Posture

Gunzinger examined the Persian Gulf’s unique anti-access and area-denial problems in a 2011 study for CSBA. He determined the US and its allies needed to re-examine seriously their operating concepts in light of Iranian military investments in fast, flexible naval and airpower, mining and submarine warfare, and short- and medium-range ballistic missiles. Improved remotely piloted aircraft technology, if paired with even rudimentary weapons, could create “a lot of damage” in certain scenarios, he said.

The Pentagon and CENTCOM appear to be steadily evolving their posture in the area. While the 2012 Defense Strategic Guidance makes clear the Middle East is the other focal point of US strategy and force planning (besides the Pacific), the pullout of American forces from Iraq and now Afghanistan is now creating new military priorities. The US is emphasizing collaboration and engagement with allies, power projection, and deterrence.

This strategic shift “is leading the US to build up its forces in the Gulf and strengthening the military forces of the Arab Gulf states,” wrote Anthony H. Cordesman and Bryan Gold in the May 2013 report “The Gulf Military Balance,” published by the Center for Strategic and International Studies.

The task is tricky, Harrigian said, as CENTCOM must balance the ongoing operation in Afghanistan—and retrograde operations—with “force presence” across the Gulf region, ranging from preparing for possible intervention in Syria to a confrontation with Iran.

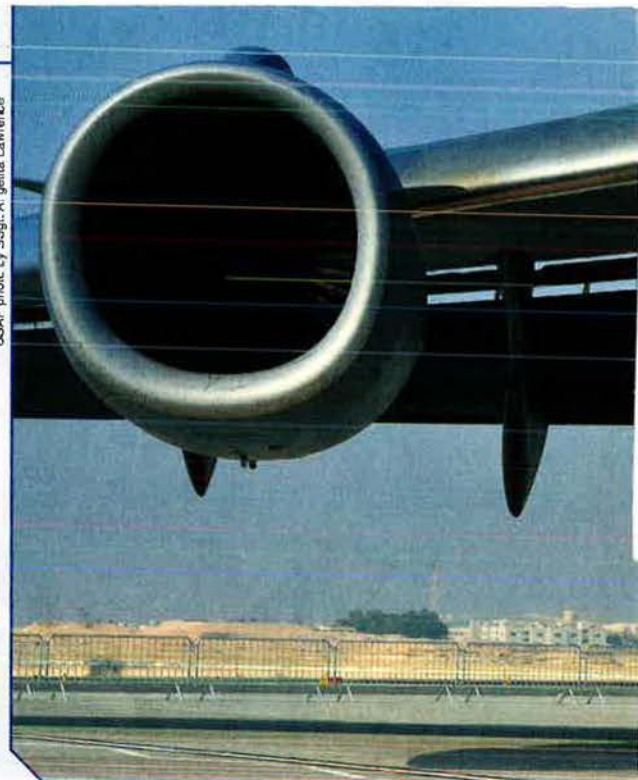
Earlier this year, Harrigian said, CENTCOM staff took a fresh look at the laydown of US forces in the area of responsibility, trying to assess enduring needs, the scenarios requiring response forces to mobilize quickly, and pitting those needs against assets available—especially when sequestration is likely to continue affecting readiness.

The amount of forces CENTCOM previously had at its disposal—and had to have because of Afghanistan and Iraq—is “coming down,” Harrigian said. “That’s reality and we are trying to focus on the right mixture of what we need now and in the future.”

Speed, flexibility, and responsiveness are critical in an environment like the Gulf, and all these attributes correspond with air and maritime integration; intelligence, surveillance, and reconnaissance; and air interdiction capabilities.

“We’ve had several exercises, particularly in the Gulf, where we are focused on leveraging ISR, building surveillance pictures, and linking that” to air and naval weapons, Harrigian said. These ideas, in many ways, are related to the AirSea Battle concept.

USAF photo by SSGT. Argelia Lawrence



A1C Timothy Michaud and A1C Brandon Denton provide security for a C-17 during the Bahrain International Air Show in 2010. Bahrain has been a quiet partner to the US during the war in Afghanistan.

“While it may read well on paper,” he pointed out, “you got to practice that. Especially in the Gulf, reaction time is a significant factor.”

Harrigian, in his previous assignment, assisted with the 2010 implementation of Exercise Eager Lion in Jordan. It featured several Gulf States and Arab allies and both aerial exercises and ground integration with Special Forces.

“A big part of this is to be there, in the region, to build trust and confidence that we have the ability to respond quickly. You have to be able to look them in the eye,” Harrigian said. “and not just send an email.”

Multilateral exercises in the CENTCOM area have blossomed. In June, the largest-yet Eager Lion took place in Jordan, and in May CENTCOM helped organize the International Military Countermeasures Exercise 2013 (IMCEX), an event staged out of Bahrain by CENTCOM’s naval component, with more than 40 nations participating.

In late April, Exercise Eagle Resolve was staged in Qatar. More than 2,000 US troops participated in the field training event, alongside military forces from the GCC. A similar seminar when it was first established in 1999, the most recent iteration featured scenarios that could apply to any number of CENTCOM operating plans in the Gulf and its periphery, including hostage situations, naval and theater ballistic missile defense, critical infrastructure protection, and counterterrorism activities.

This is not just a US initiative. The Gulf States themselves seek a greater say in regional matters. In 2011, for the first time, the GCC announced it would broaden its reach beyond the Gulf and would offer membership to Jordan and Morocco, two monarchies closely aligned with the group. Morocco, for example, sent observers to this year’s Eager Lion exercises.

“The GCC states see the future of their relationship with the US based on more reciprocity than before,” said Theodor Karasik, the research and consultancy director for the Doha-based Institute for Near East and Gulf Military Analysis.



NASA photo

Oman (left) and Iran (right) are separated by the Gulf's Strait of Hormuz—only 24 miles wide at its narrowest point. The strait is the strategic chokepoint of the region's oil and gas trade.

Karasik, who regularly advises Gulf governments and militaries in Qatar and other GCC states, said communication about the security relationships between the Gulf States and the US has improved measurably from a decade ago. At the same time, their security is closely tied with a continuing and visible US military presence.

"Today, they are frightened of the prospect of the concept of the [Pacific pivot] and what that will mean for a reduction in US military presence in the region. From their perspective, the region is getting hot right now," he said. "Iranians are on the ground in Iraq, and that is making the GCC more nervous. ... From their perspective, they are convinced they are surrounded by hostile intent."

As a result, there's been increasing collaboration among the GCC countries, and trilateral and multilateral exercises "have grown in the last few years," Karasik observed.

Based on contacts with officials in the GCC, Karasik said the Gulf States believe threats have grown more complicated. Iranian military influence has spurred them to push past intra-

Arab rivalries and build up a regional security architecture—in the process, modernizing their militaries, particularly in the air and air defense sectors.

Kuwait, the UAE, and Qatar have proved reliable partners in supporting air operations, serving as hosts for visiting long-range aircraft, including airlifters and intelligence, surveillance, and reconnaissance assets.

In the UAE, whose own military fields some of the most modernized forces in the region, US Air Force assets regularly rotate in and out of country—particularly through the Gulf Air Warfare Center at Al Dhafra Air Base, which serves as a regional training center for US, GCC, and allied air forces.

Al Dhafra is a frequent stop for USAF's most capable fighter, the F-22. Since last spring, the fighter's synthetic aperture radar, long-range sensors, and strike capabilities have allowed pilots to practice and train in a variety of scenarios and provide armed ISR overwatch on activities in the Strait of Hormuz.

Capt. Matthew Howard guides an F-22 to the runway for takeoff at Al Dhafra AB, United Arab Emirates, during 2009 training. Al Dhafra serves as a regional training center for US, Gulf Cooperation Council states, and allied air forces.



In August, Pacific Air Forces-owned F-22s returned from a deployment to Al Dhafra, where they practiced armed over-watch sorties and coordination with US assets in the region, particularly maritime security drills.

The F-22s that visit the Gulf region are a different capability from the fourth generation fighters and close air support assets that rotated in and out of Iraq from 2003 to 2010. US officials have made no secret about their purpose: assurance and deterrence. F-22s and other air defense and naval assets are often positioned in the region to “deter Iranian aggression and respond to other contingencies,” Secretary of Defense Chuck Hagel said in remarks to the Washington Institute for Near East Policy in May.

Iranian and US aircraft have had several near-incidents in the airspace over the Gulf in the last year. Last November, Iranian Su-25 fighters opened fire on unmanned aircraft during a sortie near the coast of Iran—but the aircraft returned unharmed. On March 12, an Iranian F-4 Phantom closed in on a USAF MQ-1 Predator and its fighter escort as it conducted a routine ISR sortie over international waters in the Gulf. The closest the F-4 got to the MQ-1 was 16 miles, according to DOD officials who issued a brief statement on the incident in March.

In his speech at the Air Force Association’s Air & Space Conference this September, Chief of Staff Gen. Mark A. Welsh III gave new details about the incident—confirming F-22s were conducting air escort sorties for Predator and Reaper flights in the region. Welsh described how Lt. Col. Kevin Sutterfield, a USAF Reservist and Raptor pilot with the 477th Fighter Group, flew under the Iranian F-4 and checked out his weapons load—without them knowing he was there. “[He] then pulled up on their left wing and then called them and said, ‘You really ought to go home.’” Welsh said. The F-4 broke off pursuit of the Predator.

Meanwhile, Southwest Asia’s 379th Air Expeditionary Wing at Al Udeid AB, Qatar, is the largest expeditionary wing in USAF, with assets ranging from KC-135s to the E-8 JSTARS and B-1Bs supporting operations in Afghanistan.

A maintainer from the UAE communicates via hand signals with a UAE F-16 pilot after a 2011 Red Flag mission in Nevada. The UAE is purchasing 25 more of the most modern F-16s available.



USAF photo by SSgt. Benjamin Wilson



A Saudi crew chief waits to marshal a Saudi Royal Air Force F-15 before a training mission during Red Flag 2012 at Nellis AFB, Nev. Saudi Arabia is both a US ally and a member of the GCC.

Welsh visited airmen at expeditionary wings in the Gulf January and February as well.

No Stability Renaissance

Hagel’s first trip to the Middle East brought him to Abu Dhabi in April, where he held meetings with Gen. Sheikh Mohammed bin Zayed Al Nahyan—crown prince of Abu Dhabi and dep supreme commander of the UAE armed forces—as well as UAE Foreign Minister Sheikh Abdullah bin Zayed Al Nahyan. In addition to talks about Iran’s nuclear program and the conflict in Syria, Hagel and senior officials discussed furthering defense and security ties, to include activities such as ballistic missile defense coordination.

During that visit, the UAE confirmed it would purchase additional 25 F-16 Block 60 aircraft—the most modern version of the fighter—and standoff weapons to increase the ability of the UAE Air Force to perform joint operations.

While no formal announcement was released by the Defense Security Cooperation Agency at the time, several reports indicate the weapons to be AGM-154 JSOW or AGM-158 JAS-38 standoff cruise missiles.

The modernization push in the Gulf comes as much of the world is cutting defense spending. Last year, GCC governments spent some \$74 billion on arms modernization, up nine percent from the previous year. According to Forecast International aerospace industry analysis firm, that figure is on track to reach \$86 billion by 2017. Despite long-standing grievances with foreign military sales licenses, the US is attempting to lower the barriers for sales of advanced defense materiel to GCC countries. Just the last year, Qatar, Kuwait, and the UAE have all invested in communications, radar, and support infrastructure for Pa-



USAF photo by S/A Brett Chastman

Infrastructure for Patriot missile systems—a response to Iran’s growing missile capabilities.

As US forces in CENTCOM step off a combat footing, Harrigian and other CENTCOM and AFCENT officials say there’s increasing emphasis on building a more stable and enduring military footprint around the Gulf, to include efforts at tour normalization.

At the 379th AEW, long a focal point for operations in Iraq and Afghanistan, family services are expanding. The wing is increasing accompanied tours for airmen at the base, aiming to have between 20 and 25 families on base by the beginning of Fiscal 2014—and eventually up to 60 of them permanently assigned.

The Middle East, however, is not about to have a renaissance anytime soon. Beydler points out that the political and social effects of the Arab Spring are still playing out—dramatically

Troops board a CV-22 Osprey during Exercise Eagle Resolve 2013, a multilateral training mission including GCC member nations, in Doha, Qatar.

in Syria and Egypt—and this has implications for US efforts to build regional stability.

Egypt’s volatility is certainly a contributing factor behind the US effort to build Iraq into a regional actor. While post-Saddam Iraq is no longer a threat to the GCC, the Office of Security Cooperation-Iraq, housed in the US Embassy in Baghdad, is helping the country gain both internal and external security and military capabilities, absent a US military presence.

“We want to give [the Iraqis] situations where we can facilitate training and opportunities that broaden the aperture, so we can support their internal infrastructure, but also integrate them into the larger GCC and other activities across the region,” Harrigian said.

Iraq is slated to begin receiving deliveries of F-16 aircraft in 2014, for example, and in August the US Defense Security Cooperation Agency announced the country had requested the sale of a new integrated air defense system—comprising Hawk missile batteries, radars, fire-control units, and other components—valued at about \$2.4 billion.

While some members of Congress have raised concerns about the effect of the Arab Spring on the strategic vulnerability of US bases in the Mideast—such as in Bahrain, host of the US 5th Fleet—Harrigian notes basic mil-to-mil exchanges are a big part of access discussions and must be considered in light of the allied perspective.

Basing and access are political, but it “is critically important that our staff and our people have relationships across the GCC, and in places like Jordan, so that we work through plans and work access issues which arise when we need to execute plans,” Harrigian said.

The US is also mindful that its own strategic goals must find common ground with those of its partners, whether with military sales or stationing troops or serving as a location for aircraft.

“In shaping those discussions, it is largely a matter of how [a particular country] sees us. We need to be invited, and without that it becomes problematic,” Harrigian said.

For GCC powers that were part of Operation Unified Protector, the lessons of Libya are being slowly internalized. As officials within the UAE have taken note of their contributions to the Libya operation, they see a sort of template for an Arab-led no-fly zone over Syria as a possible future option. With Jordan now on the cusp of entering the GCC, some of the member countries envision an organization more geared toward security.

“The GCC, plus Jordan, in terms of an organization like NATO, ... seems to be something in the works,” Karasik observed. “In an informal sense, it already seems to exist.” ■



USAF photo by MSgt. Kevin Nichols

MISSION TO

FRANCE'S intervention in Mali earlier this year—helping its former colony defend against Islamic extremists—didn't get the media attention lavished on the overthrow of Libyan dictator Muammar Qaddafi or the crisis in Syria. But the Mali mission has so far proved successful, and likely because of the substantial help France got from the US—largely through the Air Force.

France sent fighter aircraft and troops to Mali, along with various ground vehicles and all the related gear. Al-

though France has cargo aircraft—and even KC-135 strategic air refueling aircraft to move its equipment long distances—mobility support is exactly what France received from the US, along with intelligence, surveillance, and reconnaissance assistance.

“We can emphasize the very substantial and helpful support the USAF is providing to the French in Mali in terms of ISR, air-to-air refueling, and logistic transport assets,” said a French Embassy spokesman. “The French air force possesses its own assets in those

three strategic areas, but not as wide as the USAF does.”

The US assistance was nothing less than essential in allowing the operation to proceed, the French official said.

The C-17 was the main tool used by American forces early in the conflict to transport French troops and cargo to Mali, and US C-130s have been used to move people and equipment around the country throughout the last 10 months.

The intervention has been effective at restoring civilian government and limiting the political power of potent

The French got a big boost from USAF tankers and airlifters in this year's fight against Islamic extremists.



Two French Rafale fighters fade back after refueling from a USAF KC-135 over Mali.



MALI

By Gabe Starosta

terrorists in North Africa. In May, French Defense Minister Jean-Yves Le Drian visited Washington, D.C., and expressed how satisfied his department had been with the Pentagon's—and mainly the Air Force's—cooperation in the critical opening months of the campaign.

In the early, most dangerous days of Operation Serval, the time given by France to the military intervention against terrorists in Mali, French fighter

aircraft relied heavily on American KC-135 refueling tankers to extend their missions.

Justine Leger, a spokeswoman for the French government in Paris, explained that French fighters staged their missions from N'Djamena, the capital city of Chad, separated from Mali by Niger. Mali's large size (about twice the size of Texas) made aerial tanking a necessity.

"The commitment of US tankers [contributed to] French combat aircraft capacity to perform the two hours of flight from N'Djamena to Mali,

achieve their missions, and fly back to N'Djamena," Leger said. "Many of those missions needed not less than three or four in-flight refuelings in order to get a significant time over the engagement area. In that sense, the US assistance has been very helpful."

She said the French engaged around half their own refueling fleet in the operation and that in the first six weeks of Serval, American C-17s flew 120 sorties transporting troops and equipment into North Africa in addition to the Air Force's tanking mission.



USAF photo by 1st Lt. Christopher Meznard



USAF photo by Sgt. Christopher Meunier



A1C Anthony Ellsworth extends the boom and drogue on a KC-135 as French fighters position for a refill.

The Air Force had three contingency response groups of the 621st Contingency Response Wing at JB McGuire-Dix-Lakehurst, N.J., on call for just this sort of overseas pop-up situation.

A Dozen Vehicles Every Hour

On Jan. 14, Col. Kevin Oliver and his roughly 100 people were preparing to rotate off alert status and hand the on-call duties to another CRG. Four days later, however, Oliver was in the south of France and, shortly after that, in Mali setting up the support elements of US assistance to France.

On receiving a formal request for help from the French government, USAF alerted the three CRGs. Their most basic mission—among a vast portfolio of responsibilities—is to open and set up airfields when new operations begin. A portion of Oliver’s 818th CRG deployed to an air base in Istres, France, on the country’s south coast, on Jan. 18. The entire group numbers about 175 people, with 100 on alert at a time.

The team spent four days mission planning and preparing to depart, but did so with only a vague idea of what tasks the Air Force would be asked to perform on their arrival, Oliver said.

“When we went out the door, we weren’t sure where we were going to go or what the requirements were going

to be,” he said. “In our mission planning phase, we looked at the various different airfields we could potentially end up going into in Africa to support the French.”

Oliver, now a division chief at the service’s air and space operations center (AOC) in Hawaii, said the Istres airfield was in extremely good condition and that American forces had operated out of that location in the past. His 12-man team’s jobs included confirming that the airfield could handle the weight and dimensions of C-17 airlifters; working out an aircraft parking arrangement with France to avoid bottlenecks; installing basic aircraft scheduling capabilities; setting up living quarters for themselves, maintainers, and flight crews; and establishing work space for aircraft maintainers and flight crews alike.

Crucially, the 818th was responsible for working with the French army to determine what equipment it needed moved into Mali and when. That process began with a large quantity of military vehicles.

“Every hour, another dozen vehicles would show up,” Oliver said. “Just looking at the marshaling yard there, they had enough vehicles to probably sustain an airlift flow for a month, easy. The challenge was that these vehicles needed to be certified to fly on US

aircraft, and that was part of what our team did.”

After clearing the vehicles for transport aboard C-17s, the Air Force promptly started moving them to Bamako, Mali’s capital. The airfield there was also in good condition, and France had already opened it for normal operations, making USAF’s job easier.

The team spent five days in Bamako. Their greatest contribution was help to work out efficient aircraft parking and scheduling arrangements. USAF also sent one representative to a French transport control center in Paris to set up as the aircraft scheduler for all air traffic in and out of Bamako.

That involved planning for arrival and departure of American and French aircraft, as well as the 130s operated by African nations and Russian-type airplanes flown by other parties contributing to French military intervention, including so-called “charter” aircraft larger than the C-17.

By the end of the 818th’s 30-day deployment, US aircraft had flown 190 sorties, transported 1,480 French troops, and moved 2,400 tons—almost five million pounds—of cargo and equipment into Mali.

That initial support was sufficient and helpful to the French, so the Air Force decided not to deploy either of the other



USAF photo by MSgt. Brian Bahret

SAF SSgt. Merrill Slepica secures Liberian truck in the cargo bay of a SAF C-17.



USAF photo by MSgt. Brian Bahret

SrA. Christopher Tolleson greets Liberian soldiers as they board a USAF C-17 on their way to Bamako, Mali.

zo American CRGs that had been activated in January.

“That really closed out what the French requirements were, so there was no need for a follow-on group to come in behind,” Oliver said.

The 818th, encompassing specialists in communications, airfield operations, and security forces, also included two civil engineers with an unusual connection to the Mali operation. The engineers were part of a squadron within Oliver’s group tasked with building up the capacity of African partner nations’ air operations. Coincidentally, the two airmen had recently been in Mali, giving them points of contact, a general familiarity with the mission, and an increased level of expertise to share with the group.

Following an intense first month transporting troops and supplies from France to Mali, the operational tempo of intratheater airlift slowed down as expected, and the American support role shifted from setting up major airfield procedures to moving people and equipment within Mali.

Those taskings are controlled from Ramstein Air Base in Germany by the 3rd Air and Space Operations Center, which manages aircraft sorties in both Europe and Africa.

Col. Lloyd Malone, deputy commander for manpower and resources

at the AOC, said the Mali mission has relied heavily on a fleet of C-130 airlifters assigned to the region.

“On a given day, there are approximately six C-130s that are available to support both [US] Africa Command [AFRICOM] and EUCOM [US European Command], ... and they are the ones that are presently working to support French requirements in Mali,” he said.

Learning French

As the French or partner nations develop a need “to move troops or perhaps baggage, ... those aircraft are being tasked to support them, they are building the missions, obtaining the diplomatic clearances, scheduling the aircraft to support those requirements,” Malone said.

France begins by defining its own requirements, then passing them to US Army Africa, to be validated by AFRICOM. The geographic combatant command then assigns appropriate missions to the AOC at Ramstein. The 603rd follows through and executes them.

Becoming familiar with how the French do business has been one of the biggest challenges—but also among the best learning experiences—of this military operation, Malone said. France’s methods and time lines for setting

military requirements differ somewhat from established American protocols, forcing both sides to adapt, but there has been virtually no language barrier between the allied airmen.

“Really learning how the French develop requirements, their time lines, and how to integrate that into our process, that is an ongoing issue,” he said. “It’s not something that I can necessarily tell you, ‘It’s done, here’s the book, we’ve written it.’ But that is an ongoing issue in how we develop our capacity to support our partners like the French.”

It’s not commonly known, but American airmen are still involved in Mali, primarily providing intratheater airlift using C-130 aircraft. The Pentagon initially agreed to help the French military through the end of August, and a spokesman for the Office of the Secretary of Defense said the Pentagon was likely to agree to extend that assistance into the fall if officially asked to by France. No such request had been filed by Oct. 22, however.

As of Sept. 11, Air Force KC-135 Stratotankers off-loaded more than 14 million pounds of fuel for French operations in Mali, while airlift aircraft (C-130s and C-17s) moved or delivered more than 121 tons of cargo within the theater.



USAF photo by MSgt. Brian Bahret

Liberian soldiers provide security as a USAF C-17 arrives to take members of their service to Mali.

The service had also moved 334 passengers around Mali through early August.

The third major mission area where France needed assistance was in ISR, but Air Force officials at the Pentagon declined to discuss how the service met that request.

Said Malone, “The French are doing a wonderful job down there, and we’re just fulfilling whatever requirements they send to us and doing our best to make sure we’re good partners in their efforts to combat international terrorism.”

For France, the success of the intervention in Mali—but only with broad ISR, aerial refueling, and airlift support from the United States—has reinforced plans to expand its own aircraft inventory. This includes a variety of airlift and refueling platforms but in small numbers.

A French Embassy representative in Washington said France’s Armée de l’Air has 24 light airlifters, 53 C-130-class aircraft for tactical transport, and five larger A-340s and A-310s that are more comparable to the C-17. By way of comparison, the Air Force flies more than 200 C-17s.

Among tanker aircraft, the French fleet is made up of 14 C-135 variants, whereas the Air Force operates more than 400 KC-10s and KC-135s.

To become less reliant on American mobility assets, France plans to buy 50 more tactical transport aircraft—the A400M—and 12 tanker aircraft. The

French government has not yet selected its preferred refueling platform and is referring to the acquisition of those dozen aircraft as MRTT, or multirole tanker transport. However, the seminal aircraft company, Airbus, has had success marketing its own MRTT, based on the A330 airliner, to a number of countries, such as Australia.

Prepare for the Unexpected

On the ISR side, recent reports indicate France has expressed an interest in purchasing its own fleet of MQ-1 Predator unmanned aerial vehicles.

For the Air Force, the Mali mission cemented some procedures and made others more efficient at the AOC in Germany, and Malone highlighted the value of this kind of operation in bringing allied countries such as the US and France closer together.

Stateside, the 621st has taken the lessons learned from the first 30 days in Istres and Bamako and updated its training and exercise plans, Oliver said. “The big thing [we learned] was to be prepared for nontraditional missions.”

“Typically the CRGs practice off-load, but as we found in Istres, the first mission when we got to Istres wasn’t really to off-load aircraft,” Oliver continued. “It was to prepare vehicles and equipment and passengers for on-loading and to move forward. That luckily is one of the things we had practiced in a previous exercise,

but it wasn’t something that was real, instituted in the CRG mentality.”

The wing has also incorporated lessons learned from the experience in Mali into a biannual exercise called Eagle Flag, and Oliver said USAF began compiling a formal document on contingency response tactics, techniques and procedures before his move to the PACAF theater.

That kind of manual on responding to crises could be particularly valuable to CRG personnel; most USAF officers do only one assignment in such a job and continuity and long-term experience among first responders is often lost.

In Mali, the political situation has stabilized. July elections were a sign of relative calm in the north African nation—albeit with a continuing French military presence there.

With Malian extremists now mostly subdued and a new, democratically elected President in place, France will dial down its military presence as the year goes on, said Paris-based spokesman Leger. A United Nations peacekeeping force, officially called the United Nations Multidimensional Integrated Stabilization Mission in Mali, will fill some of the gaps left by departing French troops.

Gabe Starosta is the managing editor of the defense newsletter “Inside the Force.” His most recent article for Air Force Magazine, “The F-35 Readies Takeoff,” appeared in the April issue.

by Robert S. Dudley

Worst Case Is Pretty Bad

"This is fundamentally *terra incognita*. I don't think we've seen electronic warfare on a scale that we'd see in a S-China confrontation. I doubt very much they are behind us when it comes to electronic warfare, [and] the Chinese are training every day on cyber: all those pings, all those attacks, all those attempts to penetrate. ... Where there has been a fundamental difference, and perhaps the Chinese are better than we are at this, is the Chinese seem to have kept cyber and electronic warfare as a single integrated thing. We are only now coming around to the idea that electronic warfare is linked to computer network operations. ... [The worst case] is that you thought your jammers, your sensors, everything was working great, and the next thing you know, missiles are penetrating [your defenses], planes are being shot out of the sky."—*Heritage Foundation research fellow Dean Cheng, describing a growing Chinese military challenge, interview with breakingdefense.com, Oct. 1.*

Really Good Use of Aircraft

"It was really amazing to see an F-16 go off with nobody in it. They're basically built to be shot down. It's full-scale, full-world, real-life, combat training—not on a simulator or anything else."—*Boeing's Michelle Shelhamer, on first test flight in Florida of a special robotic F-16 transformed into a drone, Agence France-Press, Sept. 25.*

Weather Forecast

There are many of us who believe that we will save money when we go to more resilient architecture because we can use smaller satellites. We could do a lot less weather [satellite] investment than we had."—*Douglas L. Loverro, deputy assistant defense secretary for force policy, referring to the likely shape of the next generation Air Force weather satellite, Reuters.com, Sept. 26.*

Coming Short

Why does the Pentagon order troops to return to combat zones again and again, with so little time to recover and recuperate between deployments? The answer is clear: because a relatively

small Army configured to fight short wars that it confidently expected to win has found itself fighting interminably long, unwinnable wars. Do the math. We've got too much war for too few warriors. Reducing the incidence of PTSD [post-traumatic stress disorder] and suicide among the soldiers they profess to care about will require two things of general officers. First, they will need to recover their ability to achieve prompt and conclusive victory in wars that absolutely must be fought. Second, they will need to do a better job of persuading their political masters to avoid needless wars that can't be won. ... In recent years, of course, senior military leaders have manifestly fallen short on both counts, with soldiers paying the price for their failure."—*Former Army Col. Andrew J. Bacevich Jr., author of Breach of Trust: How Americans Failed Their Soldiers and Their Country, Washington Post, Sept. 27.*

Get Rid of the Warlords

"The Pentagon should close all of the [regional combatant] commands. ... First, they are redundant. When there is actual fighting to do, we create new commands under three- or four-star officers to manage combat in theater. ... Second, the commands are essentially lobbies for US involvement in their regions. Their commanders turn threats to regional stability into threats to American security. ... Third, the commands drive up force requirements and thus costs. Like children drafting Christmas lists, they request troops, ships, and future capabilities that others buy. ... Closing down our commands ... would prevent the accumulation of cost-driving force 'requirements.' It would help US diplomats manage the cacophony of official American voices articulating our regional policy. It would limit our tendency to fear any region that lacks US meddling, and [it] might even encourage the idea that the world is not entirely ours to command."—*Benjamin H. Friedman, Cato Institute, and Harvey M. Sapolsky, MIT professor emeritus, Defense News, Sept. 30.*

Our Job: We Hold Your Coat

"It's not breaking news that the US provides the bulk of our [NATO] military

force, but American taxpayers would like to know that the Europeans are also contributing to our joint military effort in a way that ensures a fair burden sharing across the Atlantic. ... Though the United States can carry out major military operations on her own, still there is the need for ensuring political legitimacy through collective action. In that respect, the United States profits greatly from having a strong trans-Atlantic relationship with NATO."—*NATO Secretary-General Anders Fogh Rasmussen, interview with USA Today, Sept. 25.*

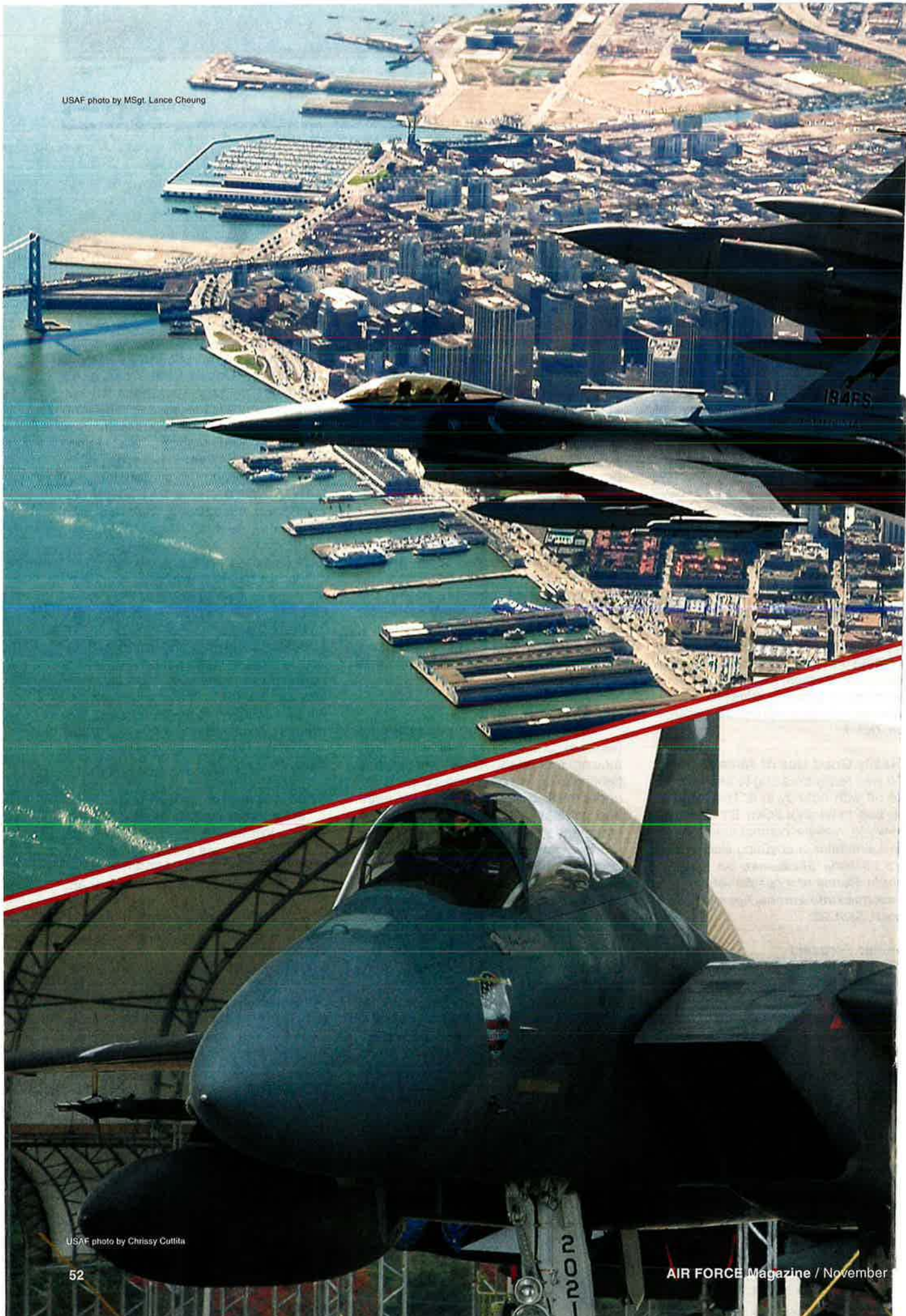
Self-Defense Is Hell

"Japan has the strongest navy and air force in Asia except for the United States. ... Japan, that's correct, absolutely. The most modern, the most effective. [They're] still restricted by Article 9 of the Constitution [forever renouncing war as a sovereign right] but you don't want to mess with them."—*Military analyst Larry M. Wortzel, address to the Institute of World Politics, quoted by www.breakingdefense.com, Sept. 26.*

Shootout at Generation Gap

"In congressional testimony, ... Adm. James Winnefeld Jr., vice chairman of the Joint Chiefs of Staff, noted that readiness 'has no constituency other than the young soldier, sailor, airman, or marine putting his or her life on the line for our nation's security interests.' Winnefeld's statement reveals that readiness does, indeed, have a constituency. The current force and those who lead it are strong and vocal proponents of preparedness for good reason: If readiness suffers, they are the ones who will bear the consequences. But senior leaders should instead be concerned that the future may not have a strong constituency. The next generation of service members—our children and grandchildren—have no say in the decisions made today, yet they are the ones who will live with the repercussions. Who will speak for their interests, and what type of military will they inherit?"—*Todd Harrison, Center for Strategic and Budgetary Assessments, op-ed in Foreign Affairs, Sept. 29.*

USAF photo by MSgt. Lance Cheung



USAF photo by Chrissy Cullita



Even after the US withdraws the last of its combat forces from Afghanistan a little more than a year from now, one major military effort undertaken in the wake of the 9/11 attacks will continue with no end point in sight: Operation Noble Eagle, the mission keeping America's skies safe from aerial attack.

Launched on Sept. 14, 2001, ONE has evolved from a series of ad-libbed defensive measures to a refined, relentlessly practiced, and—so far—100 percent effective enterprise. Noble Eagle ranges from national command and control efforts down to individual fighter and helicopter intercepts, aimed at ensuring that no unauthorized aircraft even gets close to—let alone threatens—national targets or heavily populated events.

Thousands of aircraft intruding in restricted airspace have been intercepted, challenged, and diverted. The mission has evolved and continues to do so, but like any other mission conducted by the US military, it's under scrutiny as sequester tightens the nation's purse strings.

The budget sequester, which went into effect on March 1, hasn't had "a day-to-day impact [on] Operation Noble Eagle," said Steven Armstrong, chief of North American air defense operations at NORAD, in an interview. The Air National Guard, carrying the bulk of the mission on behalf of NORAD and the US Air Force, had flexibility in how it allotted its flying hours during the first few months of sequestration, when dozens of Active Duty Air Force squadrons were grounded or limited to only the most basic proficiency flying.

However, with senior leaders "looking very seriously at mission, risk, and at dollars, I would certainly think" that changes to ONE, driven by budget, are "not off the table," said Armstrong, who has been involved with NORAD air security operations since before 9/11.

Even so, "it's an open-ended operation," Armstrong said. "It says that very specifically in the operation itself and in the execution order."

Though neither USAF nor NORAD will officially comment on ONE operational numbers, there are about 16 bases where aircraft sit alert for ONE intercepts. These sites include JB Elmendorf-Richardson, Alaska—whose F-22 fighters are the only Active Duty unit in ONE—and JB Pearl Harbor-Hickam, Hawaii, controlled by US Pacific Command rather than NORAD. Specific numbers of people dedicated to the mission are also not released.

Noble Eagle Flies On

By John A. Tirpak, Executive Editor

**The Iraq war is over.
Afghanistan is ending.
Operation Noble Eagle
must continue.**

Above left: Two F-16s begin a roll over San Francisco during an Operation Noble Eagle mission in 2004. Left: A crew chief marshals an F-15 during a 2008 Noble Eagle training exercise at Eglin AFB, Fla.



"On Day 1, we were making things up as we went along," said Brig. Gen. Marc H. Sasseville, commander of the D.C. ANG's 113th Wing at JB Andrews, Md. His Guard unit provides F-16s to protect some 34 miles of airspace around the National Capital Region (NCR) surrounding Washington, D.C. Sasseville, then a major, happened to be the flight lead for the first two-ship of F-16s launched from Andrews to respond to the 9/11 air attack on D.C. On that day, he and fellow Air Guard pilot 1st Lt. Heather Penney scrambled, expecting to intercept United Flight 93. United Flight 77 had already hit the Pentagon.

In the confusion of that morning, no one in the Federal Aviation Administration or the national military chain of command knew Flight 93 had already crashed in Shanksville, Pa., and that no more hijacked airliners were inbound to Washington.

The situation raised the uncomfortable question, though, about who could order a civilian airliner shot down if it posed a real threat. Ultimately, orders descended from then-Vice President Richard B. Cheney to fire if the situation presented itself, but the scenario was so novel and unexpected that it had scarcely been discussed and procedures didn't exist.



USAF photo by SSGT. Benito J. Davis III

In the days after 9/11, "we had some experts from 1st Air Force in the Northeast Air Defense Sector come down [to] help us with our procedures and definitions," Sasseville said. In the intervening years, those procedures have been refined, and constant exercises practice the system.

"The facilities have gotten better over time; the communications, redundancies—technology's obviously helped out a great deal," Sasseville reported. Now "we have an operation that is much more efficient than it ever has been. So it's really been a joy to watch and develop and get better ... almost every day, really," he said.

Various Stages of Reaction

The issue of who can order an airliner shot down is no longer ambiguous and no longer rests with the highest levels of government, Armstrong said.

"That has been codified to the nth degree," he asserted.

"We have what are called 'engagement authorities,'" he said, who are at regional air defense centers. "All the folks who are in the chain of command for that have been trained accordingly and [practice] accordingly, on a regular basis." Aircraft vectored to intercept an intruder perform as the "eyes and ears of those engagement authorities ... and draw him a picture of what they're seeing, so he can make a cogent decision on all the information he's been given."

Pilots who intercept intruder aircraft have no authority to fire unless ordered to do so or unless they themselves are under attack and must shoot in self-defense.

While Sasseville and Penney took off with mostly harmless practice ammo, interceptor F-16s today are armed with missiles and a full load of 20 mm cannons for any eventualities. Jets at alert bases are maintained in ready-to-go condition.

Armstrong said there are various stages of reaction to intruder aircraft, which are almost always small Cessna-like civil aviation airplanes that have wandered off course or failed to heed posted warnings. In the NCR, for example—the busiest in the nation because of the high-value targets in the area and the heavily congested airspace—calls come in from the Eastern Air Defense Sector, headquartered in Rome, N.Y.

"They'll look at a TOI—a track of interest—look at the heading, altitude, airspeed, etc., and figure out whether or not we need to respond to it," Armstrong explained. If the situation can't quickly be resolved over the radio with the target's pilot, fighters or—increasingly—Coast Guard HH-65 Dolphin helicopters can "go to 'bat stations.'" There, pilots will go out to their aircraft and listen to the radio to see if they're going to be elevated to runway alert or to a scramble ... status.

In the NCR, "they average almost two every day," he said. Nationwide, there are about 100 full-up scrambles per year, he stated.

The Coast Guard helicopters are better suited to intercept low and slow small civil aircraft because their speed is more compatible with those types. "The F-16 has a hard time slowing down to chase guys who are going 100 knots," Armstrong noted.

Lt. Col. Michael Birkeland has a green light for takeoff in an F-15 during an OBT training exercise in 2007. Birkeland was then the commander of the 125th FW, B-1, which is on continuous 24-hour alert status for ONE.

Vigilant Eagle: Cooperating With Russia on Airspace Control



USAF photo by TSgt Thomas J. Doscher

A Russian air force airborne warning and control aircraft taxis past the the Russian "track of interest" aircraft, an Il-62M, on the second day of Vigilant Eagle 2011.

When fighters are scrambled out of Alaska to intercept an aircraft, the intruder is usually a Russian Bear bomber on a less-than-friendly mission to test the North American Aerospace Defense Command system. But when it comes to possible terrorist-seized airliners, Russia and NORAD are getting well-practiced cooperation.

In late August, Russia, the US, and Canada concluded their fifth Vigilant Eagle exercise since 2003. The drill practiced procedures between Russia and NORAD to deal with an airliner hijacked in Russia and flown toward the United States, and vice versa.

Sometimes run as simply a command-post event, this exercise featured live-elements, including Russian Su-27 fighter and Canadian CF-18 Hornet interceptors, flying alongside aircraft

simulating a hijacked airplane, and a visual handoff between nations within shared airspace.

The new visual handoff element took place "without a hitch," said Maj. Gen. André Viens, the Canadian officer who is NORAD's director of operations.

In a press conference at the conclusion of the exercise, Viens said it was the first time such a handoff had happened. The drill was the payoff for more than a year of preparation, he reported.

The exercise series has "developed and refined tactics, techniques, and procedures to effectively notify, coordinate, and conduct positive handoff" of terrorist-hijacked aircraft, he said.

Outbound, the putative hijacked aircraft, standing in for a 757 airliner, was intercepted by the CF-18s near Denali National Park in Alaska and handed over

to the Flankers at the edge of American airspace. Although the CF-18s monitored the jet at a distance, the Flankers flew close formation with it all the way to a Russian Federation Air Force (RFAF) base in Anadyr, Russia.

Air Force E-3 AWACS and Russian A-50 airborne command post aircraft participated, and aerial refueling was also practiced. The process then was repeated in reverse, with the erstwhile terrorist-seized airplane originating in Russia.

A NORAD command post in Anchorage, Alaska, and a Russian site at Khabarovsk, located in that nation's Far East military district, were involved in coordinating the action.

Participants from both sides were at all locations, according to RFAF Maj. Gen. Dmitry V. Gomenkov. Speaking through an interpreter at the press conference, Gomenkov said all the exercise objectives were met, adding he hoped the next Vigilant Eagle exercise will permit "more interesting and complicated" scenarios.

Planning meetings start this month.

Gomenkov said Russia takes the threat of terrorist hijackings seriously. Answering a reporter's question, he said "at no time" was there any thought of canceling the exercise because of recent friction between Russia and the US about Syria or the Edward Snowden National Security Agency leaks affair.

Communication with the intruder is established either by radio and signals. Depending on the severity of the encroachment, the offender may be escorted to an airfield, required to land, interviewed by federal authorities who go out to meet the plane. Sometimes, a summons is issued.

Training for the Noble Eagle mission is different from what pilots get at their schoolhouse, Sasseville pointed out.

"We have a separate training syllabus" developed at the base walks the pilot through various scenarios, procedures, radios, and interaction with the FAA unique to the region. These drills are not practiced by Active Duty F-16 pilots, he said. The training is updated as procedures are refined.

In the 12 years of ONE, there have been no real-world potential hijack attacks, Armstrong said.

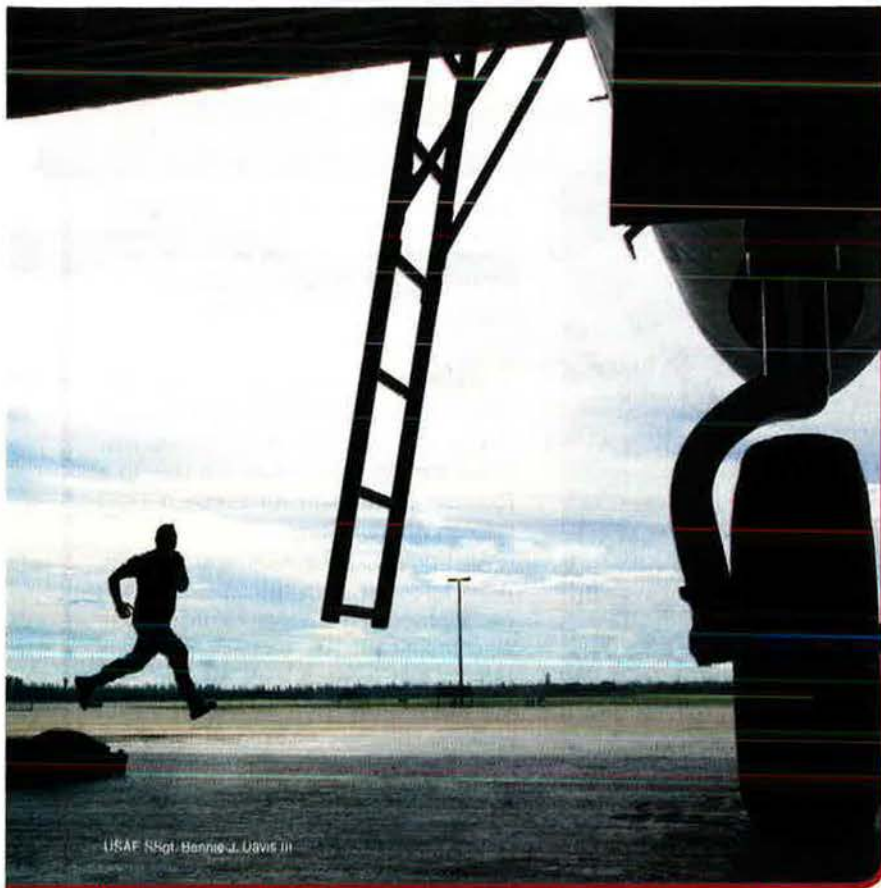
Restricted airspace is not always fixed. There are National Security Events, such as a presidential visit to an area—ramps up the level of alert and the radius of restricted airspace.

There are also separate events rated by a system called SEAR—a Special Events Assessment Rating—such as the Super Bowl, that may warrant similar restrictions.

The Noble Eagle mission is exercised routinely. In the busy capital area, there are frequent Falcon Virgo exercises. Armstrong called them "one of the best training events we do, because it is a live-fly event where we have real, no-kidding tracks of interest."

An aircraft flown by the Civil Air Patrol acts as a surrogate target aircraft and allows NORAD to "exercise our enterprise to make the tactical and operational-level decision, intercepts, and inspections, and then go through the process of assessing intent and doing the entire joint engagement sequence."

Sasseville said Falcon Virgo involves the entire chain of command, "all the way back up through the air defense sector to the ... Continental North America Region, up to NORAD. The FAA gets involved, too, and we've got the Coast Guard. ... It basically tests the entire system."




USAF SSGT. Hennie J. Davis III

Crew chief SSGT. Thomas Fitzgerald sprints to his F-15 after an alert alarm at Homestead ARB, Fla., in 2007.

The exercises typically are flown late at night to avoid disrupting traffic at the three nearby national airports, he said. “The skies are clearer and we have a little more freedom to maneuver.”

A similar exercise, Fertile Keynote, also uses CAP light aircraft and F-16s.

 [For more on Fertile Keynote, visit www.airforcemug.com, search “Capital Defenders.”]

Though most of the Noble Eagle alert sites are on the coastal areas of the US, some are in the interior, Armstrong said, to guard against homegrown air attacks.

It's Personal

However, the ONE air mission is not only oriented toward a terrorist threat. The Air Force continues to monitor the skies and perform intercepts when other countries—notably

Russia—fly military aircraft up to the edge of US airspace. These encounters typically happen in the Arctic region, and the Russian aircraft are usually met by F-22s from Elmendorf.

“That’s the air sovereignty piece,” Armstrong said. “We like to know who’s flying our airspace.”

The name of the mission shifted in recent years. It used to be air sovereignty alert, but without fanfare was changed to aerospace control alert (ACA) to better reflect the scope of the mission, now inclusive of both foreign and domestic intercepts alike.

Although it occasionally happens that NORAD is asked to assist the Department of Homeland Security with a drug enforcement situation involving aircraft that occurs rarely, Armstrong reported.

Sasseville said he thinks the ONE mission is important for the Air Guard. For the D.C. Air Guard, specifically, it’s also personal.

“We all live in the target area,” he observed. “Our families, our relatives, our extended families, our employers, ... so we’re very interested in not only defending the country and defending the National Capital Region and the seat of government, but our families.”

Both Armstrong and Sasseville said the number of alerts and scrambles is trending down. Although the D.C. ANG alone has scrambled more than 4,000 times, most of those were in the early years of the operation.

It isn’t clear why the number is declining; it may be that pilots are getting more cognizant of restricted airspace rules.

The search for better procedures, greater efficiency, and new technologies to ensure a no-fail outcome will go on, Sasseville said.

“As technology improves, we’d be looking for improved weapon systems [and] improved information transfer capabilities. I think the procedures are good as they exist right now. ... We’re as effective as we possibly could be, today, and we’re always looking to the future to hone our skills and [use] technology to our advantage.”

The adaptability of the enemy is one reason the ACA mission will probably continue, Sasseville said. “The enemy’s continuing to look for seams in our operation,” he commented. “Until it ceases—which I don’t predict [will be] anytime soon—it will continually evolve to match.”

An F-22 takes off from Langley AFB, Va., in 2006 on a Noble Eagle mission.



USAF photo by SSGT. Samuel Rogers

Rapid Raptors

NEW PACAF CONCEPT GETS F-22S TO THE FIGHT FAST.

By Marc V. Schanz, Senior Editor

F-22 officers at JB Elmendorf-Richardson, Alaska, have devised an operations concept that allows for dispatching stealth fighters, along with a tailored support package, to forward operating locations where they will be ready for operations within 24 hours.

The idea, first developed by pilots and weapon officers, has opened up the operations aperture for one of the Air Force's most valued platforms—and gives the service new strategic flexibility and resilience.

According to officials at Pacific Air Forces and the 3rd Wing at Elmendorf, the initiative to enable Raptors to deploy in a smaller package, move quickly, and be combat ready in 24 hours has already paid dividends.

PACAF Commander Gen. Herbert J. Carlisle in a September interview said one of the area-denial strategies that potential adversaries have invested in greatly in the last decade is the ability to hold at risk US installations such as Kadena AB, Andersen AFB, Guam. Large volumes of short- to medium-range ballistic missiles complicate contingency planning, he noted.

"A potential adversary knows that one of the things about the F-22 is that we launch and recover from fixed bases, which are fairly easily targetable if you want to do something to them," Carlisle said. "The idea is you can move airplanes to forward operating locations and not leave them at a fixed location for a long period of time. There are a lot of airfields out there." The concept was briefed by members of Elmendorf's 525th Fighter Squadron to Air Force Chief of Staff Gen. Mark A. Mullen III during his visit to Alaska in August.

Until now, traditional F-22 deployments to large bases such as Kadena, Andersen, and Osan AB, South Korea, required a long tail of logistical support—everything from spare parts to

weapons to materials used to maintain the jet's stealthiness. This problem drove officers to look at and streamline the F-22's deployment model.

The result is the "rapid Raptor package," a tailored four-ship deployment of F-22s paired with specific materials, munitions, and key maintainers flying aboard an accompanying C-17.

The F-22 concept has been tested multiple times and featured in exercises. Indeed, this past summer, PACAF F-22s from Hawaii deployed to Wake Island, a small coral atoll some 2,300 miles west of JB Pearl Harbor-Hickam, Hawaii. For three days, a two-ship flight with 29 airmen showed that F-22s could stage off the island.

They "demonstrated that, if necessary, with little advance notice, we can rapidly deploy to Wake Island, which has the necessary infrastructure in place to support our aircraft and operations," said Lt. Col. Mark E. Ladtkow, commander of the Hawaii Air Guard's 199th Fighter Squadron.

The deployment concept is scalable, and it involves a smaller logistics footprint than a traditional theater security package deployment to fixed installations. "If you have the right capability on a C-17 ... and you have the F-22s, you can move them together, quickly," Carlisle said.

He said this is an element of "passive defense," just as important, if not more so, to operations in the Asia-Pacific region as hardening facilities to survive a barrage of ballistic missiles. Dispersing high-value assets such as the F-22 and keeping an enemy guessing about where they are—or where they could be heading—changes an adversary's strategic calculus.

"He may know [the Raptors] are there, but by the time he wants to do anything about it, you won't be there anymore," Carlisle said. ■

fly over Wake Island in the Pacific during a "rapid Raptor package" deployment in June.



USAF photo by MSgt. Connie Figg



The C-17 Reaches THE END OF THE LINE

After a 20-year production run, Boeing has delivered the Air Force's final Globemaster I

Boeing delivered the 223rd and final C-17 to the Air Force on Sept. 12, completing the service's order for the Globemaster III after a production run that lasted 20 years.

Since the first C-17 unit began mobility operations in January 1995, the aircraft has become the workhorse of the air mobility fleet, rapidly delivering people, supplies, and equipment around the globe while being widely praised for its versatility and reliability.

McDonnell Douglas won the C-X contract in August 1981. Based on the company's YC-15 concept demonstrator, the C-17 was judged to be low risk because it would be based on "proven" technologies.

But the project was hardly an engineering milk run. The C-17 was being asked to do things a giant airlifter had never done before, such as land on unimproved airstrips, land on short fields, taxi in a tight space, and even back up on a runway, all

while delivering superheavy, outsize cargo at strategic distances.

The C-17 had to overcome flight-control problems, wings that were unable to carry their designed maximum load, automation growing pains, and a crew size reduced to just two pilots and a loadmaster. There were also teething problems in using new computer-aided design methods.

The program's early years were troubled. Several generals and a host of company managers were fired during development and initial production.

The C-17 was threatened with cancellation, and Pentagon leaders delivered an ultimatum that if it couldn't be shaped up, some other transport aircraft—such as a cargo version of the Boeing 747—would be substituted.

Planned procurement numbers tell the tale. The C-17 program was originally to deliver 210 airplanes; that was reduced to 120, then 40, and as low as eight before

the program regained its footing. The figure began to rise—to 140, then 160, then 180—as deliveries and costs impeded. Congress ultimately boosted production to 223 aircraft, leaving a force of 222 (one was lost in an accident)—more than a dozen more than the original Congressional requirement.

It all came to a head in 1994, when the Air Force and McDonnell Douglas agreed on a get-well plan. Both the service and the company would pony up cash to correct C-17's deficiencies. Requirements were reset to more realistic standards, giving the aircraft more breathing room. Lawsuits on both sides were dropped.

Fairly quickly, the project turned around. The Air Force and corporate leaders met in a new spirit of cooperation and competition. Delays diminished; eventually, the aircraft came to be delivered ahead of schedule. Quality improved, and costs began to stabilize. What was once known as the "C-17



Far left: C-17 pilot Capt. Angela Hodgson performs a walk-around check before a mission in Southwest Asia. Left: The first C-17 flies in 1991. Below left: The first two production Globemaster III aircraft near completion at the McDonnell Douglas facility in Long Beach, Calif. After a troubled start, the C-17 program recovered to become an operational and acquisition success story.

plagued C-17” acquired a new reputation as an acquisition and operational success story.

“It performs tremendously. It has such a wide range of mission capabilities,” said Robert Steele, the Air Force’s C-17 deputy program manager.

Over its nearly two decades of service, the Air Force’s C-17 fleet has logged more than 2.6 million flight hours, according to Boeing. It acquired the C-17 program as part of its merger with McDonnell Douglas in 1997.

In addition to combat support activities, C-17s have provided humanitarian relief after every major natural disaster, said Nan Bouchard, Boeing’s C-17 program manager. The aircraft also perform missions such as transporting satellites to launch bases and hauling gear during presidential trips.

From Sept. 11, 2001, to Sept. 4, 2013, Air Force C-17s flew more than 550,000 missions—some two million

flying hours—carrying nearly six million passengers and four million tons of cargo, said an Air Mobility Command spokeswoman. Since 2006, C-17s have air-dropped more than 84,000 bundles and 132 million pounds of cargo.

Despite that pace, the C-17 has had the highest mission capable rate of any mobility platform year over year, said Steele. “We are at basically 84 percent-plus ... over the last six years.”

Today’s C-17 fleet averages about 10,000 flight hours per airframe, according to Air Force Materiel Command. The oldest production C-17, tail No. 91192, has nearly 20,000 flight hours. That aircraft arrived at Charleston AFB, S.C., in June 1993. It became part of the 17th Airlift Squadron, the first C-17 combat-ready unit.

The airframes are holding up “very well,” despite the fact that the Air Force uses them “extensively and in pretty difficult environments,” Steele said. “We have not

seen any significant issues, ... just normal wear and tear.”

While the Air Force is doing a number of studies and analyses on the airframes, there are no service life extension initiatives underway right now, he noted.

The C-17 remains the backbone of US airlift capability and “the premier airlifter of the world,” according to Col. David Morgan, chief of the C-17 combined program office. It is a “very dependable, very reliable airframe,” he said.

Each time the C-17 got within a couple of years of reaching its planned last USAF delivery, Congress directed that more be bought. These extensions also helped accommodate international buyers. Six countries—Australia, Britain, Canada, India, Qatar, and the United Arab Emirates—now operate C-17s, and a consortium of 13 European countries shares three aircraft. Boeing reports more international orders are in the works.

The Air Force is now focused on standardizing C-17s to a common configuration, giving each one extended fuel tanks and other enhancements developed in later production.

Maj. Gen. Timothy M. Zadalis, commander of the 618th Air and Space Operations Center at Scott AFB, Ill., said the Air Force would face “a much greater challenge” in providing global reach in support of national objectives without the C-17 fleet and its aircrews and maintainers. The center coordinates the activities of the Air Force’s strategic airlifters and tankers.

“The C-17 offers incredible versatility to satisfy airlift, airdrop, and aeromedical evacuation mission sets into a variety of operating environments, from well-established airfields to austere semiprepared landing surfaces,” he said in a written statement. The aircraft, “along with the team of mobility enterprise airmen around the world, allows us to answer the call, so others may prevail.”

The C-17 is expected to serve USAF well into the 2050s. ■

Executive Editor Michael C. Sirak, Executive Editor John A. Tirpak, and Associate Editor Merri M. Shaffer contributed to this report.

demand, cranking out newer, more advanced equipment and technology for them.

But as the Afghan war grinds to a close, JTAC and TACP teams have seen their personnel and resources slowly draw down.

Jenn returned to Salerno in 2013 as the noncommissioned officer-in-charge for teams in Loya Paktia and now has 12 TACPs and JTACs to coordinate fixed wing CAS for all three of his provinces. Air Force TACP and JTAC forces in Regional Command-East, Loya Paktia's region, have been "stripped thin" as operations evolve and as America winds down its involvement, said Jenn.

More than half the 66,000 American troops in Afghanistan are scheduled to begin rotating back to the US this spring, in preparation for the White House's 2014 deadline to have combatants out of the country.

After next April's Afghan presidential elections, the remaining 32,000 US forces will begin their final draw-down, officially ending full-time combat operations for the US in Afghanistan. As part of that strategy, Afghan National Security Forces were officially given the lead from American and NATO forces for the country's security and combat operations during a ceremony at Bagram Airfield this past June.

As a result, the current mission for Jenn's JTAC and TACP units in Khost has consisted mostly of armed overwatch of joint, Afghan-led combat operations. "The bulk of the

missions have been like that" with the Afghan National Army "mixing [CAS] in," according to Jenn.

Evidence of the drop-off in US-led CAS operations is laid out in the combat airpower statistics for Afghanistan operations, issued in August by Air Forces Central Command.

American warplanes put iron on target in Afghanistan more than 2,000 times through August 2013. Even if American forces maintain that pace throughout the end of the year, that number will pale in comparison to the more than 4,000 times US aircraft dropped ordnance in the country in 2012.

Even the 2012 figure is dwarfed by the nearly 5,000 times American aircraft dropped weapons in Afghanistan the year before.

"I definitely don't get to control as much as I used to," said SSgt. Daryl Cooper, a five-year veteran of the JTAC and TACP community, in an interview at Combat Outpost Wilderness in Paktia province. As the JTAC for Gunfighter Company, 1st Battalion, 506th Infantry Regiment at COP Wilderness, Cooper served three previous combat tours in eastern Afghanistan, including one in Kunar province in 2011—during the most violent days of the war.

A COIN War

In June, Cooper called in four joint direct attack munitions on a suspected Taliban safe house near the Khost-Gardez Pass close to COP Wilderness. The strike came after an Army



mortar team from Gunfighter Company killed four militants who had just fired their mortars into the outpost.

While more Taliban fighters came to retrieve their dead in pickup trucks, US forces tracked the convoy back to the safe house in a nearby village. After establishing positive identification, Cooper called in F-16s to drop weapons. More than a dozen suspected Taliban fighters were killed in the strike.

Eight years ago, that strike would have been a run-of-the-mill call for Cooper and other JTACs and TACPs, but under current rules of engagement for air strikes, it became a rare opportunity for him to ply his trade.

There is tension between the JTAC mission and the evolution of the Afghan war. Air strikes have long been a source of friction between US and allied commanders and their counterparts in the Afghan government.

Afghan officials in Kabul, led by President Hamid Karzai, have long argued American airpower has killed scores of civilians alongside Taliban fighters. In February, Karzai banned Afghan forces from calling in allied air support after 10 Afghan civilians died when NATO warplanes carried out a strike on three insurgent commanders in Kunar province.

This led top American and NATO commanders to place severe restraints on when, where, and how coalition fighters and bombers can drop their ordnance.

The restrictions, according to Jenn, are a clear example of how top US and coalition leaders are more concerned

about the public perception of Afghans than the safety of American and NATO forces in the field. While Jenn was adamant that one errant bomb could in fact swing a pro-US district or province to the Taliban, he said there also are “hundreds of bad guys who should be dead” and are not—due to the stringent rules of engagement.

Waging war in an area as violent as the Khost-Gardez Pass with extreme sensitivity to civilian casualties and collateral damage, has had an effect on JTAC and TACP operations, according to Cooper.

Afghan insurgents rely on shoot-and-scoot tactics, preferring quick-hit ambushes and mortar attacks. This requires battlefield airmen like Cooper to react quickly to identify the target and deliver ordnance.

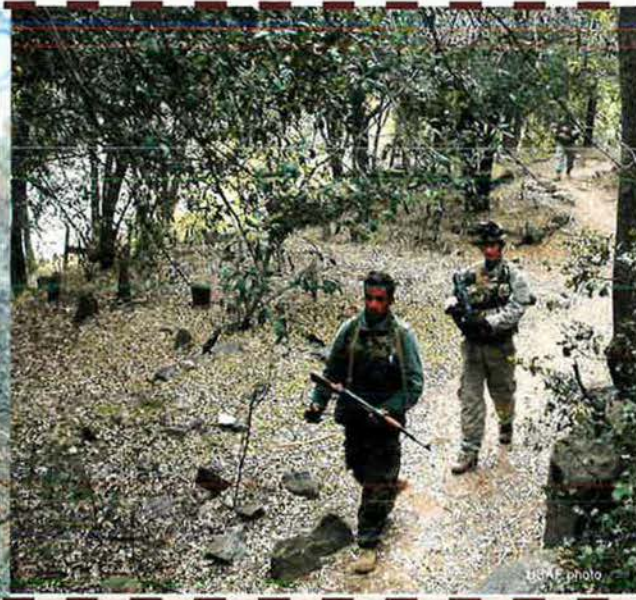
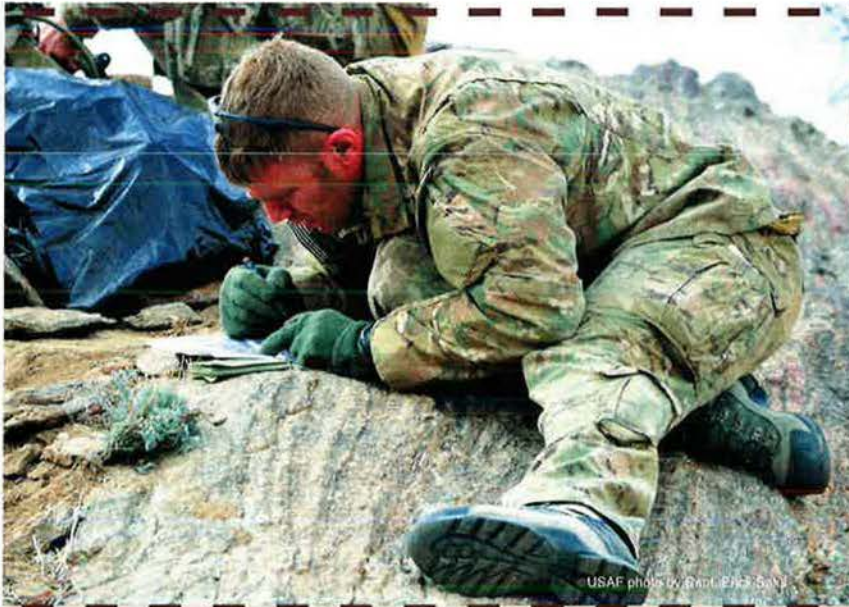
Afghan insurgents continue to adapt their tactics. By launching mortar attacks or ambushes from heavily populated areas or distributing propaganda in the aftermath of an air strike, Taliban fighters try to generate and exploit outrage.

Cooper said the tension between targeting the enemy and making sure civilians are safe always exists in combat. “It’s nerve-wracking” to call in bombs on target, knowing how

Below left: An Army OH-58 Kiowa crew communicates with Galindo to provide cover for soldiers on a foot patrol in Afghanistan. Below: Army 1st Lt. Andrew Adams and JTAC SSgt. Joshua Dickey use night vision goggles to scan a battlefield in Afghanistan for threats.



USAF photo by SSGT David Salanitr



that mission could be exploited to the benefit of the enemy in a COIN-type war, Cooper said.

Sherwood, however, said JTACs and TACPs train for everything from a permissive battlefield such as Afghanistan to an actively denied airspace like Iraq in the early stages of Operation Iraqi Freedom and, more recently, the Libya air campaign. Seeing and knowing the ramifications for dropping ordnance in a COIN war has caused terminal attack controllers “to take that extra five minutes” to assess a target before dropping bombs.

The battlefield experiences gained by airmen during the course of the Afghan war have “built a better generation of JTACs down the road,” Sherwood added.

One proposal to eliminate the enemy’s propaganda efforts is to create an Afghan version of the service’s JTAC and TACP corps. By having Afghans call in CAS, the Taliban narrative of Americans killing civilians could be blunted.

Today, JTAC and TACP teams already are using intelligence gleaned from Afghan forces to call in air strikes, said Jenn.

Still, Air Force personnel employ numerous checks on JTACs calling in weapons, even if it is based on Afghan targeting, he said. “We won’t employ [ordnance] on what they tell us,” he said. “We can’t [just] take their word for it.”

The Afghan Piece

Afghan forces are nowhere near being able to stand up their own JTAC or TACP units. According to the Air Force controllers on the ground in eastern Afghanistan, they won’t be anytime soon.

Jenn was skeptical about whether Afghans will be able to carry out the air control mission once US and coalition forces leave the country by the end of 2014.

Building a JTAC is not easy. On average, it takes two to three years to turn out a competent Air Force TACP or JTAC. The service’s JTAC schoolhouse is at Nellis AFB, Nev. Processing “every piece of information [it takes] to [piece together] this puzzle ... and figure out what it is” before you drop bombs is staggering, Jenn said.

With a country having one of the lowest literacy rates in the world, getting an Afghan soldier to understand the nuances involved in the JTAC mission would be akin to “asking an illiterate man to read you the headlines in the newspaper.” Afghans are learning how to call in heavy

Above left: TSgt. Jonathan Oliver, a JTAC, reviews operation plans and maps on a mountaintop in Afghanistan. Above: A1C Adam Green patrols with an Afghan National Army soldier.

artillery and mortars during indirect fire missions, but as far as fixed wing CAS operations, “we are a long way from that,” Jenn said.

Even if US trainers could find a handful of Afghan troops that could take on the complexity of the JTAC or TACP mission, the Afghans don’t have nearly the resources on the ground or in the air, Jenn said. The current inventory of the nascent Afghan air force consists of Mi-17 helicopters, used primarily for troop transport and resupply missions. American air advisors plan to equip the AAF with Mi-24 attack helicopters in the near future to support ground operations.

However, there are no mid- or long-term plans to outfit the AAF with the necessary arsenal of fixed wing attack aircraft needed to employ the kind of air support JTACs and TACPs specialize in.

“We have the capabilities to get them to that point,” said Sherwood. “But I think it is a [big] leap.”

In addition, American commanders are still faced with the problem of how to make sure Afghan forces can keep fighting once US forces pull their air support.

US military leadership, including the top commander in Afghanistan, Marine Corps Gen. Joseph F. Dunford Jr., has repeatedly said the lack of air support tops the list of Afghan concerns for maintaining security in the country.

As the American withdrawal creeps forward, senior combat commanders in the country are aiming to keep some level of US airpower in the skies above Afghanistan up until the very end. “We have the CAS, and if all hell breaks loose we will employ it,” Jenn said.

But when asked how Afghan forces will fare once US airpower—and the JTACs who orchestrate it—go away completely, and they are forced into a straight-on fight with the Taliban, Jenn demurred.

“There is no good answer for that,” he said. ■

Carlo Muñoz is a defense and national security correspondent for The Hill newspaper in Washington, D.C. He has covered US military operations in Afghanistan, South America, Cuba, and the Asia-Pacific. This is his first article for Air Force Magazine.

Appointment at Gettysburg

It was 150 years ago this month that Abraham Lincoln came to Gettysburg, Pa., to make a few "dedicatory remarks" at Soldiers' National Cemetery. The President was set to be second banana; the "real" Gettysburg Address was supposed to be given by famed orator Edward Everett, a former Massachusetts senator and governor. Everett, who spoke first, went on for two hours, spinning tales of ancient heroes and battles. Then came Lincoln's elegant two-minute speech. The rest is history. The next day, a gracious Everett wrote to Lincoln, "I should be glad if I could flatter myself that I came as near to the central idea of the occasion, in two hours, as you did in two minutes." He didn't. Lincoln's entire speech is given here. We offer Everett's 13,000-word Gettysburg Address online.

Four score and seven years ago our fathers brought forth on this continent, a new nation, conceived in liberty, and dedicated to the proposition that all men are created equal.

Now we are engaged in a great civil war, testing whether that nation, or any nation so conceived and so dedicated, can long endure. We are met on a great battlefield of that war. We have come to dedicate a portion of that field, as a final resting place for those who here gave their lives that that nation might live. It is altogether fitting and proper that we should do this.

But, in a larger sense, we can not dedicate—we can not consecrate—we can not hallow—this ground. The brave men, living and dead, who struggled here, have consecrated it, far above our poor power to add or detract. The world will little note, nor long remember what we say here, but it can never forget what they did here. It is for us the living, rather, to be dedicated here to the unfinished work which they who fought here have thus far so nobly advanced. It is rather for us to be here dedicated to the great task remaining before us—that from these honored dead we take increased devotion to that cause for which they gave the last full measure of devotion—that we here highly resolve that these dead shall not have died in vain—that this nation, under God, shall have a new birth of freedom—and that government of the people, by the people, for the people, shall not perish from the earth.

The text given above is the so-called "Bliss Copy" of the Gettysburg Address, one of several versions that Lincoln wrote. This is the only one the President signed, and it is believed to be the final and "official" version.

"Gettysburg Address"

President Abraham Lincoln
Dedicatory Remarks at
Soldiers' National Cemetery
Gettysburg, Pa.
Nov. 19, 1863

Find the full text on
Air Force Magazine's website
www.airforcemag.com
"Keeper File"



Photo by Alexander Gardner, Library of Congress, via Wikipedia



Photo by Timothy O'Sullivan via Wikipedia

tor Bluebird label. "Tuxedo Junction" sold 115,000 copies in the first week of release.

The hits kept coming: "In the Mood," "A String of Pearls," "Little Brown Jug," "Chattanooga Choo Choo"—which sold a million copies—and "American Patrol." A poll found Miller's band the most popular in the nation, gathering almost twice as many votes as the Tommy Dorsey band, which finished second. There were more than 500 Glenn Miller fan clubs.

The AAF Band Forms Up

When World War II began, Miller was married and 38—too old to be drafted—but he felt a personal obliga-

tion to serve in the armed forces. "It is not enough for me to sit back and buy bonds," he said.

He first tried the Navy, which turned him down, declaring it had no need for his "particular qualifications." He had better luck with the Army, which offered him a direct commission as a captain. Soon after his induction on Oct. 7, 1942, an alert AAF officer discovered "Alton G. Miller" on an Army list, realized who he was, and made a routine request for his transfer to the Air Corps. It was approved without a hitch.

The AAF did not immediately have an appropriate way to use its prize catch. He led bands that played for parades, local dances, and concerts and was

named director of band training for the AAF Technical Training Command. It was not until March 1943 that he organized the group that would be popularly known as the AAF Training Command Orchestra. It was based at the AAF Technical School at Yale University, 80 miles from New York.

The AAF orchestra was larger than Miller's civilian band. It included string instruments and dozens of musicians drawn from elsewhere in the Army. Miller obtained three members of his own prewar band and his chief arranger, Pvt. Jerry Gray, who had composed "A String of Pearls." He also got Michael "Peanuts" Hucko, formerly with Benny Goodman but drafted into the infantry. Hucko became Miller's lead clarinet player. Among those rejected for the AAF band was a 19-year-old piano player named Henry Mancini, who went on to write such works as "Moon River" and the Pink Panther movie theme.

The new band achieved instant national acclaim, broadcasting weekly on CBS and transcribing programs for use by Armed Forces Radio and abroad by the Office of War Information. The band still played for parades, and Jerry Gray's arrangement of "The St. Louis Blues March" was heard frequently. *Time* magazine said that "old-time, long-haired US Army bandmasters had the horrors," but the troops loved it.

Miller wanted to go overseas and play for the forces at the front. He had not joined the Army to spend the war in Connecticut. The AAF was reluctant to let him go, partly because of the huge sums his Stateside appearances were raising for war bonds. However, the Al-



Photo via University of Colorado-Boulder Glenn Miller Archive, Alan Cassa, and Dennis Strangis



lied Expeditionary Forces were setting up a radio service in Europe—a project of Supreme Allied Commander Gen. Dwight D. Eisenhower—and the Miller band got orders to report to England in June 1944.

Broadcasting From Britain

The band arrived in Europe with two officers—Miller and his executive officer, Lt. Don W. Haynes—and 62 enlisted members. Of these, about 40 were musicians. The others were arrangers, producers, administrative personnel, and radio technicians.

The standard billing for the group was the “American Band of the AEF” but it was commonly called the Army Air Forces Band. The big orchestra spun off several smaller units. A dance band, a jazz group, and a string ensemble played separately.

Miller’s chain of command was to the AEF director of broadcasting. The band was based at Bedford, the wartime center for the British Broadcasting Corp., which managed the AEF radio network. For the first week, the programs were carried on the BBC Home Service as well as on the armed forces channels.

On July 14, the stuffed shirts at BBC called Miller in and told him there was a problem. Home Service listeners in fringe reception areas could not hear the softer passages in his music and thought BBC had gone off the air. Henceforth, Miller should keep the volume constant all through the broadcasts.

Miller was astounded. Contrasts and fading were part of the band’s style, well understood by the fans if not by the BBC. (Curiously overlooked by the BBC,

contrasts in volume are also common in classical music.) Miller retorted that he was there to play for the troops, not for confused civilians. The upshot was that the Home Service broadcasts were canceled. In later years, the BBC official who presented the demand to Miller said he did not remember anything about it.

The band was on the air 13 times a week, almost always in live broadcasts, which the BBC managers preferred for reasons of immediacy and topicality. Whenever the schedule permitted, Miller played concerts at camps, airfields, and hospitals, sometimes performing outside in the open. Bing Crosby and Dinah Shore were among the guest stars who appeared with him. Miller mostly confined his participation to conducting although he sometimes joined in with his trombone, especially on “In the Mood” or one of his other favorites.

“Next to a letter from home, Captain Miller, your organization is the greatest morale-builder in the ETO [European Theater of Operations],” wrote Lt. Gen. Jimmy Doolittle, commander of Eighth Air Force, after a concert at High Wycombe.

Miller was promoted to major in August 1944. As the allied forces moved inland from Normandy after D-Day, he clamored for relocation of the band to France, closer to the troops at the front. The BBC managers resisted, fearing

disruption of the radio broadcasts, which were enormously popular.

AEF finally authorized a six-week tour in Europe for the band on condition that in addition to their regular workload, the musicians record six weeks’ worth of backup programming before their departure. The tour would begin with a concert and a broadcast from Paris on Christmas Day.

The exec, Haynes, was supposed to go to Paris to make advance arrangements but Miller decided to go himself. He had an additional purpose: He wanted to meet with AEF officials and try to persuade them to move the band to the continent permanently.

Missing Over the Channel

As Miller chafed under the rain delay on Dec. 15, he and Haynes encountered an acquaintance, Lt. Col. Norman F. Baessell, who said he was going to Paris that day. Baessell was the executive officer for Eighth Air Force Service Command, which also was located at Bedford. A light aircraft, a UC-64A Noorduyn Norseman, was coming to pick him up at the RAF’s Twinwood Farm satellite airfield near Bedford. Miller was welcome to ride along.

The airplane was due in from Alconbury, England, where—unknown to Miller and the control tower at Twinwood—the pilot, Flight Officer John R.

Left top: The wildly popular Glenn Miller band gives a Christmas season performance at Café Rouge in the Hotel Pennsylvania, New York City, in 1941. Left: A prototype C-64, used for testing the aircraft type. C-64s were prone to wing icing, which may have contributed to the crash that killed Miller. Below: Air Force Association founding member and movie star Jimmy Stewart (c) played Miller in 1954’s “The Glenn Miller Story,” a movie based on the musician’s life. Barton MacLane (l) played Gen. Henry H. “Hap” Arnold and June Allyson (r) played Miller’s wife, Helen.



Photo via University of Colorado Boulder Glenn Miller Archives, Bill Cass, and Dennis Spragg



Left: The Army Air Forces Band recorded albums in addition to performing live. Above: The Glenn Miller exhibit at the National Museum of the US Air Force, Dayton, Ohio.

S. Morgan, had been denied clearance for a flight to Villacoublay in France. His clearance was for local flying only with his destination listed as Twinwood Farm.

The regular military shuttles, C-47 and C-54 passenger airplanes, were grounded for weather, although both Eighth Air Force and British Bomber Command launched major strategic missions from England against Germany that day.

The UC-64 arrived at Twinwood at 1:45 p.m. and was on the ground for only 10 minutes. The decision to go was apparently made by Baessell. The airplane was assigned as personal transport for his boss, a one-star general, so Baessell had considerable leverage. According to C. F. Alan Cass, curator of the Glenn Miller Archive at the University of Colorado, Morgan “had likely been bullied to fly” by Baessell and “left his engine idling so as not to have to log an arrival.”

Baessell and Miller climbed aboard. The control tower did not challenge Morgan’s clearance and he took off into the fog at 1:55 p.m. Air traffic control tracked the UC-64 to the English coastline. It did not reappear in the controlled airspace on the other side of the channel and did not respond to radio inquiries.

The band flew to Paris Dec. 18 and—having no reason to doubt that Miller had arrived earlier without incident—was surprised that he was not there to meet them. When the flight still had not turned up on Dec. 20, Eighth Air Force formally declared the flight missing. Miller’s wife, Helen, was notified in a personal telephone call from Gen.

Henry H. “Hap” Arnold, commander of the AAF. The public announcement was made Dec. 24.

Jerry Gray conducted the band in its live broadcast on Christmas Day. The band completed its European tour and continued its broadcasts and concerts until it was disestablished after the war.

Glenn Miller was awarded the Bronze Star, which was presented to his wife in February 1945. The medal was for his contributions to morale. The recommendation already was in the pipeline for approval when he died.

Theories and Strange Tales

All sorts of theories have emerged about what happened to Glenn Miller. Most of these stories can be summarily dismissed as nonsense—or worse.

In a self-published book in 2006, former British Pvt. Clarence B. Wolfe, 82, claimed that his anti-aircraft battery had shot down the Miller airplane near Folkestone on Sept. 9. He had no explanation for Miller’s numerous public appearances in the three months after that.

The most extreme tale was by Hunton Downs in *The Glenn Miller Conspiracy*, published in 2009. As Downs tells it, Miller was a special agent for Eisenhower and was affiliated with the Office of Strategic Services. He was supposedly carrying messages to German generals involved in a plot against Hitler when he was captured in France by Nazi agents, who tortured and killed him in an unsuccessful interrogation.

Another widely reported story gained some credibility despite some of its

weak spots: The UC-64 was blown out of the air accidentally by a British bomber crew. In 1984, Fred Shaw, a former navigator on an RAF Lancaster bomber, said his aircraft, returning from an aborted combat mission on Dec. 15, 1944, jettisoned incendiary bombs in a part of the English Channel designated for that purpose. He saw an airplane at lower level go down amid the bombs exploding below. Shaw said he did not connect it to Glenn Miller until years later. His account was confirmed by the pilot and the flight engineer.

Miller archive curator Cass regards this explanation as less probable than the finding of the official inquiry in 1945, which concluded that an uncontrolled crash into the channel was most likely caused by pilot disorientation. A contributing factor may have been carburetor or wing icing, to which the UC-64A was prone.

The Legend Continues

The Glenn Miller band was reconstituted several times, the first of them in 1946 with Tex Beneke as leader. He had a falling out with the Glenn Miller estate and another version of the band was organized by former Miller drummer Ray McKinley in 1956.

The legacy of Glenn Miller in the AAF is kept alive by the US Air Force Band, which created the Airmen of Note, a 19-member jazz ensemble, in 1950 to carry on the tradition. The group has appeared regularly ever since, performing in uniforms modeled on World War II pinks and greens.

Right: Miller sits in a jeep with drum and bass players of the AAF band in New Haven, Conn., in 1943. The "Jeep Band" was a component of Miller's orchestra. It performed with the marching unit for parades and other events. Below right: Announcer Paul Douglas (l) and W. Wallace Early, an RCA executive, present Miller with the first Gold Record in history for "Chattanooga Choo Choo" in 1942.

A movie, "The Glenn Miller Story," starring Jimmy Stewart and June Allyson as Glenn and Helen Miller, set off a revival of the music in 1954. The Airmen of Note performed as the AAF Band in the movie. Ironically, Henry Mancini, who had been rejected for the band in 1943, wrote the title theme and arranged the music for the film.

In 1994, the US Air Force Band recreated the full AAF orchestra, instrument for instrument, for a 50th anniversary commemoration. The nationwide tour included Carnegie Hall in New York and an appearance in Clarinda, Iowa, where Miller was born. The program for the tour consisted of selections Miller played at his wartime appearances.

The National Academy of Recording Arts and Sciences (home of the "Grammys") recognizes three Miller recordings in its Hall of Fame as having particular historic importance: "In the Mood," "Moonlight Serenade," and "Chattanooga Choo Choo."

A memorial to Miller was placed in Arlington National Cemetery in 1992. The control tower at Twinwood has been restored to its original condition. Glenn Miller fans from around the world visit when the tower and the small museum are open during the summer months.

The Glenn Miller exhibit at the National Museum of the US Air Force in Dayton, Ohio, displays Miller's trombone, his summer uniform, cap, and spare glasses, along with sheet music and a music stand used by the Miller band as well as photos, letters, and other artifacts.

In general, the big bands faded away after World War II, as public tastes in music changed. The last of the high-profile big bands was led by Lawrence Welk, who was a fixture on television until he retired in 1982.

The Glenn Miller Orchestra, however, is still touring and getting good reviews in 2013. ■

John T. Correll was editor in chief of Air Force Magazine for 18 years and is now a contributor. His most recent article, "The First Domino," appeared in the October issue.



Photo via University of Colorado-Boulder Glenn Miller Archive, Alan Cass, and Dennis Spragg.



Photo via University of Colorado-Boulder Glenn Miller Archive, Alan Cass, and Dennis Spragg.



The US Air Force Honor Guard, from JB Anacostia-Bolling, D.C., presents the colors at the Air Force Memorial during AFA's annual memorial service and wreath laying ceremony in September.



More than 6,000 attendees gathered for the 2013 AFA National Convention and the Air & Space Conference and Technology Exposition, dedicating time to better understand Air Force issues.

Top USAF leaders, such as Acting Secretary Eric Fanning, Chief of Staff Gen. Mark A. Welsh III, and CMSAF James A. Cody, took the stage at the Gaylord National Resort and Convention Center in National Harbor, Md., just outside Washington, D.C. Adm. James A. Winnefeld Jr., vice chairman of the Joint Chiefs of Staff, gave an A&SC keynote address. All speakers shared with audiences their present challenges as well as their visions for the Air Force's future.

The annual AFA National Convention began Saturday, Sept. 14, with two days of AFA business as part of the National Convention, followed by three days of conference activity, filled with 55 speaker sessions and 35,500 square feet of exhibit space displaying cutting-edge technology of the future. It culminated with the Air Force Anniversary Dinner on Wednesday, Sept. 18.

The conference commenced with welcoming remarks by Welsh, followed by an awards ceremony that highlighted 40 individuals and groups for their contributions to the aerospace community. Fanning, Welsh, and specific command leaders helped present citations of honor, in addition to Air Force crew and team awards, Air National Guard and Air Force Reserve awards, and civilian professional awards.

AFA formally honored the Air Force's 12 Outstanding Airmen of the Year with a ceremonial dinner following a reception sponsored by Northrop Grumman on Sept. 16. Cody congratulated the airmen during his keynote address at the dinner ceremony. SMSgt. Laura A. Callaway, one of the 2012 OAYs, acted as master of ceremonies, and Brig. Gen. Richard M. Erikson, mobilization assistant to the chief of chaplains, led the gathering in prayer. The US Air Force Band provided entertainment during the evening's festivities.

Thanks to financial support from Lockheed Martin, the 12 OAYs attended events in and around D.C. throughout the conference. The dozen met with their congressional representatives on Capitol Hill, took a guided D.C. tour, and visited the Pentagon.

The conference celebrated the achievements of airmen while acknowledging the many challenges the US defense complex is facing today. Throughout the event, participants heard from military leaders and national defense and policy experts on topics ranging from cyber, space, and intelligence, surveillance, and reconnaissance to nuclear and energy issues. The Four-Star Forum included 11 senior leaders discussing topical issues such as training, sequestration, and innovation. The Command Chief Master Sergeants Forum offered insight into what affects airmen, addressing areas such as professional development, readiness, resiliency, and force management.

Sessions covering events in the Middle East and the Asia-Pacific region also were on the agenda.

Fanning, joined on the main stage by Welsh, Cody, and AFA leaders, snipped the ceremonial red ribbon with oversized scissors—a sign of the official opening of the technology exposition—on Sept. 16. Ninety-one exhibitors showcased their products. Highlights included Lockheed Martin's two-stage hypersonic missile; Sikorsky's experimental X2 Technology Demonstrator; EADS' UH-72 Lakota light helicopter; and dogs with the Warrior Canine Connection, a program that provides therapy dogs to help vets with post-traumatic stress disorder.

As the event explored the future of airpower, it also celebrated Air Force heritage. A wreath laying ceremony took place on Sunday morning, Sept. 15, at the Air Force Memorial. "It is not length of life, but depth of life," said AFA Chairman of the Board George K. Muellner, quoting Ralph Waldo Emerson, as he honored the lives and contributions of AFA members and friends who have died in the last year. AFA National Chaplain retired Maj. Gen. William J. Dendinger provided the invocation and benediction for the somber event. A memorial tribute list of the deceased was read by Muellner with Scott P. Van Cleef, Vice Chairman of the Board for Field Operations, and Jerry E. White, Vice Chairman of the Board for Aerospace Education. Assistant Vice Chief of Staff Lt. Gen. Stephen L. Hoog, Cody, and Muellner laid a ceremonial wreath for the Air Force.

AFA's Air Force Anniversary Gala toasted the service's 66th anniversary

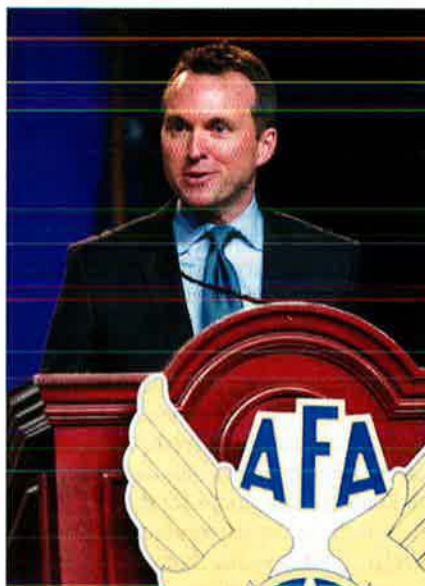
Photos by Chuck Fazio Photography



Chief of Staff Gen. Mark Welsh greets exhibitors on the technology exposition floor.



AFA Chairman of the Board George Muellner speaks to the audience at the National Convention. Muellner was re-elected for a second term.



Acting Secretary of the Air Force Eric Fanning spoke about how Air Force heritage informs the present and future force.



Col. Jodi Tooke (c), chief of cyber force development, greets another conference attendee during a break between sessions.

on Sept. 18. Guests enjoyed music by the Air Force Band's Silver Wings, and Patrick Coulter and Ken Goss served as masters of ceremonies. During the event, the following were saluted with national aerospace awards:

- Retired Gen. Douglas M. Fraser, former commander, US Southern Command, with the H. H. Arnold Award, recognizing the year's most significant contribution to national security by a member of the military;

- Michael B. Donley, former Air Force Secretary, with the W. Stuart Symington Award, recognizing the year's top contribution by a civilian in the field of national defense;

- Boeing's X-51A WaveRider team, with the John R. Alison Award for the most outstanding contribution by industrial leadership to national defense;

- The 93rd Air Refueling Squadron, with the David C. Schilling Award for the most outstanding contribution in the field of flight.

- The Civil Air Patrol's aerospace education programs were recognized with the AFA Chairman's Aerospace Education Award, for long-term commitment to aerospace education.

AFA Lifetime Achievement Awards were presented to: Retired Maj. Gen. Joe H. Engle; Rep. Sam Johnson (R-Tex.); and the Arlington Committee of the Air Force Officers' Wives' Club—the "Arlington Ladies"—a group that sends a member to the funerals of USAF personnel buried at Arlington National Cemetery.

In addition, the Air Force Association Cycling Classic and Northrop Grumman (in celebration of the 20th anniversary of the company's first B-2 delivery to the Air Force) received Chairman's Citations.

This year, AFA also hosted the annual Spouse and Family Forum, previously presented by the Air Force. The forum was held Sept. 16, with a full day of speakers, panels, and working discussions on issues facing military families and an emphasis on empowering spouses. Guest speakers included Air Force senior leader spouses Betty Welsh and Athena Cody as well as Fanning, General Welsh, Chief Cody, and Lt. Gen. Darrell D. Jones, USAF's deputy chief of staff for manpower, personnel, and services.

Awarding Education

Margaret Spigner, a teacher at West Ashley High School in Charleston, S.C., was honored as the 28th recipient of the AFA's National Aerospace Teacher of the Year Award. Spigner has been an educator for 31 years, having taught honors and college

prep marine science, biotechnology, investigative research, and other science-related courses. The award recognizes classroom teachers for their accomplishments and achievements in promoting and engaging today's youth in science, technology, engineering, and mathematics. As AFA's top educator, Spigner receives a \$3,000 cash award and plaque.

In addition, AFA awarded Joan Ozdogan, from Chantilly Academy in Chantilly, Va., and William Beckman, from Marine Military Academy Marine Corps Junior ROTC, Harlingen, Tex., as CyberPatriot Coaches of the Year. CyberPatriot, AFA's flagship STEM program, is the nation's largest high school cyber defense competition.

AFA Business

Forty-one state delegations with 205 authorized delegates attended the National Convention where they conducted AFA business, including elections and program management. In concert with AFA's mission to educate, advocate, and support, the delegates approved a Statement of Policy and Top Issues for 2014, a document that represents AFA's position on important matters pertaining to the Total Force, as well as key modernization and national security issues.

Delegates attended briefings on the Arnold Air Society and Silver Wings, the Wounded Airman Program, the Transition Program, CyberPatriot, and AFA's IT infrastructure. Retired Gen. John A. Shaud, former chief of staff, Supreme Headquarters Allied Powers Europe, was the guest speaker. He was AFA's Executive Director—the post now renamed President—from 1995 to 2002.

AFA Elections

In national officer elections, George K. Muellner, of Huntington Beach, Calif., was re-elected for a second term as Chairman of the Board. Scott P. Van Cleef, of Fincastle, Va., was re-elected for a second term as Vice Chairman of the Board for Field Operations. Jerry E. White, of Colorado Springs, Colo., was re-elected for a second term as Vice Chairman of the Board for Aerospace Education. Marvin L. Tooman, of West Des Moines, Iowa, was elected for a first term as National Secretary. Leonard R. Vernamonti, of Clinton, Miss., was re-elected for a fourth term as National Treasurer.

Other election results included national directors, a three-year term: David A. Dietsch, of Arlington, Tex., was elected as the Central Area Director. Peter E. Jones, of Potomac Falls, Va., and David B. Warner, of Colorado Springs, Colo., were elected as Directors at-Large.



Don Bolling (l), a business development representative with Lockheed Martin, speaks with airmen during the technology exposition.



*Author Jerry Yellin signs a copy of his book *The Blackened Canteen* for a tech expo attendee. Yellin was a fighter pilot in World War II.*



From l-r: Welsh, CMSAF James Cody, Gen. Edward Rice, Gen. Mike Hostage, Gen. Janet Wolfenbarger, and Gen. Herbert Carlisle were among the Air Force top leadership who spoke as part of the Four-Star Forum panel on Sept. 18.



Newly elected Region Presidents are: F. Gavin MacAloon, Central East; Wayne R. Kauffman, Far West; Ron Adams, New England; Maxine Rauch, Northeast; James M. Mungenast, South Central; Ross B. Lampert, Southwest; and Richard D. Baldwin, Texoma.

DOD and USAF Leaders

Many Air Force leaders participated in the conference, as presenters and session attendees, helping to create a venue for open dialogue on Air Force issues. Many senior Air Force leaders also took part in media-only sessions.

Betty Welsh, wife of the Air Force Chief of Staff, spoke at the Spouse and Family Forum.



David Deptula, dean of AFA's Mitchell Institute for Airpower Studies, participated in panels on long-range strike and on USAF's role in the joint arena.



AFA President Craig McKinley (l) thanks Adm. James Winnefeld, vice chairman of the Joint Chiefs of Staff, after Winnefeld's keynote address on the future of the joint force, Sept. 18.

Senior leadership speaking at the conference included Winnefeld, Fanning, Welsh, and Cody. Other high-level leaders included Gen. Herbert J. Carlisle, commander, Pacific Air Forces; Army Gen. Frank J. Grass, chief, National Guard Bureau; Gen. G. Michael Hostage III, commander, Air Combat Command; Gen. Edward A. Rice Jr., commander, Air Education and Training Command; Gen. Paul J. Selva, commander, Air Mobility 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. Michael J. Basla, chief of information dominance on the Air Staff; Lt. Gen. Christopher C. Bogdan, F-35 program executive officer; Lt. Gen. Stanley E. Clarke III, director, Air National Guard; Lt. Gen. Eric E. Fiel, commander, Air Force Special Operations Command; Lt. Gen. Stephen L. Hoog, assistant vice chief of staff; Lt. Gen. James Jackson, commander, Air Force Reserve Command; Lt. Gen. James M. Kowalski, commander, Air Force Global Strike Command; Lt. Gen. Robert P. Otto, deputy chief of staff, intelligence, surveillance, and reconnaissance; Maj. Gen. Sandra E. Finan, commander, Air Force Nuclear Weapons Center; Maj. Gen. Garrett Harencak, assistant chief of staff, strategic deterrence and nuclear integration; Maj. Gen. Steven L. Kwast, director, Air Force Quadrennial Defense Review; Maj. Gen. John F. Thompson, program executive officer for tankers; Maj. Gen. Brett T. Williams, director of operations, US Cyber Command; Brig. Gen. Albert M. Elton II, director, plans, programs, requirements, and assessments, AFSOC; and Brig. Gen. John E. Michel, commander, NATO Air Training Command-Afghanistan.

Acknowledgements

The Air Force Association thanks supporting partners Northrop Grumman, Lockheed Martin, BAE Systems, Boeing Co., Cubic Corp., EADS North America, L-3 Communications, Pratt and Whitney, SES World Skies, URS, UTC Aerospace Systems, Aurora Flight Sciences, Bombardier, IBM, TASC, ATK, Marsh, USAA, SpouseLink, and Sittercity for making this year's conference possible.

AFA National Convention Parliamentarian was David T. Buckwalter, AFA's former executive vice president. Inspectors of Elections were Buckwalter (chairman), George L. Castle, and David T. Hanson. Mark L. Tarpley chaired the Credentials Committee, serving with Geri Sutter, Karel J. Toohey, and Sharon White. ■

Air Force Association TOP ISSUES for 2014

The Air Force Association is especially proud of Air Force men and women—Active Duty, Guard, Reserve, 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.
- Encourage more federal involvement supporting veteran transition workshops and call for new incentives for employers to hire returning veterans and take advantage of the skills they possess.
- Oppose the raising of TRICARE fees at medical inflation rates, which exceed the annual cost of living adjustments to retired pay. TRICARE is an earned benefit that meets the unique demands of military service.

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.
- Urge the Administration and Congress to commit to keeping the F-35 program on track and, if possible, at a faster and more efficient production rate.

SECURING SPACE AND CYBERSPACE

- Recognize the Air Force must play a role in gaining and maintaining cyber superiority, by ensuring access and freedom of maneuver in cyberspace and by developing active defenses and offensive capabilities.
- Invest steadily and strategically in space capabilities and recognize the US must retain clear superiority in this critical mission area.

STRENGTHENING THE NUCLEAR MISSION

- Urge our national leaders to support programs and policies for future improvement of our nuclear deterrent.
- 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, and just as importantly, the nuclear support equipment and infrastructure.

INVESTING IN AIRPOWER

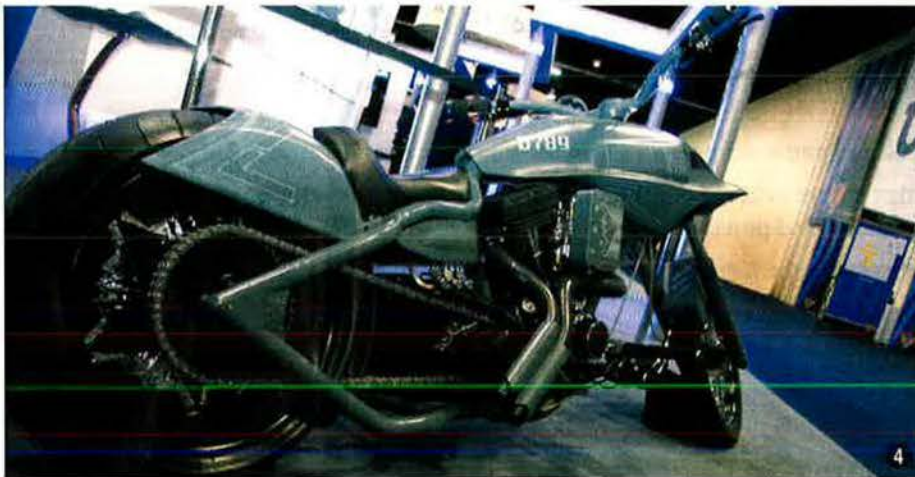
- Encourage Congress to end sequestration and strengthen USAF air, space, and cyber forces by investing adequate funds in training to avoid increasing mission risk.
- Support the KC-46A, C-17, and C-5M programs to provide systems that will ensure the Air Force's future ability to provide Global Vigilance, Global Reach, and Global Power. The KC-46A will revolutionize our nation's ability to employ tankers.
- Support all reasonable initiatives that will further capitalize on the caliber of this Total Force team.
- 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.





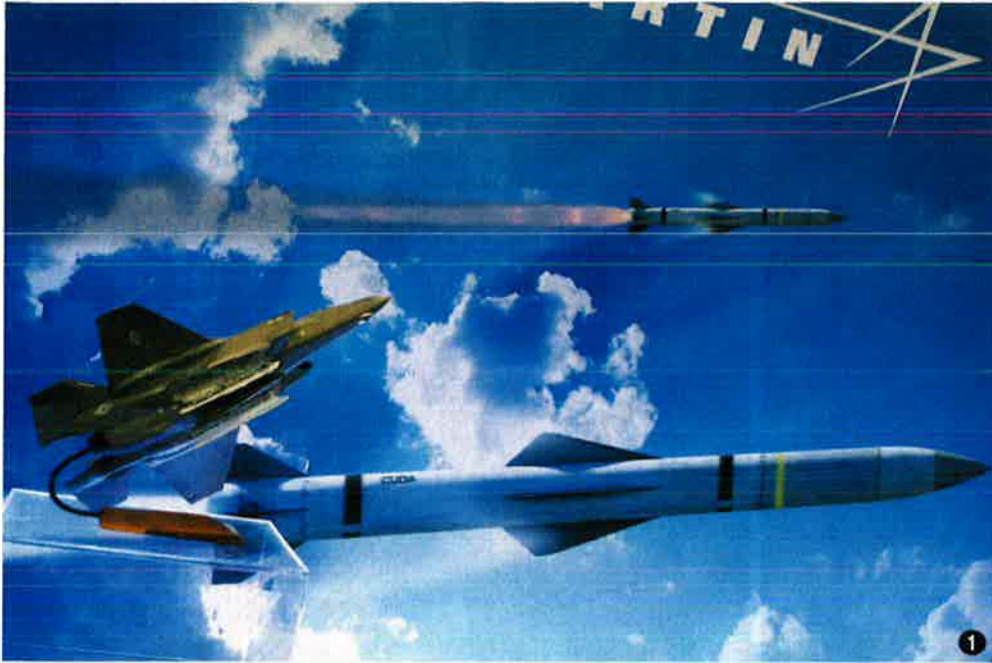
Aerospace technology of the highest order was on display at AFA's annual showcase.

Technology demonstrators, products aimed tightly at upcoming Air Force competitions, and eye-grabbing displays filled the hall at AFA's 2013 Technology Exposition. **1** Chief of Staff Gen. Mark A. Welsh III toured the exhibit hall after a speech in which he urged contractors to help USAF find affordable solutions to its most pressing problems. **2** Boeing presented a life-size display of an extended-range Small Diameter Bomb. The ability to carry more weapons on fewer airplanes could be a force multiplier. **3** and **4** Siemens and Northrop Grumman showed off specialty motorcycles built by Orange County Choppers. The white ride is an electric bike illustrating Siemens' "green" capabilities, while the gray machine commemorates the 20th anniversary of the B-2 bomber's first flight.





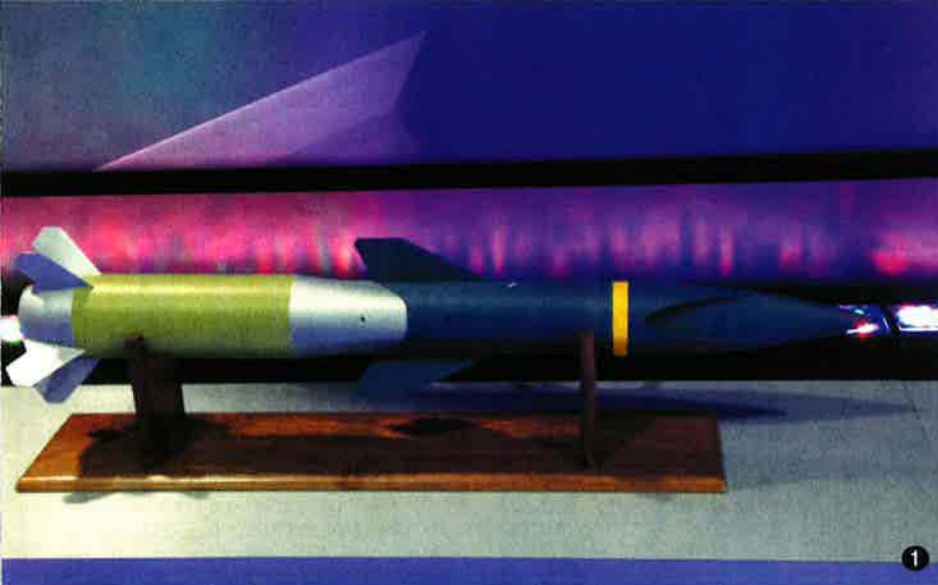
111 Lockheed Martin presented a generic wing loaded with company products, including its Long-Range Anti-ship Missile, LRASM. The stealth missile, derived from the Joint Air-to-Surface Standoff Missile-Extended Range, completed a successful test just before the expo. 121 This massive long-range radar is a Lockheed Martin concept to help protect air bases from ballistic missiles. 131 Boeing's Phantom Eye is a high-altitude, long-endurance, remotely piloted surveillance aircraft. The real one has a wingspan of 250 feet. 141 Adm. James Winnefeld, vice chairman of the Joint Chiefs of Staff, stopped by the expo after his Air Force Association conference address.



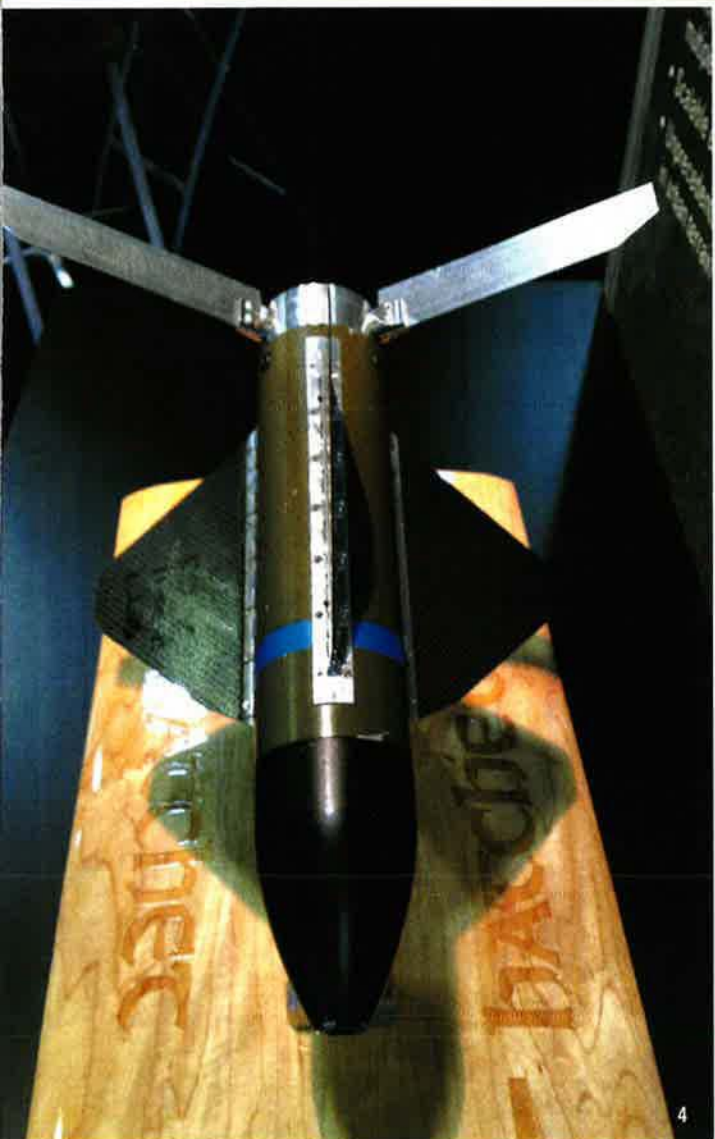
11 Lockheed Martin's Cuda missile is intended to increase the F-35's loadout without resorting to unstealthy carriage on the wings. A dozen of the radar guided hit-to-kill missiles could be carried internally on the F-35. Steering is aided by bursts from a belt of thruster ports. 12 Brig. Gen. Burke Wilson (r), director of space operations on the Air Staff, enjoys a moment with CMSgt. Rodney Reyes (l). 13 A Boeing satellite orbited above the company's booth. Boeing promoted its GPS IIF system as well as hosted payloads for government/commercial partnerships.



14 General Atomics' MQ-9 Reaper displays its impressive maximum load. The remotely piloted armed intelligence, surveillance, and reconnaissance aircraft has been a USAF workhorse in Afghanistan and is now being acquired by a number of allied nations. 15 Warrior Canine Connection is a Maryland-based program that provides therapy dogs to help vets with post-traumatic stress disorder; the vets themselves help train the dogs, who are always welcome visitors at the expo.



111 This two-stage hypersonic missile is Lockheed Martin's entry in the upcoming High-Speed Strike Weapon competition. Like the X-51 hypersonic demonstrator, the missile is accelerated to hypersonic velocity on an ATACMS booster. Reaching speeds of up to Mach 5, such a weapon could go a long way toward keeping standoff bombers relevant against future air defenses. The dual-mode ramjet weapon also has some stealth shaping. It bears the Skunk Works logo on the tail. **121** AFROTC cadets try out a generic cockpit presented by CMC Electronics. Flying the notional fighter is Caleb Bliesner from Liberty University in Lynchburg, Va. He's cheered on by classmates.



131 MBDA's large F-35 model featured weapons that will be integrated on the Lightning II for the UK and could be integrated on US F-35s as well. They include (outboard to inboard) the ASRAAM short-range heat-seeking dogfight missile, the Meteor long-range radar guided missile, and the Storm



Shadow long-range strike missile. **141** ATK offered the "Hatchet" miniature weapon for armed reconnaissance, intended for deployment on RPAs, cruise missiles, and large aircraft.



111 The pathfinder for the High-Speed Strike Weapon is the X-51 Waverider, shown off as a model by Boeing. The real X-51 achieved a flight of more than 300 seconds at speeds up to Mach 5 in May, providing a wealth of data for aerospace technologists to study. The project was a joint effort of DARPA, NASA, the Air Force, Boeing, and Pratt & Whitney.
121 Textron Chief Executive Officer Scott Donnelly speaks with Maj. Gen. Kenneth Merchant, director of USAF Global Reach Programs, in front of the Textron display.
131 Pratt & Whitney's large model display emphasized its key role in providing propulsion for USAF's top fighter aircraft (l-r): the F-15, F-16, F-35, and F-22 as well as the KC-46 tanker.
141 A C-130J propeller (background) made by Dowty and a Goodrich ACES 5 ejection seat with elements that can be retrofitted to the ACES 2, used by a large portion of the combat fleet, on display.





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3



4

111 Sikorsky brought its experimental X2 Technology Demonstrator to the expo. The coaxial rotor, pusher-propeller configuration has achieved speeds of more than 300 mph, and could be the basis of future rescue, medevac, utility, or special operations machines. 121 BAE Systems, Northrop Grumman, L-3, and Rolls Royce are teamed to offer the Hawk Advanced Jet Training System when the Air Force is ready to pursue the TX-trainer to replace the T-38. The Hawk booth featured this large model and a trailer with multimedia presentations. 131 EADS's show offerings included this derivative of its UH-72 Lakota light helicopter. To replace UH-1s, the Air Force must recapitalize. 141 The Airborne Battle Management Crew of the Year stopped by the Northrop display. They are Combat Crew 3, 16th Airborne Command & Control Squadron, 161st Air Control Wing, from Robins AFB, Ga. Wing commander Col. Henry Cyr is in the back row, far right. ■



NATIONAL AEROSPACE AWARDS

Award and Recipients

H. H. Arnold Award

Most significant contribution by a military member to national defense

Gen. Douglas M. Fraser, USAF (Ret.), Former Commander, US Southern Command

W. Stuart Symington Award

Most significant contribution by a civilian in the field of national defense

Honorable Michael B. Donley, Former Secretary of the Air Force

John R. Alison Award

Most outstanding contribution by industrial leadership to national defense

X-51A WaveRider Program

David C. Schilling Award

Outstanding contribution in advancing flight activity

93rd Air Refueling Squadron, Fairchild AFB, Wash.

Theodore von Karman Award

Outstanding contribution in science and engineering

The Aerospace Corp., El Segundo, Calif.

Gill Robb Wilson Award

Outstanding contribution in arts and letters

Richard P. Hallion

Hoyt S. Vandenberg Award

Outstanding contribution in aerospace education

The USA Science and Engineering Festival

Thomas P. Gerrity Award

Outstanding contribution in systems and logistics

Lt. Col. Eduardo A. Quero, 86th Logistics Readiness Sq., Ramstein AB, Germany

Department of Veterans Affairs Employee of the Year

Outstanding performance by VA employee

Lauren Incontrera, Women Veterans Program Manager, VA Hudson Valley Health Care System, Montrose, N.Y.

Gen. George C. Kenney Award

Outstanding contribution in lessons learned

Warhawk Team, 4th Air Support Operations Sq., Wiesbaden Army Airfield, Germany

Lt. Gen. Claire L. Chennault Award

Outstanding aerial warfare tactician

Capt. Beau E. Diers, 55th Fighter Sq., Shaw AFB, S.C.

Gen. Larry D. Welch Award

Outstanding contribution toward the nuclear mission

Lt. Col. David M. Franklin, 532nd Training Sq., Vandenberg AFB, Calif.

CMSAF Thomas N. Barnes Award

Most outstanding crew chief in the Air Force

SSgt. Jason S. Williams, 4th Aircraft Maintenance Sq., Seymour Johnson AFB, N.C.

Gen. Billy Mitchell Award for C4 Excellence

Outstanding contribution toward warfighting capability

SMSgt. Jose G. Cruz, National Reconnaissance Office, Chantilly, Va.

AFA Chairman's Aerospace Education Award

Long-term commitment to aerospace education, making a significant impact nationwide

The Civil Air Patrol

PROFESSIONAL, CIVILIAN, MANAGEMENT, AND ENVIRONMENTAL AWARDS

Award and Recipients

AFMC Management Award—Executive Division

Janet Tremelling, ICBM Flight Systems Division, Hill AFB, Utah

AFMC Management Award—Junior Division*

Capt. Jason S. Henderson, Medium Altitude UAS Division, Wright-Patterson AFB, Ohio

AFMC Management Award—Middle Division*

AMaj. Jason D. Webb, Minuteman III SRM Modernization Program Manager, Hill AFB, Utah

AFROTC Cadet of the Year:

Cadet Justin M. Ignacio, Det. 028, Embry-Riddle Aeronautical University

CAP Aerospace Education Cadet of the Year:

Cadet Maj. Jeremy A. King, Winter Haven, Fla.

Chaplain Corps Award:

Capt. Chad A. Bellamy, 421st Air Base Group, RAF Menwith Hill, UK

Civilian Program Manager of the Year*:

Casey D. Sherman, ICBM Fuze Replacement Program, Hill AFB, Utah

Civilian Program Specialist of the Year*:

Special Agent Ryan D. Schilcher, Air Force Office of Special Investigations, JB Andrews, Md.

Civilian Senior Manager of the Year:

Gina M. Lavender, Deputy Commander, 436th Civil Engineer Sq., Dover AFB, Del.

Civilian Wage Employee of the Year*:

Brandon J. Bozeman, 315th Aircraft Maintenance Sq., JB Charleston, S.C.

Gen. E. W. Rawlings Environmental Award—Mgmt.*:

Not awarded

Gen. E. W. Rawlings Environmental Award—Tech.*:

Not awarded

Joan Orr Award for Air Force Spouse of the Year:

Sonya R. Cage, Naples, Italy

Juanita Redmond Award for Nursing:

1st Lt. Agnes F. Liem, 87th Medical Operations Sq., JB McGuire-Dix-Lakehurst, N.J.

Paul W. Myers Award for Physicians:

Lt. Col. Chad M. Hivnor, Medical Specialties Sq., JBASA-Lackland, Tex.

Stuart R. Reichart Award for Lawyers:

James R. Van Orsdol, International Law Division, Hq. US Air Forces in Europe-Air Forces Africa

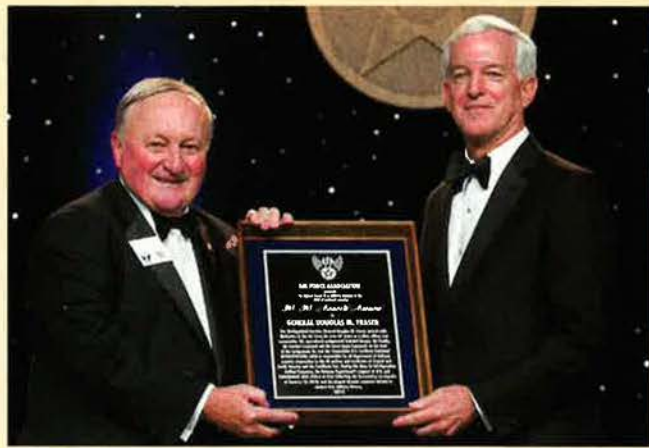
Verne Orr Award for Human Resources:

Total Force Initiative 22nd (Active)/931st (AFRC) Operations Support Sq., McConnell AFB, Kan.

*Presented at recipient's location



Air Force Association Chairman of the Board George Muellner (left) presented the W. Stuart Symington Award for most significant contribution by a civilian in the field of national defense to former USAF Secretary Michael Donley.



The Gen. H. H. Arnold Award for most significant contribution by a military member to national defense was presented to retired Gen. Douglas Fraser, a former commander of US Southern Command.

Photos by Chuck Fazio

AFA LIFETIME ACHIEVEMENT AWARD

Recognizing a lifetime of work in the advancement of aerospace.

Maj. Gen. Joe H. Engle, USAF (Ret.)

Engle flew more than 185 different types of aircraft, logging nearly 15,000 flying hours. As an astronaut, he also accumulated 224 hours in space. He was the only person to have flown two different winged space vehicles—the X-15 and the space shuttle—when he retired from active service in 1986, after which he served in the Air National Guard.

Rep. Sam Johnson (R-Tex.)

Johnson ranks among the few members of Congress to have fought in combat. During 29 years in the Air Force, he flew combat missions in both the Korean and Vietnam Wars, receiving two Silver Stars and one Bronze Star Medal with Valor, among numerous other awards. He endured nearly seven years as a POW in Hanoi. Following his military career, he established a home-building business in Dallas and served in the Texas State Legislature.

The Arlington Ladies

Established as the USAF Arlington Committee in 1948 by Gen. and Mrs. Hoyt S. Vandenberg and organized by the Air Force Officers' Wives' Club, The Arlington Ladies ensure no airman's funeral at Arlington National Cemetery goes unattended.



Muellner presented an AFA Lifetime Achievement Award to retired Maj. Gen. Joe Engle, a former astronaut who flew in more than 185 different types of aircraft during his career.



Rep. Sam Johnson (R-Tex.) was presented with an AFA Lifetime Achievement Award. Johnson served in both Korea and Vietnam, receiving two Silver Medals and one Bronze Star Medal with Valor device.



Honored as a group with an AFA Lifetime Achievement Award was the "The Arlington Ladies," founded in 1948 by Gen. and Mrs. Hoyt Vandenberg and organized by the Air Force Officers' Wives' Club to assure that no airman's funeral at Arlington National Cemetery goes unattended.

CITATIONS OF HONOR

Outstanding contribution of an individual or organization to the development of aerospace power.

Recipients and Achievements

Gen. Kevin P. Chilton, USAF (Ret.), NASA Astronaut and Former Commander of USSTRATCOM

With more than 34 years of distinguished service, Chilton's accomplishments include being a reconnaissance pilot, an astronaut, and concluding his career as the Commander of US Strategic Command. As USSTRATCOM head, he oversaw not only the national strategic deterrence mission but also space and cyberspace missions. Chilton is a powerful and credible proponent of US nuclear modernization and a key figure in the reforming of the Air Force's nuclear weapons management policy and procedures.

Lt. Gen. Michael C. Gould, USAF (Ret.), Former Superintendent of USAFA

As Superintendent of the US Air Force Academy, Gould has demonstrated extraordinary leadership in his service to our country. This pilot, turned instructor pilot, turned military commander, has enabled those around him to develop and use their strengths to the best of their ability. His style of leadership is about empowerment, and in turn, those many airmen influenced by him have become better cadets, better pilots, and better Air Force leaders.

Lt. Gen. Larry D. James, USAF (Ret.), Former Deputy Chief of Staff for Intelligence, Surveillance, and Reconnaissance (ISR)

Under James' outstanding leadership, Air Force ISR accomplished an amazing transformation, removing the prohibitive stovepipe systems to enable the ISR community to deliver intelligence directly to combatant commanders. USAF ISR assets can now network to handle the incredibly large amounts of data going through tools that process, exploit, and disseminate that battlefield information. Achieving this most challenging mission objective of networking sets the US Air Force apart from others.

9th Bomb Squadron, 7th Bomb Wing, Dyess AFB, Tex.

While deployed for Operation Enduring Freedom, the 9th Bomb Squadron demonstrated outstanding combat effectiveness. The squadron executed 772 combat missions supporting coalition ground forces in more than 50 named operations. The unit's actions resulted in a 99 percent air tasking order effectiveness rate and the most B-1 combat sorties on a single deployment in more than 10 years of sustained conflict. The squadron responded to more than 500 troops-in-contact situations with the enemy as close as 330 yards from friendly forces and delivered more than 400 weapons on 225 targets.

CREW AND TEAM AWARDS

Airborne Battle Management Crew for best AWACS or Joint STARS aircrew's battle management: Combat Crew 3 (JSTARS), 16th Airborne Command & Control Sq., 461st Air Control Wing, Robins AFB, Ga.

Brig. Gen. Ross G. Hoyt Award for best air refueling crew: Crew of Agile 21, 9th Special Operations Sq., Eglin AFB, Fla.; 352nd Special Ops Group and 67th SOS, RAF Mildenhall, UK

Gen. Curtis E. LeMay Award for best overall bomber crew: Crew of Bone 34, 9th Bomb Sq., 7th Bomb Wing, Dyess AFB, Tex.

Gen. Jerome F. O'Malley Award for best reconnaissance crew: Crews of Ronin 3 and 4 (Cobra Ball), 390th Intelligence Sq., Kadena AB, Japan; 97th IS, 45th Reconnaissance Sq., 55th Operations Support Sq., and 55th Intelligence Support Sq., Offutt AFB, Neb.

Gen. Thomas S. Power Award for best overall missile crew: 1st Lt. Jeffrey R. Maciejewski and 1st Lt. Tyler W. Remkus, 90th Missile Wing, F. E. Warren AFB, Wyo.

Best Space Operations Crew for best overall space operations: Echo Crew, 11th Space Warning Sq., and Det. 1, 8th SWS, Schriever AFB, Colo.

Lt. Gen. William H. Tunner Award for best airlift crew: Crew of Agile 21, 9th Special Operations Sq., Eglin AFB, Fla.; 352nd Special Ops Group and 67th SOS, RAF Mildenhall, UK

Lt. Gen. Howard W. Leaf Award for best test team: F-22 Combined Test Force Flight Sciences Test Team, 412th Test Wing, Edwards AFB, Calif.

AIR NATIONAL GUARD AND AIR FORCE RESERVE COMMAND AWARDS

Award and Recipients

CMSgt. Dick Red Award

Best ANG maintainer

MSgt. Michael P. Junjulas, 105th Aircraft Maintenance Sq., New York ANG

Earl T. Ricks Award

Best ANG unit airmanship

Crew Reach 716 (C-5A), 167th Airlift Wing, West Virginia ANG

Outstanding ANG Flying Unit

Top ANG unit of the year

176th Operations Group, Alaska ANG

George W. Bush Award, Officer

Outstanding Civilian Employer

Not awarded

George W. Bush Award, Enlisted

Outstanding Civilian Employer

Allied Investment Properties LLC, Fort Dodge, Iowa
SrA. Randal E. Meyer, 133rd Test Sq., Iowa ANG

President's Award for AFRC

Best AFRC flying unit of the year

Maj. Mark J. Crowder and MSgt. Nicholas A. Alessandri, Det. 1, 926th Group, Creech AFB, Nev.

AFRC Unit Award

Best AFRC unit of the year

442nd Fighter Wing, Whiteman AFB, Mo.

AFRC Citizen Airman Award, Officer

Outstanding Civilian Employer

Sandia National Lab, Albuquerque, N.M.

Col. Norman L. Anderson, NORAD Region/1st Air Force, Tyndall AFB, Fla.

AFRC Citizen Airman Award, Enlisted

Outstanding Civilian Employer

Transportation Security Administration, Southwest Florida

International Airport

MSgt. Jessie J. Barcala II, 482nd FW, Homestead ARB, Fla.

2013 AFA FIELD AWARDS

Donald W. Steele Sr. Memorial Award

AFA Unit of the Year: **Paul Revere**, Mass. President Keith M. Taylor



Board Chairman George Muellner and Vice Chairman of the Board for Field Operations Scott Van Cleef (fourth from right) present the Unit of the Year Award to Paul Revere Chapter President Keith Taylor and other members of the Massachusetts chapter.

Outstanding State Organization

Virginia—President Peter E. Jones

Outstanding Chapters by Size

Small Chapter

Leigh Wade, Va.

President Gary D. Metzinger

Medium Chapter

Lincoln, Neb.

President Mary A. McGahan

Large Chapter

Swamp Fox, S.C.

President David T. Hanson

Extra Large Chapter

Paul Revere, Mass.

President Keith M. Taylor

Unit Exceptional Service Awards

Best Single Program

Leigh Wade, Va.

President Gary D. Metzinger

Communications

Paul Revere, Mass.

President Keith M. Taylor

Community Partners

Meridian, Miss.

President Langford Knight

Community Relations

Leigh Wade, Va.

President Gary D. Metzinger

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.

Central Florida, Fla.

Cheyenne Cowboy, Wyo.

C. Farinha Gold Rush, Calif.

Fort Dodge, Iowa

Gen. Bruce K. Holloway, Tenn.

Gen. Charles A. Gabriel, Va.

John C. Stennis, Miss.

Leigh Wade, Va.

Lincoln, Neb.

Montgomery, Ala.

Northern Shenandoah Valley, Va.

Paul Revere, Mass.

Swamp Fox, S.C.

Ute-Rocky Mountain, Utah

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

Leigh Wade, Va. - President Gary D. Metzinger

Medium Chapter

Lincoln, Neb. - President Mary A. McGahan

Large Chapter

Ute-Rocky Mountain, Utah - President Lacy Bizios

Extra Large Chapter

Montgomery, Ala. - President James Harris

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, 2013, as a percentage of total chapter membership as of July 1, 2012. This award is based on both the quantity of new members as well as sustained new member recruitment.

Chapter Award

John C. Stennis, Miss.

President Michael E. Bullington

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

South Alabama, Ala.

President Steven D. Carey

Medium Chapter

Golden Triangle, Miss.

President Richard T. Johnson

Large Chapter

John C. Stennis, Miss.

President Michael E. Bullington

Extra Large Chapter

David A. Terry Jr., Ark.

President Jerry Reichenbach

Chapter Larger Than 1,100

Langley, Va.

President Vincent P. Wisniewski

AFA Gold Life Membership

James M. McCoy

Member of the Year

Tim Brock

Distinguished Sustained Aerospace Education Award

Bonnie B. Callahan

Chairman's Citation

Peter E. Jones, Va.
Richard C. Taubinger, Calif.
Ronald R. Azarcon, Calif.
Mike Liquori, Fla.
Keith M. Taylor, Mass.

Eric P. Taylor, Pa.
Brian Binn, Colo.
Robert Rutledge, Pa.
Thomas W. Gwaltney, Ala.
James E. Dotherow, Ala.

Individual Awards by Region

Presented for outstanding service.

Central East Region

Medal of Merit

Albert Pianalto, Va.
Jeffrey Blessing, Va.
Christof Paul Cordes, Va.
E. Miranda Hernandez, Md.
Patricia Burlison, Md.
John Murphy, Del.
James Hass, Va.
James White, Va.

Exceptional Service Award

Norman G. Brander, Va.
Harvey L. Hammond, Va.
Kevin Lewis, Va.

Far West Region

Medal of Merit

Lee Barnby, Calif.
Steve Quillici, Calif.
Thomas Taverney, Calif.
Norton James, Calif.
Nelson Howlett, Calif.

Exceptional Service Award

Randy Kelly, Calif.
Ray Coughlin, Calif.
Sandy Stultz, Calif.
Dave Fields, Calif.
Richard Reaser, Calif.

Florida Region

Medal of Merit

Sandy Palmer, Fla.
Gary Cornell, Fla.

Exceptional Service Award

Sharon Branch, Fla.
Fran C. Shaw, Fla.

Great Lakes Region

Medal of Merit

Thomas Koogler, Ohio
Bill Richard, Ohio
Michael Reed, Ind.

Exceptional Service Award

Paul Lyons, Ind.
Brandon Monticue, Ind.
Richard Mrozinski, Ind.

Midwest Region

Medal of Merit

Harley Thornton, Iowa
Mary A. McGahan, Neb.
David Ott, Iowa
Luke Perrin, Iowa
Herbert Morris, Ill.

New England Region

Medal of Merit

Don Tilley, Mass.
Ryan Lafferty, Mass.
Erin Lafferty, Mass.
Jenny Hopewell, Mass.
Joe Moynihan, Mass.

Exceptional Service Award

Irene Biddy, Mass.
Paul Zauner, Mass.

Northeast Region

Medal of Merit

William Horay Jr., N.J.
Susan Loricchio, N.J.
Michael Szymczak, N.Y.
Maritza Mendoza, N.J.
Kenny Scott, N.J.
Richard Guidas, N.Y.

Exceptional Service Award

Maxine Donnelly Rauch, N.Y.
Thomas G. Baker, Pa.

Northwest Region

Medal of Merit

Daniel Wordell, Wash.
William Patton, Wash.

Rocky Mountain Region

Medal of Merit

Ellie Constantine, Wyo.
Richard Follmar, Colo.
Frances Bradshaw, Utah
Hank Scarangella, Colo.
Sherry Shadday, Utah
Jeri Andrews, Colo.
Cory Jenkins, Utah

Exceptional Service Award

Robert Ekstrom, Utah
Stephen Gourley, Colo.
Mary Thompson, Wyo.
Michael Peterson, Colo.

South Central Region

Medal of Merit

Larry Loudon, Ark.
James Mungenast, Tenn.
James Elmer, Ark.
Catherine Scott, Ala.
Robert Kuehn, Ala.
James Bill, Tenn.
Olan Scott Key, Ala.

Exceptional Service Award

Frederick Driesbach, Ala.
Stephen Dillenburgh, Tenn.
John Glass, Tenn.

Southeast Region

Medal of Merit

James Dowis, S.C.
Taylor Hardin, S.C.
Linda Sturgeon, S.C.

Exceptional Service Award

Corlyn Troyer, S.C.

Southwest Region

Medal of Merit

George Castle, Ariz.
Miles Crowell, N.M.
James O. Turner, Ariz.

Exceptional Service Award

Gene Fenstermacher, Ariz.
Frederick Harsany, N.M.

Texoma Region

Medal of Merit

Vance Clarke, Tex.
Tangie Pappo, Okla.
Homer Black, Tex.
Wesley Knick, Okla.
Larry Bradshaw, Tex.
Dan Ohnesorge, Okla.
Robert Kjar, Tex.
Eva Letha Lucas, Okla.
Stan Greil, Okla.

Exceptional Service Award

Bob Gehbauer, Tex.
Mark Tarpley, Okla.
James Putnam, Tex.
Deborah Bates, Tex.

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.
Enid, Okla.
Fairbanks Midnight Sun, Alaska
Fort Dodge, Iowa
Fort Wayne, Ind.
Gen. David C. Jones, N.D.
Happy Hooligan, N.D.
Leigh Wade, Va.

McChord Field, Wash.
Mel Harmon, Colo.
Meridian, Miss.
Montgomery, Ala.
Northeast Texas, Tex.
Robert H. Goddard, Calif.
Swamp Fox, S.C.

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.

Brig. Gen. Bill Spruance, Del.
Central Okla. (Gerrity), Okla.
Cheyenne Cowboy, Wyo.
Eglin, Fla.
Gen. Bruce K. Holloway, Tenn.
Golden Triangle, Miss.

Hurlburt, Fla.
Paul Revere, Mass.
Shooting Star, N.J.
Steel Valley, Ohio
Tennessee Valley, Ala.
Ute-Rocky Mountain, Utah

Special Recognition

SUSTAINED NEW MEMBER RECRUITMENT

These chapters have attained the quarterly new member recruitment goal for three consecutive quarters, extending from October 2012 to June 2013.

David D. Terry Jr. , Ark.	Miami-Homestead , Fla.
Donald W. Steele Sr. Memorial , Va.	Montgomery , Ala.
Frank Luke , Ariz.	Paul Revere , Mass.
Gen. E. W. Rawlings , Minn.	Robert H. Goddard , Calif.
John C. Stennis , Miss.	South Alabama , Ala.
Langley , Va.	

STATE GROWTH

These states have realized a growth in total membership from June 2012 to June 2013.

Alabama	Nevada
Arkansas	New Jersey
Georgia	New York
Idaho	North Carolina
Louisiana	Pennsylvania
Michigan	Washington
Mississippi	West Virginia
Missouri	Wisconsin
Montana	

REGION GROWTH

These regions have realized a growth in total membership from June 2012 to June 2013.

North Central	South Central
Northeast	Southeast
Northwest	Southwest
Pacific	

CHAPTER GROWTH

These chapters have realized a growth in total membership from June 2012 to June 2013.

Abilene , Tex.	Chautauqua , N.Y.	Lewis E. Lyle , Ark.	Sarasota-Manatee , Fla.
Albany-Hudson Valley , N.Y.	Chuck Yeager , W.Va.	Lt. Erwin R. Bleckley , Kan.	Snake River Valley , Idaho
Altoona , Pa.	Columbia Palmetto , S.C.	Lt. Col. B.D. "Buzz" Wagner , Pa.	South Alabama , Ala.
Altus , Okla.	Del Rio , Tex.	Maj. Gen. Oris B. Johnson , La.	South Georgia , Ga.
Austin , Tex.	Dolomiti , Italy	Mel Harmon , Colo.	Swamp Fox , S.C.
Big Sky , Mont.	Donald W. Steele Sr. Memorial , Va.	Mercer County , N.J.	Tennessee Ernie Ford , Calif.
Billy Mitchell , Wis.	Fort Dodge , Iowa	Meridian , Miss.	Tennessee Valley , Ala.
Birmingham , Ala.	Fran Parker , N.M.	Mifflin County , Pa.	Thunderbird , Nev.
Blue Ridge , N.C.	Genesee Valley , N.Y.	Mount Clemens , Mich.	Total Force , Pa.
Bozeman , Mont.	Hangar One , N.J.	Pocono Northeast , Pa.	Whiteman , Mo.
Brig. Gen. Bill Spruance , Del.	Inland Empire , Wash.	Pope , N.C.	
Brig. Gen. F. W. Castle , N.J.	Iron Gate , N.Y.	Robert H. Goddard , Calif.	
Cape Canaveral , Fla.	John C. Stennis , Miss.	Sal Capriglione , N.J.	

Chapter Retention Awards

Overall Retention Award

Small Chapter

Altoona, Pa.
President Thomas G. Baker

Medium Chapter

Total Force, Pa.
President Lee W. Niehaus

Large Chapter

Thomas B. McGuire, N.J.
President Maritza N. Mendoza

Extra Large Chapter

Ak-Sar-Ben, Neb.
President Timothy Adam

Chapter Larger than 1,100

Thunderbird, Nev.
President Robert Cunningham

First Year Retention Award

Small Chapter

Mifflin County, Pa.
President George Rheam

Medium Chapter

Total Force, Pa.
President Lee W. Niehaus

Large Chapter

Pope, N.C.
President Brian Wilson

Extra Large Chapter

Mount Clemens, Mich.
President Bill Day

Chapter Larger than 1,100

Mile High, Colo.
President Jennifer Clinkscales

Community Partner Challenge Award

Montgomery, Ala.
President James Harris

Central Oklahoma (Gerrity), Okla.
President Jerry McMahan

Ute-Rocky Mountain, Utah
President Lacy Bizios

Robert H. Goddard, Calif.
President Juan Cruz

McChord Field, Wash.
President William Striegel

Eglin, Fla.
President Shannon Farrell

Northeast Texas, Tex.
President Vance Clarke

CyberPatriot Coach and Mentor of the Year

Open Division Coach

Joan Ozdogan
Chantilly Academy, Chantilly, Va.

Open Division Mentor

Ryan Walters
Falls Church, Va.

All Service Division Coach

William Beckman
Marine Military Academy MCJROTC, Harlingen, Tex.

All Service Division Mentor

Mitchell Thomas
San Antonio

By Frances McKenney, Assistant Managing Editor



Emerging Leaders

The Air Force Association recently began an Emerging Leaders Program as an avenue for securing AFA's future.

Emerging Leaders volunteer for a year. With guidance from a mentor, they participate on a national-level council, attend national leader orientations, and serve as National Convention delegates.

Emerging Leaders will be profiled here in the coming months.

Capt. Leanne M. Babcock

Home State: Oregon.

Chapter: Charleston Chapter (S.C.). Previously belonged to Columbia Gorge Chapter (Ore.), San Diego Chapter, and Lance P. Sijan Chapter (Colo.).

Joined AFA: 2004.

AFA Offices: Field Council member. Was a chapter VP of membership. Served on the AFA national Membership Committee.

AFA Awards: California Meritorious Service award; Sijan Chapter's Exceptional Service award.

Military Service: 10 years, beginning as a vehicle mechanic, Oregon Air National Guard. Commissioned through San Diego State University. Served on Active Duty at Peterson AFB, Colo. Now a Reserve captain, a flight commander with the 38th Aerial Port Squadron at JB Charleston, S.C.

Education: AAS, Community College of the Air Force; B.S., San Diego State; M.S., Colorado State University. Working on an M.A. from The Citadel.

Social Media: Find Leanne Babcock on Facebook and on LinkedIn.



Q&A

What did you learn at the National Convention? How the grassroots is so important. It's the most vital way that AFA is going to survive.

Who taught you the most about leadership? MSgt. Bill Taylor, vehicle maintenance supervisor; retired Col. Linda Aldrich, thesis advisor; my mom, Debbie.

How can AFA increase membership? I did my whole master's thesis on this. ... People need to feel they belong to the organization, that their membership stands for something (organizational commitment). The Total Air Force needs to be the target.



Babcock (r) and her cousin Shaylan after the Dirty Dash muddy obstacle course in Colorado last year.



AFA's National Aerospace Teacher of the Year Margaret Spigner speaks to the AFA National Convention audience about her students' science activities.

National Teacher of the Year

At the Air Force Association's National Convention, a science teacher from Charleston, S.C., became the 28th recipient of AFA's National Aerospace Teacher of the Year award.

Margaret Spigner is the science department chairwoman at West Ashley High School, where she has taught for 26 years. During that time, she has covered marine science, biotechnology, investigative research, biology, and environmental and physical science.

One of her pupils' recent projects involved storm water detention ponds. The students designed mitigation measures for the pollution levels, created a floating wetland, and installed an artificial reef for the ponds' fishes. These projects required them to learn about water quality testing, computer-aided design, 3-D printing, and underwater remotely operated vehicles, among other skills.

"Can you imagine how excited the students must be to attend her class?" asked South Carolina State President Arthur Rooney Jr. in his letter nominating Spigner for the top teacher award.

Spigner had previously been named the **Charleston Chapter's** Teacher of the Year and received the statewide honor as well. [See photo at airforcemag.com. Search "Margaret Spigner."]

Reunited: Purple Hearts and Heroes

Army National Guard Capt. Zachariah L. Fike has been awarded two Bronze Star Medals, the Purple Heart, the Meritorious Service Medal, and the Army Commendation and Army Achievement medals multiple times, not to mention four kinds of badges. In September, however, he spoke to Vermont's **Green Mountain Chapter** about the one medal that has become his focus: the Purple Heart.

Established by Gen. George Washington, the Purple Heart is the oldest US military award and is bestowed on those wounded by the enemy or given to the next of kin of those killed in action.

Guest speaker Fike commands the Bennington, Vt.-based reconnaissance soldiers of Blackjack Troop, 1st Squadron,

172nd Cavalry Regiment, but a more personal mission has been to return lost Purple Hearts to their recipients or the descendants of the awardees.

Fike told the Green Mountain audience that this effort began in 2009 when his mother gave him a Purple Heart she had bought in an antique shop. Fike said he knew he couldn't keep the medal because it really belonged to the family of the soldier whose name was engraved on the back of it. He tracked down the family of Pvt. Corrado Piccoli and presented the medal to them in 2011.

Since then, he has returned 30 lost Purple Hearts and in 2012 founded the nonprofit Purple Hearts Reunited to support this work. Fike told the AFA chapter that today he has more than 100 other Purple Heart cases.

A quick look at the organization's website reveals how these medals get mislaid. A man in Texas, for example, found a Purple Heart left behind at a rental property. Other places they've been rescued from: flea markets, pawn shops, estate sales, attics, and old vehicles and furniture. Some have been stolen.

Chapter President Raymond Tanguay said the meeting's topic brought out nearly 30 members and guests, including several Air National Guardsmen led by the 158th Fighter Wing commander, Col. David P. Baczewski.

Barbecue

The line of hungry people at the **Paul Revere Chapter's** barbecue snaked through the parking lot at the Veterans Affairs facility in Lowell, Mass.

Veterans, caregivers, chapter members—more than 70 guests queued up for the chapter's annual summer picnic of hamburgers, hotdogs, and Italian sausages.

Dick Codling displays a thank-you card and gift from the Paul Revere Chapter. Air Force Sergeants Association volunteers surrounding him helped with the chapter's barbecue.



Zac Fike speaks at a Green Mountain Chapter luncheon about Purple Hearts Reunited. The organization returns lost Purple Hearts to their rightful owners.



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Meeting with US Sen. Heidi Heitkamp (D-N.D.), second from left, on Capitol Hill during AFA's National Convention are l-r: Al Palmer, Red River Valley Chapter; Jim Simons, Gen. David C. Jones Chapter; Mike Haugen, Happy Hooligan Chapter; and Capt. Bernard Harper, Jones Chapter.



Sen. Amy Klobuchar (D-Minn.) holds a stuffed-toy aviator, presented by Lawrence Sagstetter (left) of Minnesota's Gen. E. W. Rawlings Chapter. The chapter communications VP visited Klobuchar on Capitol Hill during AFA's National Convention.



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I certify that all information furnished on this form is true and complete. I understand that anyone who furnishes false or misleading information on this form or who omits material or information requested on the form may be subject to criminal sanctions (including fines and imprisonment) and/or civil sanctions (including civil penalties).

Richard B. Codling, the chapter VP for veterans affairs for 10 years until his retirement to Florida last month, organized the event. It's one of several the chapter carries out each year specifically for veterans.

Chapter President Keith M. Taylor wrote in an email, "On average, 1,000 veterans per year have benefited from the service and barbecue planning of Dick and his Paul Revere Chapter team."

The chapter buys the food and rents the grills, but the barbecue team always includes Air Force Sergeants Association volunteers from Hanscom AFB, Mass., who man the grills. "We partner with them for our veterans events," explained Taylor. "They come out in great numbers."

Birthday Bash: '50s Flashback

The Arnold Air Society cadets are in their 20s, while the North Carolina Tarheel Chapter members—well, one of them, Gilbert M. Slack, turns 90 next month.

But age makes no difference when it comes to partying—in this case celebrating the Air Force's birthday anniversary with a 1950s-themed sock hop in September at North Carolina State University.

The cadets arranged for the venue on campus and turned to the Web to figure out what to wear, while chapter members showed up with the food, decor, AFA door prizes, and music—on then-State President Patrick H. Yanke's iPod.

In Italy, Aviano High School robotics teacher Dave Izzo (left) received a Teacher of the Year award from Dolomiti Chapter officers SSgt. Daisha Bey and TSgt. Joshua Roberts. The presentation took place at a faculty meeting in September.



For the '50s look, the cadets favored jeans and white T-shirts with the cuffs or the sleeves rolled up. Chapter Secretary Joyce W. Feuerstein, now the state president, went through the trouble of sewing herself an orange skirt with the classic poodle applique on it.

The young adults "didn't have any problem rockin' and rollin'," she said, but she ended up teaching a cadet how to foxtrot.

As for decor, a banner showing a giant jukebox hung on one wall. Feuerstein compiled a photo slideshow, projected on a big-screen TV, of famous personalities from the 1940s and 1950s and shots of past events that the cadets and chapter members have carried out together.

Pizza provided by the chapter turned out to be the spark plug, though. After the cadets ate, Feuerstein said, "they all got on the floor and didn't stop dancing for the rest of the evening."

More Chapter News

■ **Iron Gate Chapter's** luncheon in New York City in September featured Maj. Gen. Michael J. Carey, then 20th Air Force commander, who described the readiness of missile wings. Following the luncheon, then-Chapter President Frank T. Hayes and chapter member Adelle L. Roban attended a briefing that Carey delivered to military fellows—**Whiteman Chapter (Mo.)** member Col. Robert S. Spalding III among them—at the Council on Foreign Relations. ■

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Long Island Chapter President Fred di Fabio (right) poses with World War II re-enactors at the American Airpower Museum in Farmingdale, N.Y. The chapter set up a display in the museum's hangar for a World War II program on Labor Day weekend.



At right di Fabio greets a visitor: a World War II veteran, Tuskegee Airman Julius Freeman.

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Sarasota-Manatee Chapter President Mike Richardson (center) watches Jacob Mann and Tuskegee Airman George Hardy (right) cut the birthday cake at the Florida celebration for USAF's 66th anniversary. Hardy and Mann were the oldest and youngest guests.



In Virginia, the Northern Shenandoah Valley Chapter arranged for a demonstration of US flag protocol to students at Sacred Heart Academy in Winchester. The honor guard performing the flag ceremony came from nearby Randolph-Macon Academy.

reunions@afa.org
Reunions

B-58 Hustler Assn. May 1-4 at Fossil Creek Radisson Hotel, Fort Worth, TX.
Contact: Richard Bolcer (817-249-5019) (rich92437@sbcglobal.net).

Email unit reunion notices four months ahead of the event to reunions@afa.org, or mail notices to "Unit 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.

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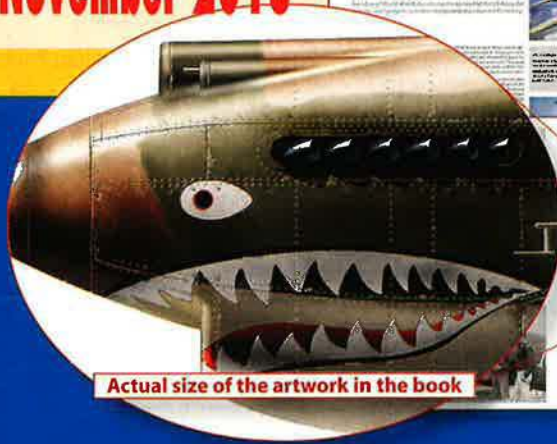
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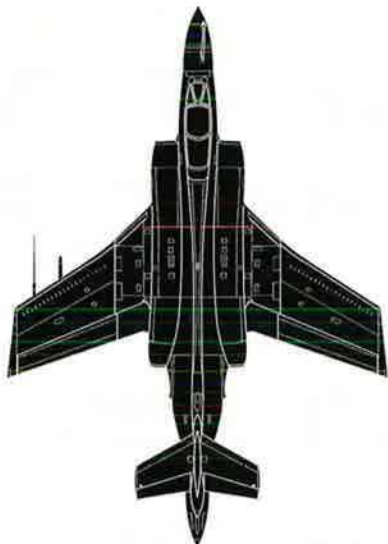
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Buccaneer



The Buccaneer, designed as a naval attack aircraft, flew off Britain's conventional carriers from 1962 until the last of that class was retired in 1978. It provided the backbone of Royal Navy strike operations, including nuclear strike. Built by Blackburn Aircraft (later, Hawker Siddeley), the Buccaneer eventually found a home in the Royal Air Force, where it turned in a creditable combat performance in the Gulf War.

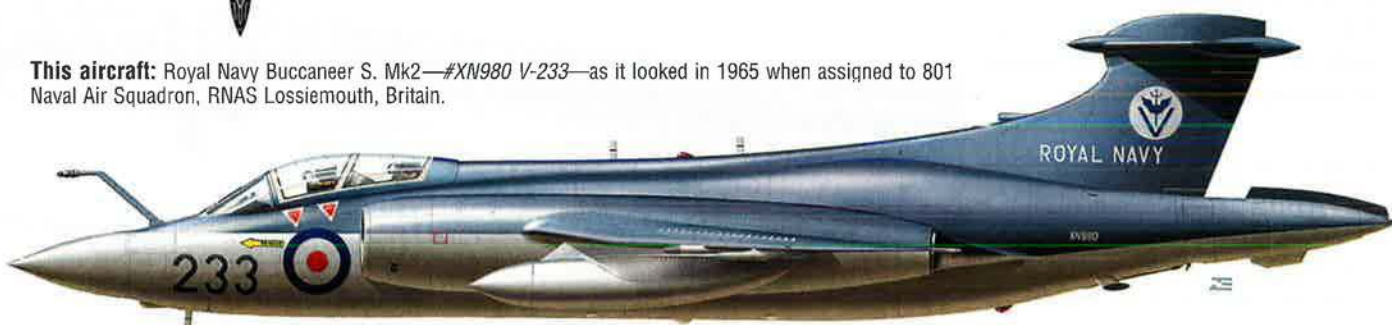
For its day, Buccaneer was a highly advanced aircraft. It was conceived in the 1950s to counterbalance an emerging threat posed by the Soviet Navy's *Sverdlov*-class cruiser. The all-metal, twin-engine aircraft featured thin wings with a 40-degree sweep. It possessed, for the time, extremely advanced electronics; this gave the Buccaneer a valuable all-weather, low-level at-

tack capability. The original variant proved to be underpowered, however, and later models sported much stronger Rolls Royce Spey engines. This subsonic strike aircraft formed a critical part of Royal Navy attack power.

It also became, some years later, a valued element of the RAF. That service procured the Buccaneer following cancellation of both the TSR2 and F-111K, the RAF's preferred options for a new strike aircraft. In addition, the RAF received all the Navy's Buccaneers when the last carriers were withdrawn. Britain even sold a few to South Africa, which used them in various border wars, but a UN embargo choked off further deliveries. After the Gulf War in 1991, all Buccaneers were soon ushered out of service.

—Walter J. Boyne

This aircraft: Royal Navy Buccaneer S. Mk2—#XN980 V-233—as it looked in 1965 when assigned to 801 Naval Air Squadron, RNAS Lossiemouth, Britain.



DOO photo



An RAF Buccaneer S.2B in flight at RAF Mildenhall, UK, in 1988.

In Brief

Designed, built by Blackburn (absorbed into Hawker Siddeley)
 ★ first flight April 30, 1958 ★ number built approximately 200
 ★ crew of two (pilot and observer) ★ **Specific to NA 39 S. Mk2:**
 armament AIM-9 Sidewinder ★ munitions load up to 12,000 lbs of
 bombs, rockets, missiles, including Red Beard and WE.177 nuclear
 types ★ two Rolls Royce R.B. 168-A Spey turbofan engines
 ★ max speed 645 mph ★ cruise speed 510 mph ★ max range
 1,730 mi ★ weight (loaded) 45,000 lb ★ span 44 ft ★ length 63
 ft 6 in ★ height 16 ft 10 in.

Famous Fliers

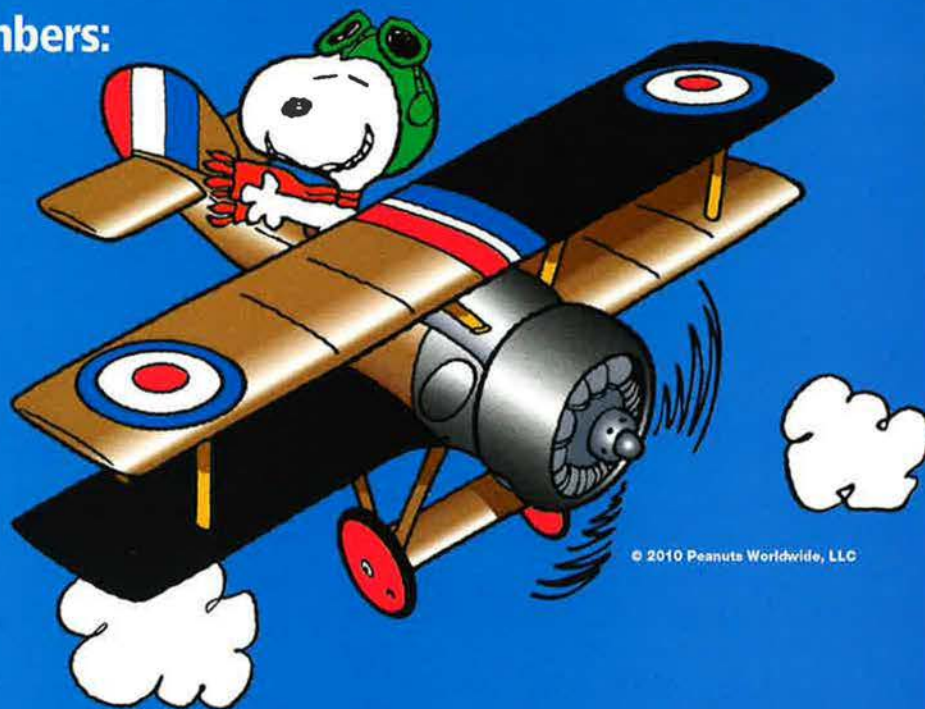
Notables (Britain): E. R. Anson, Norman Browne, Bill Cope, J. F. H. C. de Winton, John Ford, Glenn Mason, J. C. Mather, Carl Wilson.
(South Africa): S. Odendaal, P. Webb. **Test pilots:** J. G. Burns, R. J. Chandler, Gordon Copeman, G. R. I. Parker, B. J. Watson, D. J. Whitehead.

Interesting Facts

Nicknamed "Buck" and "Banana Jet" ★ became (in 1965) first Fleet Air Arm aircraft to make nonstop, unrefueled crossing of the Atlantic
 ★ flew a total of 218 missions in Gulf War, designating targets and dropping laser guided bombs ★ built in six variants ★ tested by US Navy in 1965 on carrier USS *Lexington* ★ adopted by RAF in 1968 after the service had twice rejected it ★ could carry, in bomb bay, a large photoreconnaissance pack or 528-gal ferry tank ★ suffered frequent pilot-induced oscillation ★ sported very large hydraulically operated air brake in tail cone ★ used in combat by South Africa ★ replaced in RN by Sea Harrier and in RAF by Tornado ★ equipped with "retard defense"—four 1,000-lb chute-retarded bombs dropped to deter following attackers.

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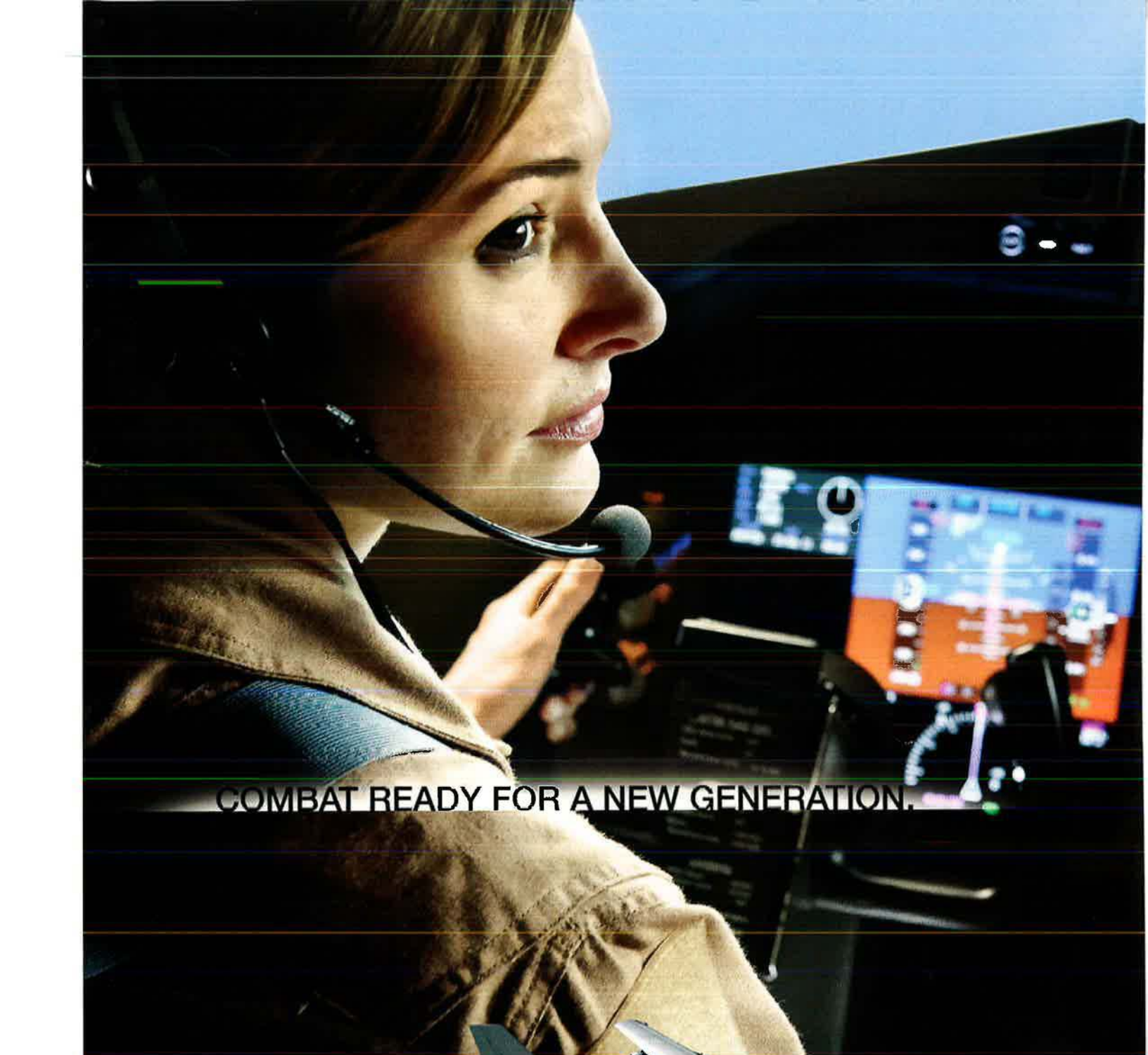
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