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AIR FORCE

JOURNAL OF THE AIR FORCE ASSOCIATION

MAGAZINE

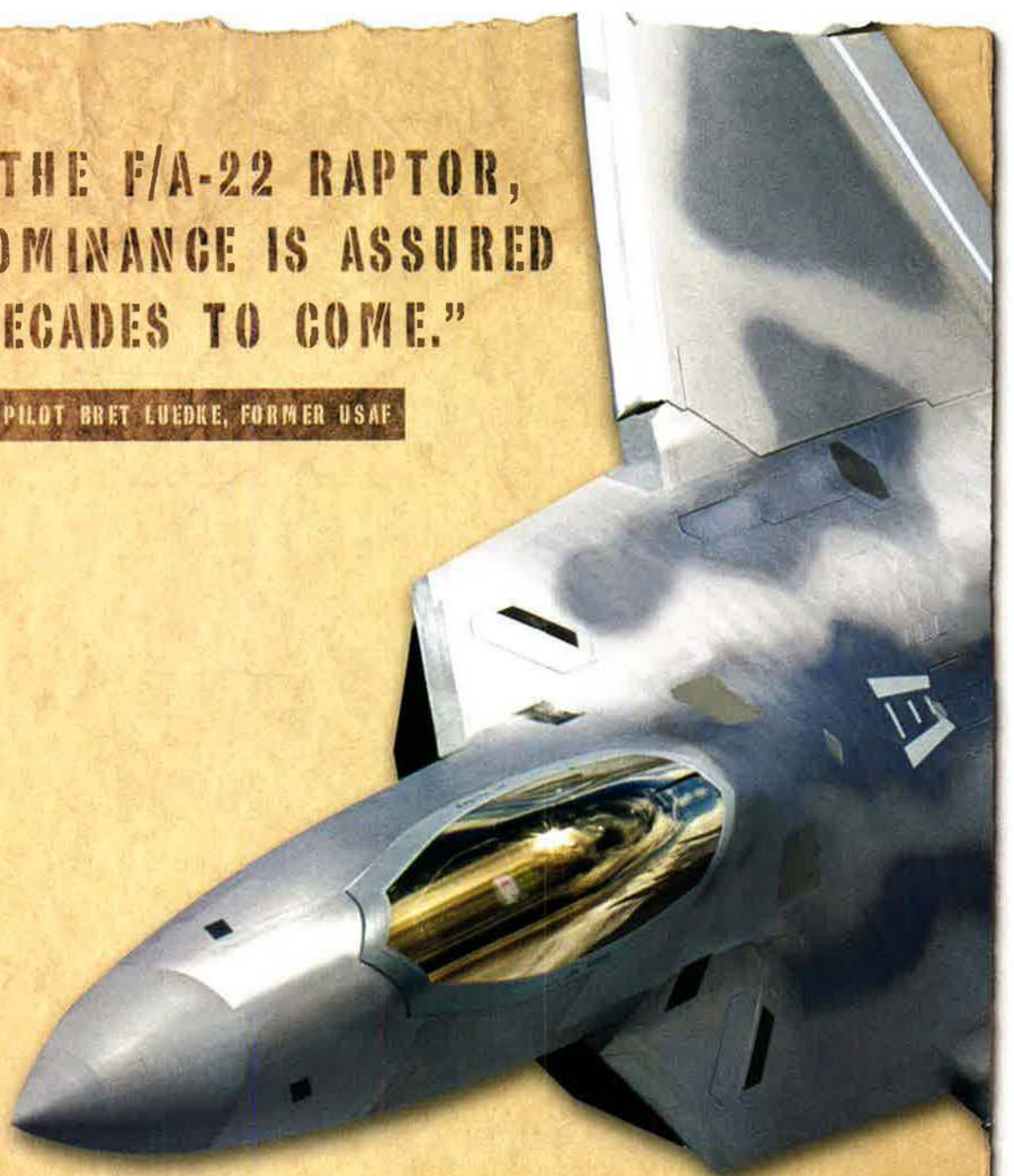
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By Robert S. Dudley, Editor in Chief

The Shadow of Khobar Towers

Not long after the 1996 Khobar Towers bombing in Saudi Arabia, the FBI hit a roadblock; Riyadh was refusing access to some major suspects. According to former FBI chief Louis J. Freeh, President Clinton was asked to use a private meeting with Crown Prince Abdullah to press the FBI's case, but Clinton, instead, hit up Abdullah for a donation to his Presidential Library.

Freeh aired the allegation in his book, *My FBI*, and in an Oct. 9 interview on CBS' "60 Minutes." Given that 19 US airmen died in the attack, his charge is as serious as a stroke, and Clinton's spokesman quickly denounced the claims as "untruths."

The facts may never be established. However, even if the tale of Presidential panhandling is proved true, the deed would not rate as the worst feature of the Khobar Towers affair. The FBI eventually prevailed in the matter, so Clinton's act—if it happened—did no lasting harm. The same cannot be said for other Administration actions.

Khobar Towers was a high-rise apartment complex situated in a congested section of Dhahran, a large city on the Gulf. Buildings 131 and 133 housed airmen from USAF's 4404th Wing (Provisional), which since 1992 had flown missions to enforce a "no-fly" zone over Iraq. The structures were set back 80 feet from a perimeter fence to the north. At 10 p.m. on June 25, 1996, a driver wheeled a sewage tanker truck into the area and parked it just outside the fence. Within four minutes, the tanker exploded.

Investigations showed the vehicle contained 5,000 pounds of advanced plastic explosives, which produced a blast equivalent to 20,000 pounds of TNT—80 times larger than any bomb previously detonated in the kingdom. Its kinetic force sheared off the face of Building 131, not only killing 19 but also wounding hundreds, many severely.

In the first weeks after the blast, DOD officials blamed poor intelligence, saying it was "inconclusive" as a predictor of such an attack. Congress also zeroed in on "intelligence failures," not any individuals. No fingers were being pointed—yet.

Though it took a while, the Admin-

istration finally settled on someone to blame. He was Brig. Gen. Terryl J. Schwalier, commander of the 4404th. In July 1997, after a year of press and political agitation for someone's head, Defense Secretary William S. Cohen concluded Schwalier "could and should have done more" to protect his troops. Cohen emphasized two supposed failures: an ineffective alarm system and inadequate evacuation plans.

Cohen canceled Schwalier's previously approved promotion to major general, ending his career. Schwalier resigned on the same day.

The attack cost USAF 19 airmen, a talented commander, and a principled Chief of Staff.

Only later did DOD fully release two comprehensive Air Force reports. Both found that Schwalier did quite a lot to protect his troops—130 specific security upgrades over his one year in command—and that no reasonable person could have expected him to do more. (See "Khobar Towers," June 1998, p. 41.) Cohen faulted Schwalier for not conducting evacuation *drills*, but Khobar Towers troops had staged six *real* evacuations. Cohen was aware of these and many other facts, but he ignored them.

Said Army Gen. J.H. Binford Peay III, Schwalier's commander: "These guys went for a political decision and ruined a young general's career."

Cohen also stiff-armed the Air Force's top uniformed leader.

Gen. Ronald R. Fogleman, Chief of Staff, went before the Senate Armed Services Committee to argue the attack was an "act of war" and that punitive action would make future military commanders dangerously timid. He strongly advised against punishment, saying it would be "criminal" to "hold somebody accountable ... because the media has created a frenzy based on partial information."

In the end, Cohen, a former Republican Senator from Maine, did not accept Fogleman's advice. This had immediate repercussions. It played

an important role in the Chief's decision to retire a year before the official end of his tour. Moreover, it raised this lingering question: Does anyone actually believe Cohen cared more than Fogleman about personal "accountability"?

Finally, there is the matter of the perpetrators. Hours after the bombing, Clinton vowed, "The cowards who committed this murderous act must not go unpunished."

It didn't take long for investigators to identify the actual bombers; they were members of a homegrown Shiite extremist group, Saudi Hezbollah, an offshoot of the Iran-sponsored organization Hezbollah in Lebanon. However, investigators also developed evidence of a more-disturbing reality—the direct complicity of Iran in the attack.

As Freeh put it in a May 20, 2003, *Wall Street Journal* article: "The evidence became clear that, while the attack was staged by Saudi Hezbollah members, the entire operation was planned, funded, and coordinated by Iran's security services, ... acting on orders from the highest levels of the regime in Tehran."

Indeed, a 2001 US federal indictment charging 13 terrorists for the Khobar Towers murders makes 37 specific references to Iran or Iranian involvement in the bombing.

Yet justice has not been swift. A few of the terrorists were rounded up in Saudi Arabia. Most fled and have remained at large. As for Iran, there have been no consequences. The Administration was distinctly unenthusiastic about pursuing the question of its complicity. In a June 1998 story, the *New York Times* pointed out that the Clinton Administration, at the time, was seeking to "improve relations with the new, relatively moderate government in Tehran."

To sum up: The Khobar Towers attack cost the Air Force 19 dedicated airmen, a talented commander, and a principled Chief of Staff. Most of the killers were never brought to justice, and their state sponsor was appeased. These facts were not lost on the troops, and that is the reason that the Khobar Towers disaster—in the US military, at least—continues to cast a long shadow. ■



I am EADS

My name is Valerie Manning. I am Director of Strategy and Analysis at EADS North America. Armed with a Stanford doctorate in Aeronautics and Astronautics, I prepare EADS to participate and cooperate in the U.S. defense and advanced technology arenas. My focus is on developing and executing strategic opportunities for EADS capabilities to enhance U.S. military programs through growth and partnership. I am an international competitor in track and field. I take challenges in stride. I am a major in the U.S. Air Force Reserves. I am EADS North America.

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At the Crossroads

The editorial "The Air Force at a Crossroads" [September, p. 2] was written as if the author was completely unfamiliar with the work of former Pentagon analyst Franklin Spinney and his briefing on the so-called "defense death spiral." For well over 30 years, the Pentagon has not had a realistic plan for replacing its fleet of tactical aircraft within its existing or projected budgets. Cuts in the size of that fleet have been, and will continue to be, the inevitable result until fundamental changes are made in the way the Pentagon and the Air Force budget for future forces, specify requirements, and develop aircraft.

Yes, indeed, the Air Force is at a crossroads. Will the service acknowledge that the acquisition practices of the past 50 years are not sustainable and finally change its way of doing business? Or will the service continue down the path stated by Spinney and others so many years ago: one aircraft, shared between the Air Force and Navy. The Air Force uses it four days per week, the Navy three. The Marines fly it on leap years.

Andrew Wagner
 Somerville, Mass.

■ *We are, to say no more, aware of Chuck Spinney's work. The bit about going down to one airplane comes not from Spinney but from Norman Augustine, retired Chairman and CEO of Lockheed Martin Corp.—THE EDITORS*

Don't Lump the Weathermen

Battlefield and Special Operations Weather Teams are not the same specialty within the Battlefield Airman Program. [See "The Ground Warriors of Airpower," September, p. 40.] The difference could be likened to the difference between a combat controller and an air traffic controller. Battlefield Weather Teams are assigned to the Army's conventional forces down to the Army's division level and typically perform their duties at the tactical operations center. Special Operations Weather Team personnel perform most of their duties with special operations forces, down to the small tactical team level. They provide observation, forecasting, and weather

application operations from behind enemy lines as members of these special operations teams, often providing the first behind-the-lines weather reporting in a conflict. The skills to perform tasks at this level are considerably different than those required to perform staff weather officer functions at the division level. Because of these differences, Special Operations Weather Team personnel require and receive more specialized combat training than Combat Weather or Battlefield Weather Teams.

Special Operations Weather Teams are manned at a much lower rate than the article indicates—manning is in the mid-60 percent range. These teams are on the Global Military Force Policy Low-Density, High-Demand asset list.

Lastly, the article seemed to focus most of the interviewing efforts on personnel who perform or are responsible for the complicated and important task of close air support. While these individuals are certainly well-informed, they aren't subject matter experts on the other battlefield airman specialties. As the article points out, there are seven specific battlefield airman groups. Readers would like more information from more knowledgeable sources on the other four specialties.

Brady Armistead
 Fort Walton Beach, Fla.

■ *The writer is correct about the seven battlefield airman specialties. Per Air Force Policy Directive 10-35, they are: (1) Combat Rescue Officers, (2) Special Tactics Officers, (3) Pararescue Airmen, (4) Combat Control Airmen, (5) Tactical Air Control Personnel, (6)*

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



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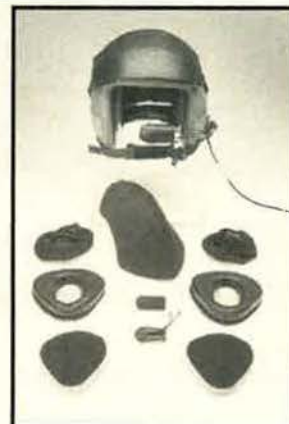
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Special Operations Weather Team (officer and enlisted), and (7) Battlefield Weather (officer and enlisted). Thank you for further explanation of the work of weather personnel.—THE EDITORS

The Enlisted Heritage Hall

On behalf of the enlisted men and women of Air Force Space Command, thank you for your insightful and informative article on the Air Force's Enlisted Heritage Hall. [See "Enlisted Heritage Under Glass," September, p. 52.]

As our air and space professionals move forward through the 21st century, it's important that we continue to celebrate our rich heritage and always remember the accomplishments of the enlisted professionals who came before us. I appreciate AFA's continued strong support of our enlisted force and programs.

CMSgt. Ronald G. Kriete,
Command Chief Master Sergeant
Air Force Space Command
Peterson AFB, Colo.

I just wanted to pass on our sincere thanks for another great story and outstanding photographs covering the Air Force Enlisted Heritage Research Institute and Enlisted Heritage Hall.

There is one item I need to correct and that is with the caption on p. 54 regarding the AFEHRI directors. The

caption states there have only been three men to have served as director; however there have been 10 over the years dating back to 1986. The nine others are: CMSgt. Wayne L. Fisk, CMSgt. Donald B. Hines, CMSgt. Walter J. Davis, CMSgt. Ray Hamilton, CMSgt. Danny L. Chesnut, CMSgt. Michael A. Staples, CMSgt. Richard R. Robold, CMSgt. Gary R. Akin, and CMSgt. David L. Hamel.

CMSgt. Malcolm "Mac" McVicar,
Director, USAF EHRI, EHH
Maxwell AFB-Gunter Annex, Ala.

The Superpower Standoff

The statement "Superpower Standoff, Oct. 28, 1962. USSR agrees to remove missiles from Cuba, ending Cuban Missile Crisis" is correct but incomplete. [See "The Air Force and the Cold War: A Chronology, 1945-91," September, p. 70.] The United States also agreed to remove its intermediate-range ballistic missiles from Turkey (Jupiters) and England (Thors) and cease missile base planning for IRBMs in northern Italy (Thors). These IRBMs were all under control of SAC.

Maj. Gen. Kendall Russell,
USAF (Ret.)
Mercer Island, Wash.

I make no claim as a historian or scholar of the Cold War. Certainly,



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one could include many more events than those that fit in the few pages of the September article. However, I feel that the various wars in Southeast Asia represented another place where US policy checked Soviet expansion and caused them to spend resources beyond their means. Not long after, the tables were turned in Afghanistan, and our support helped cause a Soviet debacle. Afghanistan is also not listed in the chronology.

The cumulative impact of US policy checking Soviet aggression or influence at every move ultimately led to the bankruptcy of the Soviet economic system and was a principal cause of its demise. I believe these are two serious omissions in even this abbreviated Cold War chronology. Possibly, in the coming years, all the wars involving the US and the Soviet Union after World War II until 1991 will get viewed in a larger context. Regardless, I enjoyed the historical review—quite a (cold) war—and I am thankful for the outcome.

Lt. Col. Bill Lawson,
USAFR (Ret.)
Livonia, Mich.

■ *The chronology was done originally as part of a broader project, which deals at some length with the relationship of Korea and Vietnam to the Cold War. To*

some extent, that is a matter of opinion and perspective. As the larger study says (and as I have written elsewhere in Air Force Magazine), President Truman believed Korea was the first step toward global conquest by the Soviet Union. That was not the case, although there were Russian fingerprints all over, including the presence of Russian pilots in North Korean MiG-15s. Why we got into Vietnam is a subject in itself. (Again, I have written extensively on this in the past year, with more coming in future issues.) The "Domino Theory" in Southeast Asia had been proclaimed by Eisenhower. Khrushchev aggravated it with his claim—more hot air than substance—about "wars of national liberation." The Domino Theory was "re-validated" in the early 1960s. However, Vietnam does not appear to actually have been a major challenge from the Soviet Union. The Cold War centered on the strategic confrontation of the United States and the Soviet Union. These are some of the considerations that went into the chronology.—JOHN T. CORRELL

Enjoyed the article on the Cold War chronology, but what happened to the B-58? Has everyone forgotten us already? The author mentioned the initial operational capability of every other

SAC aircraft during that period, but no mention of the Hustler—the fastest and most unique bomber the Air Force ever had. Hopefully, all that time we spent on nuclear alert with the B-58 also had a part in winning the Cold War.

Lt. Col. Dick Dirga,
USAF (Ret.)
Nevada City, Calif.

Combat-ready B-58s set more records than any fighter or bomber aircraft in the world. The B-58 won five aeronautical trophies: Thompson, Bleriot, Mackay, Bendix, and Harmon. The Hustler also set 14 world speed records in international competition. On Sept. 18, 1962, a Hustler carried a payload of 11,000 pounds to an altitude of 85,360 feet. The B-58 took that record, and many others, away from the Russian Air Force. And many of the Hustler's records are still intact today. You would be hard pressed to find an aircraft that garnered more love and affection from all the people who were around her than the B-58. She was a deadly weapons system that should not be forgotten by the free world or your editors.

Lt. Col. B.J. Brown,
USAF (Ret.)
Mountain Home, Ark.

The article completely ignores the

most important advancement in Air Force history: the acceptance of aerial refueling in 1948. No other technology defines us as a superpower more than our ability to project power anywhere in the world with aerial refueled aircraft. The secret early overflights of the Soviet Union that gave us an unparalleled reconnaissance advantage were made possible by aerial refueling. After the nonstop round the world flight of *Lucky Lady II* in 1949, Gen. Curtis LeMay, was prompted to remark, "I guess this proves that an atomic bomb can be dropped anywhere it needs to be dropped." This was a threat that drove the Soviets further into the arms race that was their downfall.

William J. Spelliscy
Orange, Calif.

I was extremely disappointed by your failure to include RB-47Es and Hs in your Cold War chronology. In particular I am thinking of the overflights by Col. Hal Austin and crew and those of the 10th Strategic Reconnaissance Squadron out of Lockbourne AFB, Ohio.

Maj. Harry B. Wolfe,
USAF (Ret.)
South Hadley, Mass.

Adding to the B-26 Record

Your article "The Guns of July 1950"

[September, p. 100] shows a photograph on p. 100 of the Douglas B-26 dropping bombs. For the record, the first bombs dropped in Korea were from one of the B-26s of the 8th Bomb Squadron. I wasn't in the "Friendly Eighth" at that time, but I was there when one of our B-26s dropped the last bombs in the war. We were given that privilege to honor the fact that we were the first to drop a bomb in that war.

I left Korea the same day as the cease-fire took effect. I always figured they had to quit, for I wasn't there to help them! I wound up my Air Force service—as a master sergeant—33 years ago.

MSgt. Gerald L. Norway,
USAF (Ret.)
Fulton, N.Y.

Clarification

The Team Osprey advertisement in the October issue was published as a result of an error by the staff of Air Force Magazine. The contractor had provided Air Force Magazine with a valid change order, but it was misplaced. We regret the mistake.—THE EDITORS

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KNOWING WHICH ARABIC DIALECT TO USE WHEN I LANDED WAS.**

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Verbatim

By John T. Correll, Contributing Editor

Terrorism Not Top Priority

"President Bush should call back from Iraq as many Guard units as necessary to do the job that the Guard is trained to do: Protect Americans at home in times of peril. ... The so-called war on terror will grind on, but there's now a more urgent war to be fought against hunger, disease, misery, and urban disorder on our own soil. Homeland security should begin at home. Just ask the folks of Orleans Parish."—**Carl Hiaasen, columnist and author of best-selling novels, Miami Herald, Sept. 4.**

The Military Mission

"Do we really want to saddle the military with a variety of new, non-combat missions, vastly escalating its commitment to formerly ancillary duties—and diverting its focus from its central mission of combat training and warfighting?"—**Mackubin Thomas Owens, Naval War College professor of national security affairs, New York Post, Sept. 15.**

Fight Over There

"Our basic military approach is that it's better to play the away game than the home game. ... The only way to fight these extremists is the offensive and not the defensive, especially since we are not willing to absorb another attack and then respond to it, but rather go and seek them out."—**Army Maj. Gen. Douglas E. Lute, director of operations for Iraq and Afghanistan, US Central Command, Asharq Al-Awsat, Aug. 25.**

Strange Way To Hide

"Terrorists had no idea what all these leased office facilities were. They didn't even know what the acronyms stand for."—**US Rep. James P. Moran (D-Va.), on Pentagon's Base Realignment and Closure decision to move military activities from dozens of leased offices in Arlington, Va., to Ft. Belvoir, Andrews Air Force Base, and other installations in the Washington metropolitan area, Washington Post, Aug. 26.**

Air Defense Ready

"If, despite our best efforts, terrorists

were to commandeer a civilian aircraft once again as they did on Sept. 11 in order to convert that aircraft into a weapons platform, it is very unlikely that that weapons platform, that that commandeered aircraft, would make its way to the terrorists' intended target."—**Paul McHale, assistant secretary of defense for homeland defense, Aerospace Daily & Defense Report, Aug. 31.**

Time To Get Out

"We should start figuring out how we get out of there. I think our involvement there has destabilized the Middle East. And the longer we stay there, I think the further destabilization will occur."—**Sen. Chuck Hagel (R-Neb.), ABC's "This Week," Aug. 21.**

Wrong

"People who want to toss in the towel were wrong yesterday, they're wrong today, and they'll be wrong tomorrow."—**Secretary of Defense Donald H. Rumsfeld on US position in Iraq, speech at Ft. Irwin, Calif., Aug. 29.**

Extended Airpower Requirement

"As I see the transition into the hands of the Iraqi military, I will continue to see the need for them to require the support from the air until they're able to set up their own ability to support themselves. And that's going to take a while, even after some future withdrawal of ground forces."—**Gen. John P. Jumper, retiring Air Force Chief of Staff, New York Times, Aug. 30.**

Mission Complete

"It has served its purpose and completed its mission. ... We're proud of what we have done. It's time to move on."—**SMSgt. Steven Levin of F.E. Warren AFB, Wyo., who worked with the Peacekeeper missile from 1986 until the last missile was deactivated in September, Air Force Print News, Sept. 16.**

Devolution in Military Affairs

"The enemy has moved into a situation where American power that is dominant is increasingly irrelevant. ... Irregular war is irregular only to us. Because we have come to dominate

outer space and aviation kinds of war above 10 [or] 15,000 feet and out on the deep blue sea, the enemy has been pushed into an area of irregular war. But it's not irregular to them—it's very regular."—**Lt. Gen. James N. Mattis, Marine Corps Combat Development Command, Inside the Pentagon, Aug. 25.**

Voice of Authority

"I am the joint task force commander and you are an asset. Now get the [bleep] moving!"—**Army Lt. Gen. Russell L. Honore, commander of Joint Task Force Katrina in New Orleans, fixing a slowdown in the operation, Newhouse.com, Sept. 5.**

Chirac's Warning

"The use of civilian nuclear energy, which is perfectly legitimate, must not serve as a pretext for pursuing activities that could actually be aimed at building up a military nuclear arsenal."—**French President Jacques Chirac, warning Iran not to pursue nuclear weapons, New York Times, Aug. 30.**

But Why?

"Some of us are wondering why they need civilian nuclear power anyway. They're awash with hydrocarbons."—**President Bush on Iran's nuclear program, Washington Post, Sept. 14.**

Sharing the Peace

"The Islamic Republic never seeks weapons of mass destruction, and with respect to the needs of Islamic countries, we are ready to transfer nuclear know-how to these countries."—**Iranian President Mahmoud Ahmadinejad, official Iranian news agency, Sept. 15.**

Where the Money Goes

"Since 2001, homeland security efforts have been hampered by a grant formula that guarantees each state funding regardless of the likelihood of attack. Risk plays no role. We provide more per capita to low-risk states than to high-risk, heavily populated states."—**US Reps. Nita M. Lowey (D-N.Y.) and John E. Sweeney (R-N.Y.), letter to Washington Post, Sept. 19.**



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The Chart Page

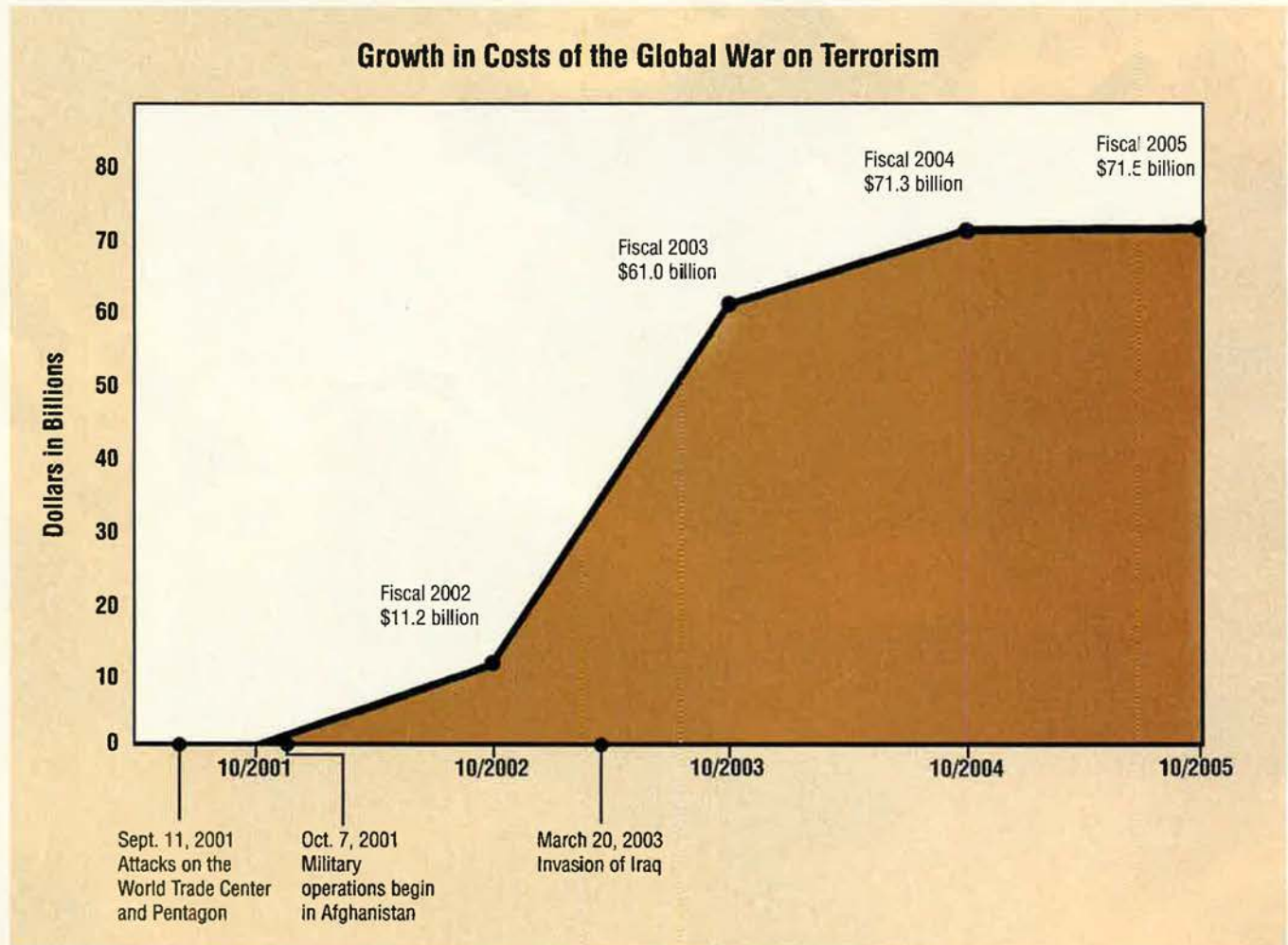
By Tamar A. Mehuron, Associate Editor

War Costs and Context

Spending on US military operations in Southwest Asia has followed an uneven course. As can be seen in this Government Accountability Office chart, the US launched military action in Afghanistan on Oct. 7, 2001, shortly after the Sept. 11 terror attacks. War costs were relatively low for a year, then rose steeply as the US built up for the war in Iraq, fought it, and then became engaged in a bloody campaign

against irregular forces in Iraq. Now, however, the cost of war seems to have reached a plateau at some \$71 billion per year, the approximate figure expended for the past two years.

To put these figures in context: Current costs amount to about six-tenths of one percent of annual US Gross Domestic Product.



Source: Government Accountability Office, "Global War on Terrorism: DOD Needs To Improve the Reliability of Cost Data and Provide Additional Guidance to Control Costs," September 2005.



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Washington Watch

By John A. Tirpak, Executive Editor

“CDR” vs. QDR; Big Changes at AETC; Get Moving on the C-17; Raptor Entering New Phase

Hunter's QDR Alternative

The chairman of the House Armed Services Committee is launching what he hopes will be a “bipartisan ... nonpartisan” Congressional review of specific military threats to the US—and whether there will be sufficient capability to address them.

At a Sept. 14 panel hearing, Rep. Duncan Hunter (R-Calif.) insisted his threat-based review is intended as an alternative—and not a rebuttal—to DOD’s capabilities-based Quadrennial Defense Review, expected to be released in February. However, it’s the first time that a Republican-controlled House has suggested challenging the defense assumptions of a Republican Administration.

At the hearing, Hunter maintained that he has no intention of duplicating the Pentagon’s QDR or second-guessing it. Rather, he and like-minded Congressmen want to make sure nothing falls through the cracks.

“We should try and set up a bipartisan process to consider long-term threats to US national security, reach conclusions about what the armed forces will need to deal with them, and determine what resources will be necessary to get there,” Hunter said in opening the hearing.

Among the witnesses queried on whether this alternative review would be a good idea was Dov S. Zakheim, former comptroller of the Defense Department. Zakheim said the Pentagon is in real danger of giving up more and more needed hardware programs because health care and other personnel costs are eating up an ever-greater percentage of the defense budget.

Hunter noted that he and others had made a “gallant foray” to try to move the health care costs to other parts of the budget earlier in the budget process, so the personnel accounts don’t compete so directly with weapons programs. The move failed.

“Those people costs, and particularly the medical costs, are here to stay,” Hunter admitted.

Without such a move, however, the armed forces will be hamstrung by spending on needs other than weapons, he asserted.

“The alternative is, you keep modernization at 60 percent of what it should be, or you increase the budget,” he said.

The review he has in mind will “have a threat panel and analyze the threat, and hand off the product from the threat panel to ‘gap’ panels” looking at areas that need to be addressed. He was not specific as to what these gaps might be, but Hunter has previously expressed concern with the Pentagon’s cutbacks to shipbuilding and tactical aviation accounts.

China, Hunter said, is one potential threat that he thinks isn’t taken seriously enough by the Pentagon in its capabilities-based analyses.

He also said he wants to get beyond Pentagon answers to routine Congressional budget queries. “We’ve said, ‘How come you didn’t do this?’ [and] the answer is, ‘We didn’t think we’d have enough money,’” asserted Hunter. He now wants the answers to be based on realistic assessment of threats,



Hunter (left, with Rumsfeld) wants a nonpartisan look at threats.

AP photo by Dennis Cook

not on how much money the Pentagon expects to have.

“We’re given half the analysis” he said. “We’re given what DOD thinks we can afford, and it’s their priorities, not ours.”

Hunter said, “I think we owe to the American people at least the option—at least the picture, the blueprint—of what we need to defend the United States.”

His so-called “Committee Defense Review” will “help us place the [Pentagon] QDR into context and to form educated opinions about its strengths and weaknesses,” he explained. It will get under way soon, and “we will be able to incorporate what we learn in the Fiscal Year 2007 defense authorization bill.”

Training for a Changed Force

A shrinking fighter force, the war on terrorism, and technological improvements are among the factors driving some big changes at Air Education and Training Command, according to its new chief, Gen. William R. Looney III.

The Air Force plans to shrink its fighter force by 25 percent over the next 15 years, a fact that requires attention on the front end of the training system now, Looney said.

The service in December will hold “what we call a ‘rated summit’ led by the Chief of Staff,” he told *Air Force Magazine* in September. The meeting will consider “the amount of aircraft that we expect [to] have and the number of cockpits that are needed to be filled,” to determine the right number of pilots to be produced each year for the next decade or two.

“Right now, it’s 1,100 pilots a year,” Looney noted. However, while the number most likely will decline, it could go up, because the greater reliability of the F/A-22 and F-35 will increase the number of sorties that each will be able to fly in any particular day. Given that the Air Force wants to replace about 850 fighters with just 381 F/A-22s, it will need to get more out of them.

“That means they’re going to have to fly a lot more than the F-15s and F-16s” that will be retired, Looney said. While the typical fighter crew ratio is about 1.25 pilots per aircraft,



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the ratio for the F/A-22 could go as high as 2.5 pilots per aircraft, he said.

A pilot will “go fly a mission, get out of the airplane, and then another pilot could get into it and go fly another mission,” Looney explained.

The rated summit is intended to avoid a repeat of the chaotic situation of the 1990s, when pilot production was slashed to 500 a year and many graduates were sent to nonflying jobs while the force was downsized.

USAF photo by TSgt. Brian Blaker



SSgt. Jason Berry climbs onto a Langley AFB, Va., Raptor.

“We paid a significant price for that shortage of pilots,” he said. “We don’t want to have to go through that same, major, drastic reduction, because of the unintended consequences ... it has on the force.”

It remains to be seen if simulation—constantly making big gains in fidelity—can substitute more and more for real-world flying hours, Looney said.

“I’m a big believer” in simulation, he said, noting that C-17 pilots get so much of their training in the machines that “the first time they fly the airplane is for their check ride.”

However, basic training will probably become nearly a week longer, Looney said, owing to the increasingly expeditionary nature of the Air Force mission.

Once, Looney said, the only airmen who faced the enemy were flight crews, and bases were considered “safe havens.” That’s all changed, he pointed out. “Our bases are located in contested territory and we are subject to attack. Whether you are a contracting officer or a civil engineer, or security forces or dining staff, ... today, everybody’s in harm’s way.”

Airmen must now know how to defend themselves and go on the offensive, if necessary. They must know first aid and self-aid. Between marksmanship and the other skills needed for the modern expeditionary mission, it will “probably result, in the next few years, in an additional five days of training,” Looney surmised.

Not all airmen will need to acquire ground combat skills to the same extent as do combat controllers or other special operations forces, he said, but even that community is due for an upgrade. The new Chief of Staff, Gen. T. Michael Moseley, “wants to create a center of excellence for battlefield airmen,” Looney said, to improve the flow of troops through that training pipeline and shore up those specialties where there are shortages.

Given the pace at which new technology is being introduced in the force, Looney said, it is a challenge keeping personnel up to speed with new pods, weapons, and hardware.

He said that new systems, like the Sniper targeting pod, are given to units about to deploy to a combat theater, and

training is done on-site. A decision is made later when to add it to the fighter training syllabus. However, the fighter syllabus doesn’t necessarily get longer because a new system often “bumps” or replaces an older one.

Moreover, such systems are usually easy to understand and “user friendly,” he said, meaning training time is not too much of a burden on the unit in the field.

Looney said AETC is leaning toward step-saving training innovations, such as giving new “heavy” pilots training in “both seats—left and right. ... When the time comes for them to upgrade to aircraft commander, it can be done at home station.” The idea is to skip the need for the pilot to come back to the schoolhouse if some extra work on the front end can obviate the requirement.

Such moves are being made on a case-by-case basis, Looney said.

“You always have to worry about putting a training load on an operational unit,” he said. As a fighter wing commander, “I did not want to have to teach the basics,” he said. “What I wanted to do was refine our skills so we were razor-sharp. I did not want to teach what should have been taught at the schoolhouse.”

The Cost of Being Late

Further delay on releasing and implementing the Joint Staff’s Mobility Capabilities Study, already months overdue, will cost some serious money. That’s because Boeing, which makes the C-17, is already beginning to wrap up production of the airlifter—the only outsize cargo carrier now being built anywhere in the world. Some decisions on further production now could save billions of dollars later.

Boeing’s Ronald C. Marcotte, a former Air Force three-star and now the company’s vice president for airlift and tanker programs, said some suppliers have already finished work on parts for the 180th C-17, the last one on contract under the multiyear procurement plan. Without a promise of more work, Boeing soon will have to start shuttering those parts of the production line with the longest lead times.

Marcotte said Boeing has fronted some money to keep the longest-lead suppliers going and working on the 181st airplane—he said the cost has been “in the millions”—but can’t wait indefinitely for the Defense Department to figure out how it wants to meet lift requirements.

The MCS is the successor to the Mobility Requirements Study 2005, which, despite its name, was done in 2001. It came out right around 9/11 and was immediately obsolete, since it didn’t take into account the lift needs of a war on terrorism half a world away.

However, to meet the airlift requirements set in MRS-05,



USAF photo by TSgt. Cary Humphries

USAF needs at least 222 C-17s, according to AMC officials.

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it would take a force of at least 222 C-17s, according to Air Mobility Command officials. There is general agreement that airlift needs have only gone up in the meantime.

Also delayed is the Intratheater Lift Analysis. That mission is traditionally done by the C-130 Hercules. However, the C-17 showed in Enduring Freedom and Iraqi Freedom that it is well-suited to operate from remote, unimproved airstrips and has been used extensively in the intratheater role. The ILA was to consider how much of that job should be done by the C-17, which can move about three times the load of a C-130, at about twice the cost.

The two lift studies have been rolled into the seemingly endless Quadrennial Defense Review, not slated to be unveiled until next February. However, the MCS study is supposed to come out this month, senior USAF officials have said.

Boeing says the Globemaster III is being built at "the most efficient rate" of 15 airplanes a year. Without a new multiyear contract, the cost of more aircraft would go up by about \$20 million apiece, Marcotte said, and the longer the delay, the higher the bill.

The company has developed proposals for buys of 40, 60, and more additional C-17s, but the Air Force has been compelled to wait for the MCS results before it can take action. The C-17 is now at its cheapest price, since the costs of developing the airplane and a factory to build it have long since been amortized. The airplane also has been improved since earlier versions, with bigger fuel tanks and more elaborate defensive systems.

Boeing officials said it would cost "billions" to restart the C-17 line if there is a lapse in production lasting a year or more.

Marcotte also said Boeing has been working on more enhancements to the C-17. New engines and landing gear, among other changes, could allow the big transport to take off and land in as little as 2,000 feet, loaded.

Last Hurdle for Raptor

The F/A-22 was to have completed follow-on test and evaluation (FOT&E) in mid-October, the last of many pre-deployment tests intended to dispel any questions about its suitability for real-world operations.

FOT&E tests began Aug. 29 at bases throughout the Southwest. The objectives were to demonstrate the Raptor's capabilities at ground attack and to show that it can meet requirements for reliability and maintainability.

At the conclusion of initial operational test and evaluation last year, testers determined that the Raptor was operationally effective, having consistently shot down everything that came up against it in mock dogfights, even when F/A-22s were outnumbered two to one.

However, the fighter earned a rating of "not suitable" for fielding, chiefly because of issues with onboard diagnostics, availability of spare parts, and maintenance procedures, particularly with regard to its stealthy surfaces.

Air Force officials believe all those issues have been addressed, and they expected the F/A-22 to pass this final confidence check without further delay.

"We really need to see if we're ready for operations on the air-to-ground side," said F/A-22 Program Executive Officer Maj. Gen. Richard B.H. Lewis.

Although rated "operationally unsuitable" in IOT&E, "you have to remember this airplane has very high requirements," and didn't need to achieve the "suitable" rating until the end of development, in December, "or until 2,900 hours," Lewis said. He spoke at AFA's Air & Space Conference in Washington, D.C., in September.

The F/A-22 is supposed to be mission capable 85 percent of the time, substantially better than the current standard of about 75 percent among fighters in Air Combat Command.



An F/A-22 releases a 1,000-lb JDAM during a California test.

Despite being brand new, the Raptor is "better than where the average fighters are out there today," Lewis said.

Gen. Ronald E. Keys, ACC commander, said at the symposium that he sees no reason why he won't declare initial operational capability with the F/A-22 at Langley AFB, Va., on schedule in December. He also said he does not need to wait for the results of FOT&E.

The air-to-ground element of the test was to include using F/A-22s to attack both tactical and strategic targets, using the 1,000-pound Joint Direct Attack Munition, or JDAM. The Raptor can carry two JDAMs and can release them at high speed and altitude, greatly expanding the range of the glide bombs and permitting the Raptor a greater standoff capability.

A "strategic" evaluation put F/A-22s in the mode of the F-117: attacking heavily defended, high-value targets while employing stealth and, in the case of the F/A-22, high speed.

Another element had F/A-22s receive new targeting information when already airborne, retargeting the JDAMs en route to the objective.

Keesler's Comeback

The Air Force has made quick progress in getting Keesler AFB, Miss., back up to speed after Hurricane Katrina flooded the base and destroyed some of its facilities.

Keesler is a training base, and the relatively new campus facilities were built to withstand 200 mph winds, said Gen. William R. Looney III, the AETC commander.

"We were very fortunate" that such a standard was set, he said. The campus survived "with very minimal damage." By the middle of September, Keesler started 398 new students for training. They were all in what were deemed "critical skills" such as flight crew, boom operators, and pararescuemen.

"We have developed a priority list of the AFSCs [Air Force Specialty Codes] and where they will fall in," Looney said.

It can't be helped that there will be some bulges in the training pipeline as AETC tries to catch up from the hurricane delays, but Looney said, "We believe that we are significantly ahead of the game." Backups "will be the exception rather than the rule. We're going to get back on track very quickly."

The only big problem Looney saw was that instructors would probably have to serve at Keesler unaccompanied for some months, because the base housing areas and quality of life amenities, such as the base exchange and commissary, were hardest hit.

Although he had not "heard any discussion at an official level about whether or not we should rebuild or reconstitute Keesler," Looney said, "we are moving ahead with the expectation that Keesler will reconstitute and do what it was doing before this hurricane." ■

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Aerospace World

By Breanne Wagner, Associate Editor

Bush Endorses BRAC Moves

President Bush on Sept. 15 endorsed and sent to Congress the Base Realignment and Closure Commission's recommendations to close 22 major military bases and realign 33 more.

The commission would shutter four Air Force, Air National Guard, and Air Force Reserve Command facilities. There were nine identified for closure on the Pentagon's list.

The BRAC panel rejected the Pentagon's call to close Ellsworth AFB, S.D. It also left open Cannon AFB, N.M., allowing the base to operate until at least 2009 and continue in operation after that if it can acquire a suitable mission.

BRAC legislation permits Bush to either accept or reject the plan that the BRAC panel presented to him. A rejection would have prompted the commission to revise their recommendations, but Bush had signaled that he would not hold up the process. After receiving the commission plan from the President, Congress had 45 days to enact a joint resolution of disapproval or the recommendations would become binding.

In all previous BRAC rounds, Congress had gone along.

The Pentagon's recommendations called for closing 33 major installations and realigning 29 others, for a total annual savings of \$5.4 billion. According to the panel, its proposals would yield \$4.2 billion in annual savings.



Photo by Nate Loong

The Air National Guard's 173rd Fighter Wing at Kingsley Field in Klamath Falls, Ore., hosted the 12th biannual air-to-air training exercise, known as Sentry Eagle. An F-15 of 173rd FW's 113th Fighter Squadron comes in for a landing. US Navy and Marine Corps aircraft participated with ANG forces, providing dissimilar air combat training.

USAF Gets First CV-22

The first production CV-22 Osprey tilt-rotor was delivered to the Air Force at Bell Helicopter's facility in Amarillo, Tex., the company reported. The CV-22 is the Air Force variant of the V-22. It will be used by Air Force Special Operations Command.

The CV-22 has changes over the standard V-22 used by the Marine Corps, including long-range fuel tanks, upgraded avionics, and electronic warfare systems. The aircraft also boasts a multimode radar that allows it to fly at low altitude in bad weather or at night. The aircraft has a retractable aerial refueling probe



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and flight engineer crew positions in the cockpit.

The Osprey will replace the MH-53J and some MH-60Gs in USAF service. Initial operational capability is slated to be declared in 2009, after the aircraft completes developmental testing, initial operational test and evaluation, and operational utility evaluation. A team of Bell and Boeing builds the aircraft, which can tilt its engines forward for high-speed flight and tilt them vertically for vertical takeoff and landing.

EADS, Northrop Team Up ...

Northrop Grumman announced Sept. 7 that it had teamed with European Aeronautic Defense and Space for the anticipated tanker replacement competition.

The team would offer to the Air Force a version of the European A330 airliner that it has dubbed the KC-30, which it would equip with a USAF-style refueling boom.

Northrop Grumman would head the new industrial team, which expects its KC-30 to square off against Boeing's KC-767 to replace hundreds of 40-year-old Boeing-built KC-135s in Air Force service.

Team officials told reporters at the Air Force Association's Air & Space Conference in Washington, D.C., that US content and labor would account for more than 50 percent of the aircraft's production. They also noted that Boeing's KC-767 contains significant foreign content.

... While Congress Remains Wary

Northrop-EADS plans call for the KC-30 to undergo final assembly in Mobile, Ala. The team believes that the tanker program could create at least 1,000 new jobs in Mobile.

EADS officials said the Mobile facility would also support "continuing engi-

Help for Acquisition Woes?

The revival and strengthening of an old institution might solve chronic problems with the Pentagon's acquisition system. So said retired Lt. Gen. Richard M. Scofield at AFA's Air & Space Conference in Washington, D.C.

Scofield argued for restoring the Industrial Preparedness Program to full funding and importance. Created in 1947, the IPP was meant to "advance key Air Force manufacturing capabilities," reducing acquisition cost, risk, and technology transition time. Working on everything from technology maturation to depot development, Scofield said the IPP led to the design of the B-52, made the specially fabricated wings of the B-2 possible, and saved enough money on the F-15 program to buy an additional squadron of that aircraft.

Decreased funding, as well as the merger of Air Force Systems Command and Air Force Logistics Command in 1992, reduced the IPP's importance in the 1990s, Scofield said. This was part of a broader "atrophy" of defense industry infrastructure over the last 13 years, he asserted. However, the program never went away completely and is still yielding value.

The IPP helps map a way ahead, not only through design but development, manufacturing, and support, solving "pervasive manufacturing issues," increasing affordability, and reducing depot cycle times and costs, Scofield said.

He argued for a transformed and integrated IPP that would influence the plans for new system development and, importantly, incorporate ultimate manufacturing issues in all phases of a program. Scofield wants funding for the program raised from about \$35 million a year now to \$135 million. It would support USAF advanced technology demonstrations of the kind that led to the Global Hawk and Predator UASes and put far greater attention on upgrading depots. He thinks there should be expanded manufacturing capability to support such technology excursions, and he thinks there should be new specialty centers, such as for stealth.

neering work" on commercial EADS aircraft, such as the A330, A340, and A350 airliners.

The teaming, however, did not immediately win friends in Congress, where "buy American" sentiment and rules have hung over defense budgets in recent years.

House members suggested barring EADS from receiving US defense contracts due to an unsettled trade dispute with Europe over commercial airplane subsidies.

Northrop Grumman officials said the firm had a powerful incentive to get into the tanker business. Worldwide, the company said, it sees a market of \$25 billion to \$100 billion in tankers in years immediately ahead.

New Runway Opens at Balad

An Army C-12 was the first aircraft to touch down at Iraq's improved Balad Air Base, which opened a new runway on Aug. 15.

Balad supports 13,000 flights per month with more than 25 different aircraft, but constant use was beginning to cause its runway to deteriorate. The situation caused great concern that the presence of extensive foreign objects on the runway would hamper the base's F-16 operations.

The runway was often closed part of the day so airmen could remove the foreign object debris and civil engineers could repair the damaged sections of the runway.

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Photo by Rosa Kotly



Air Force Reserve Command receives its first C-17 cargo aircraft during a ceremony Aug. 9 at March ARB, Calif. AFRC's 452nd Air Mobility Wing will fly the new bird, which sits outside a new hangar specifically built for the unit's new C-17s.

missions at the base to continue without interruption, said officials.

DOD Defends Katrina Response

The Pentagon's top leader has challenged the notion that American military forces were slow in reacting to the devastation of Hurricanes Katrina and Rita, which struck within three weeks of each other.

During a Sept. 27 press briefing, Secretary of Defense Donald H. Rumsfeld detailed what he declared was an effective response by the US military, saying that troops "went in very rapidly and peaked very fast." He added, "You don't tend to put forces into a state

without being asked." Rumsfeld went on, "The federal government relies on the state and local governments to be the first responders under the Constitution and under our current arrangements."

He suggested that initial problems in New Orleans and Mississippi were the result of the storm's overwhelming scope, which prevented first responders from acting as quickly as they might otherwise have.

Pilot Error Caused Deadly Crash

An Air Force investigation found that pilot error caused a May 11 HH-60G Pave Hawk crash near Angel Fire, N.M.,

the Air Force announced on Aug. 29. An Air Force flight engineer died in the crash. (See "Aerospace World: Airman Dies in HH-60 Crash," July, p. 17.)

According to the report, bad weather and the flight crew's complacency also contributed to the accident.

The three-man crew was assigned to the 58th Special Operations Wing, Kirtland AFB, N.M. In the instructor-proficiency training flight, Maj. Larry Ouellette, the pilot, turned the helicopter toward the Vietnam Veterans Memorial in Angel Fire so that TSgt. Scott Bobbitt, flight engineer, could see it. Ouellette, however, failed to keep the helicopter at a proper altitude, and he lost control of it.

The aircraft crashed on the memorial's property. Bobbitt died from injuries suffered after he was ejected from the main cabin. The pilot and copilot, Capt. John De Sir, were treated for minor injuries.

The aircraft was destroyed in the crash and subsequent fire.

Rumsfeld: No Hurricane Penalty

The defense program won't take drastic funding hits to help offset the costs to the federal government of Hurricane Katrina, said Defense Secretary Rumsfeld.

At a Sept. 20 press conference, Rumsfeld turned aside reports that the Pentagon could be tapped as a bill-payer for the relief and reconstruction operations on the Gulf Coast. The Pentagon chief said DOD had not received any White House orders to cut spending.

Rumsfeld asserted, "No decisions have been made and no guidance has been given."

As of late September, Congress had already approved \$62 billion for storm relief.

He's more than a pararescueman.



Fuel Run-Up Hits USAF Accounts

Even though the Pentagon may not be asked to bear the full financial burden of hurricane relief, the storms of late summer will certainly hit the services squarely in the pocketbook because of fuel prices.

"The Air Force budget is short \$800 million due to gas cost," according to Maj. Gen. Stephen R. Lorenz, USAF's deputy assistant secretary for budget. After Katrina, oil prices soared above \$60 per barrel, setting new, inflation-adjusted records.

"For every \$10 increase in a barrel of gas, it's a \$600 million increase for the United States Air Force," Lorenz reported at AFA's Air & Space Conference. He said the service is asking the Office of Management and Budget to pick up the extra fuel expense, "instead of [the Air Force] having to eat [the cost]."

If that doesn't happen, a USAF spokeswoman said, the service will "examine options for reallocating funds from lower-priority requirements to our highest priorities to maintain our readiness and warfighter support."

USAF Officer Dies in Egypt

Air Force 1st Lt. Sarah Small on Sept. 19 died in a motor vehicle accident while supporting Exercise Bright Star in Egypt, the service said. The accident occurred in a desert area west of Alexandria.

Two noncommissioned officers were injured in the incident, according to Air Force officials. They were taken to a local hospital and declared to be in stable condition.

Small, 25, was a public affairs officer assigned to the Air and Space Expeditionary Force Center, Langley AFB, Va. She had been on active duty since 2002.

Bright Star 2005 Unveils New Capabilities

After a three-year hiatus, Exercise Bright Star 05/06 in Egypt began on Sept. 10 and concluded on Oct. 3. The last such exercise—the largest noncombat allied training event conducted by the US with its Middle East coalition partners—was canceled due to the wars in Afghanistan and Iraq.

Participating were units from the US Air Force, Army, Navy and Marine Corps, as well as from Egypt, France, Germany, Greece, Italy, Jordan, Kuwait, Netherlands, Pakistan, United Arab Emirates, UK, and Saudi Arabia, according to a Pentagon spokesperson. Some 36 nations were invited to send observers.

US Transportation Command chose the event to unveil the new Joint Task Force-Port Opening (JTF-PO)—a theater distribution pipeline designed to get supplies and equipment quickly to troops on the ground.

During an exercise at Bright Star, JTF-PO opened an airfield, then moved in 1,075 tons of cargo and 2,797 passengers. It received 60 US and coalition aircraft.

"Joining forces between the Army and Air Force allows us to get the resources off the airfield sooner and smarter," said Maj. Kenneth King. He said the techniques would be incorporated into future operations.

Tactical air and special operations forces also held field training exercises in the Egyptian desert. The five-phase program involved approximately 30,000 troops.

This year's exercise focused on training for peacekeeping operations.

The biennial event co-hosted by Egypt and the US was intended to improve readiness and interoperability between US, Egyptian, and coalition forces. It also aimed at enhancing defense capabilities and military-to-military relationships. The first Bright Star was held in 1980.

AMC Awards CRAF Contracts

Air Mobility Command awarded \$2.2 billion in contracts on Sept. 13 for the Civil Reserve Air Fleet Program.

CRAF is comprised of air freight and passenger carriers that agree to let their aircraft and crews be "called up" in time of war to transport people and cargo in augmentation of Air Mobility Command's airlifters. To encourage participation, the Defense Department gives preference to CRAF participants when it contracts for routine cargo and passenger travel.

AMC made the following awards: Alliance Contractor Team, \$1.22 billion; Federal Express Team, \$864 million; UPS Team, \$121 million; Miami Air Team, \$42 million; and Continental Airlines, \$11 million.

Smaller contracts were given to Falcon Air Express, Grand Air Holdings, Lynden Air Cargo, MN Airlines, and Spirit Airlines in awards valued between \$2,000 and \$254,000.

DOD has called on CRAF twice during wartime, first for Operation Desert Storm and then for the Global War on Terrorism.

V-22 Effective, Tests Say

The Pentagon's top testers have rated the V-22 effective and cleared the way for full-rate production to begin.

David W. Duma, acting director of the Pentagon's Office of Operational Test and Evaluation, said in a report sent to Congress Sept. 27 that the V-22 demonstrated "significant mission advan-

He's a husband, a father, and a son. His family is waiting for him at home, and there's only one weapon system that really has what it takes to get the job done and bring him back safely. The HH-92 is the smartest, toughest and most technologically advanced combat search and rescue system. By selecting the HH-92, the U.S. Air Force will be purchasing a superior, network-connected system that will save billions of dollars and thousands of lives.

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Weapons Sales Highest Since 2000

Military equipment sales worldwide have jumped to the highest level since 2000, reports the Congressional Research Service in a new study.

In 2004, they totaled \$37 billion, up from \$28.5 billion in 2003.

The US dominated the market, claiming 33.5 percent of global weapons contracts. However, total US arms sales dropped from 2003 to 2004.

Russia was second in global arms sales, claiming 16.5 percent of contracts worth \$6.1 billion in 2004. Developing countries—among which the CRS included China and India—accounted for \$5.9 billion of those sales. China and India were Russia's biggest customers.

The US sold \$6.9 billion worth of defense gear to developing countries in 2004.

The military market has shifted to developing countries and away from the traditional military and economic leaders, with more than half of all weapons transfers—\$21.8 billion in 2004—going to developing countries.

China has been buying more weapons than any other developing country in the last four years, making \$10.4 billion worth of arms purchases since 2001. But in 2004 alone, India claimed the lead in weapons purchases, followed by Saudi Arabia and then China.

System, decoys, and the Navy's EA-6B and EA-18 jammers.

Boeing and BAE Systems have previously developed electronic battle management and multivehicle command and control software that is being used for the E-10A and J-UCAS. The team also has helped develop electronic warfare programs for the B-52, EA-18G, Compass Call, F/A-22, and F-35.

The Air Force expects to award the predevelopment contract this fall. B-52 SOJ is slated to reach initial capability by 2012.

Support for Iraq War Declines

American support for the war in Iraq is slipping, according to a *New York Times*/CBS News poll taken in September.

tages when compared to the medium-lift helicopters that it will replace.”

Problems that led to several crashes earlier in the program have been resolved, according to the report. In particular, it noted that more than 5,000 hours flown with a redesigned hydraulic system “provide confidence” that the aircraft is “safe to operate.”

The findings cleared the way for full-rate production to begin on a planned 458 aircraft for the Marine Corps, Navy, and Air Force. Plans call for production to rise from 16 this year to 48 per year by 2012.

B-52 Jammer Team Formed

Boeing and BAE Systems have teamed to pursue the Air Force's proposed B-52 Standoff Jammer (SOJ) program.

The B-52 SOJ, considered the centerpiece of USAF's future electronic attack portfolio, would work in concert with the Joint Unmanned Combat Air

Could Scott Speicher Be Alive?

Acting Deputy Defense Secretary Gordon R. England approved a Navy inquiry board report that has found there is no credible evidence that Persian Gulf War pilot Capt. Michael Scott Speicher was killed in action. England has ruled that the Navy aviator should still be carried as “missing in action.”

Speicher's fate has been in doubt since his F/A-18 Hornet was brought down by a surface-to-air missile over Iraq on Jan. 17, 1991.

The possibility that Speicher was an unacknowledged prisoner of war in Iraq figured among President Bush's justifications for ousting Saddam Hussein's government.

The Navy announced on Sept. 8 that Speicher's status will remain “missing/captured” and will not be changed to “killed in action.”

After Saddam was deposed, the Iraqi Survey Group searching for weapons of mass destruction also conducted a search for any evidence of the pilot, but found none to suggest that Speicher might be alive.

The Navy board noted in its report that the government of Saddam Hussein revealed items from Speicher's aircraft, as well as his flight suit, years after the crash. (See “Aerospace World: Navy Changes Status of Gulf War Casualty,” March 2001, p. 13.)

Saddam was questioned about Speicher in 2003, but denied knowing the pilot's whereabouts, according to a US official.

Defense Secretary Donald Rumsfeld, speaking to US forces in Saudi Arabia in April 2003, said the Pentagon was pursuing an investigation into Speicher's fate. A team sent to Iraq that month had found what could have been his initials carved into a prison wall.

A military probe of the initials did not find DNA or fingerprints belonging to Speicher. Handwriting analysis also was unable to identify the writing as his.



Some 52 percent of those polled said they favor immediate withdrawal of US troops from Iraq, even if that country has not yet been stabilized. Only 44 percent said the invasion was the right decision, the lowest percentage since the polling group began asking the same question two years ago.

Of the 1,167 adults polled between Sept. 9 and 13, most of those expressing an opinion—45 percent—said US casualties have been higher than they expected. Only 42 percent said they want the US to stay in Iraq as long as it takes to achieve stability there. Sixty percent of respondents said they disapprove of the way President Bush is handling the war.

Responses tended to break along political lines. Of the Democrats polled, 71 percent want the US to leave Iraq as soon as possible, while this was true of 52 percent of independents and only 31 percent of Republicans.

The vast majority, however—90 percent of all those polled—said they would not approve of cutting domestic programs to pay the financial burdens of occupation and nation-building in Iraq.

Fire-Fighting Predator?

A variant of the RQ-1 Predator unmanned aircraft system is being considered for Smokey Bear duty: watching for fires in national forests.

The Forest Service and NASA are conducting tests to see if unmanned aircraft can spot wayward campfires and lightning strikes and monitor the direction of fires already under way.

The vehicles have appeal because the Forest Service prohibits using manned aircraft for night functions, after a series of crashes in earlier fire seasons. National forests have few lights and ground references, making night flying extremely hazardous,

The War on Terrorism

Operation Iraqi Freedom—Iraq

Casualties

By Sept. 26, a total of 1,917 Americans had died in Iraqi Freedom. This total includes 1,773 troops and five DOD civilians. Of those fatalities, 1,494 were killed in action by enemy attack, and 423 died in noncombat incidents.

There have been 14,641 troops wounded in action. This includes 7,686 who returned to duty within 72 hours and 6,955 who were unable to quickly return to action.

US Airpower Strikes Iraqi Terrorists

US forces launched an air strike in the western Iraqi city of Qaim on Aug. 30, after a conflict erupted between two opposing tribes in the area.

According to Reuters news service, the strikes killed several al Qaeda operatives.

Air strikes were conducted along the Euphrates River in two towns believed to be havens for insurgents. At least 56 people, most of whom were followers of Abu Musab Zarqawi, were killed in the bombings, according to Qaim hospital officials.

Three separate strikes were launched, using precision guided bombs. Abu Islam, a key al Qaeda operative, was killed in the second bombing on a house in Husayba, according to a statement released by the US military.

Another air strike was conducted in Husayba during a separate operation on Sept. 8, targeting Abu Mohammad, who is known to have worked directly for Abu Islam. Abu Mohammad has been involved in numerous car bomb and other explosive device attacks on coalition forces, according to intelligence sources.

Operation Enduring Freedom—Afghanistan

Casualties

By Sept. 26, a total of 234 Americans had died in Enduring Freedom, primarily in and around Afghanistan. The total includes 115 troops killed in action and 119 who died in noncombat incidents such as accidents.

A total of 601 troops have been wounded. They include 225 who were able to return to duty in three days and 376 who were not.

Airpower Supports Afghan Elections

Air Force A-10 Warthogs and EC-130H Compass Call aircraft, along with Navy EA-6B Prowlers, provided close air support to ground troops to ensure that voting and ballot counting went as smoothly as possible during Sept. 18 elections in Afghanistan.

"We're in the skies providing an umbrella of protection by providing electronic jamming support to ground troops and voters," said Cmdr. Jay Johnston, an electronic attack squadron commander.

The A-10s were sent from Pope AFB, N.C., and Davis-Monthan AFB, Ariz. EC-130Hs were deployed from Davis-Monthan and EA-6Bs from NAS Whidbey Island, Wash.

One US soldier and two Afghan soldiers were injured on voting day, when their patrol came under fire from suspected Taliban militants, according to TSgt. Marina Evans, a US military spokeswoman.

Afghan police and the US military patrolled at more than 6,100 polling places, ensuring the security of the elections.

The election was the first of its kind since 1969. Some 12.5 million Afghan voters registered and the election was considered a success.

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especially in the presence of smoke. Cost is a factor. Some of the vehicles cost millions of dollars. Alternatively, NASA is eyeing the Altair, a UAS built by General Atomics Aeronautical Systems. The Altair is an extended-wing version of the Predator B used by the Air Force in Iraq and Afghanistan.

Other UAS models being considered are the APV-3 or the MLB Bat, which both cost less than \$50,000 each.

Unmanned Force to Expand ...

The Air Force plans a substantially bigger fleet of large unmanned aircraft

in the near future, senior officers have said.

Lt. Gen. Donald J. Hoffman, military deputy to the assistant secretary of the Air Force for acquisition, told attendees at a Capitol Hill symposium in September that USAF plans to acquire 51 Global Hawks, more than 100 Predator A models, and a large number of Predator B models. The service now has only a pair of production-model Global Hawks and a handful of Predator systems. Hoffman said the Global Hawks gradually will take over some of the mission of the U-2.

The Global Hawk is a very high-flying aircraft that can surveil the ground with mapping radar and infrared sensors. The Predator is a lower-flying aircraft that can conduct video surveillance, designate targets for other aircraft, and carry light weapons.

The two types of unmanned aircraft have been highly successful in Iraq and Afghanistan, Hoffman said, and he expects "other US agencies to buy them for domestic issues such as disaster relief and border security."

... Especially in the Pacific

The Pacific shapes up as a growth area for unmanned aerial systems. Gen. Paul V. Hester, commander of Pacific Air Forces, told a recent Capitol Hill symposium that such aircraft will be necessary in larger numbers in his theater of operations.

"As we develop the Global Hawk," said Hester, "we are going to station them in Guam, and we are looking for a consortium of countries to help us out [with basing]." Among the potential helpers: Australia, Japan, Singapore, and South Korea.

The Global Hawk will increase PACAF's reconnaissance capabilities. The drones can fly to the Sea of Japan or the East China Sea, and remain on station for 16 hours, or to the Strait of Malacca and loiter for 12 hours before returning to base, according to Hester.

The Air Force also would like to deploy Predator A and B aircraft to South Korea. According to Hester, Predator B is "capable of doing the full spectrum [of activities], from watching to shooting."

USAF Leaves Rhein-Main

The United States Air Force on Sept. 30 closed up shop at Rhein-Main AB, Germany, wrapping up a long, colorful history of operations in World War II and the Cold War. The formal departure ceremony took place Oct. 10.

Located near Frankfurt, Rhein-Main was the main western operating base during the 1948-49 Berlin Airlift. Air transport provided the only means for resupplying Berliners in the city's western sectors which had been cut off by the Soviet blockade.

The base was a major USAF European hub throughout the Cold War. It was also a major transit site for US military personnel and equipment headed to Iraq and Afghanistan in recent military operations in those countries.

Under a 1999 bilateral agreement, the base is to be returned to the German government. The official turnover is slated for December, but US Air Forces in Europe officials said the last military mission from Rhein-Main took place on

Senior Staff Changes

RETIREMENT: Maj. Gen. Paul J. Lebras, Maj. Gen. Dale W. Meyerrose, Lt. Gen. John W. Rosa Jr.

NOMINATION: To be Major General: William T. Lord.

PROMOTIONS: To Lieutenant General: Gary L. North. To ANG Brigadier General: Roger F. Clements, James S. Goodwin.

CHANGES: Brig. Gen. Robert R. Allardice, from Dir., Personnel, AFMC, Wright-Patterson AFB, Ohio, to Dir., Airman Dev. & Sustainment, DCS, Personnel, USAF, Pentagon ... Maj. Gen. (sel.) Dana T. Atkins, from Vice Cmdr., 7th AF, Osan AB, South Korea, to Dir., Ops., PACOM, Camp H.M. Smith, Hawaii ... Brig. Gen. Paul F. Capasso, from Dir., C4 Sys., TRANSCOM, Scott AFB, Ill., to Cmdr., 81st Training Wg., AETC, Keesler AFB, Miss. ... Brig. Gen. Thomas F. Deppe, from Dir., Log. & Comm., CIO, AFSPC, Peterson AFB, Colo., to Cmdr., 20th AF, AFSPC, F.E. Warren AFB, Wyo. ... Maj. Gen. Paul J. Fletcher, from Asst. Dep. C/S, P&P, USAF, Pentagon, to Cmdr., 3rd AF, USAFE, RAF Mildenhall, UK ... Maj. Gen. Douglas M. Fraser, from Dir., Air & Space Ops., AFSPC, Peterson AFB, Colo., to Cmdr., Alaskan Command, PACOM, Elmendorf AFB, Alaska ... Brig. Gen. Marke F. Gibson, from Cmdr., 354th FW, PACAF, Eielson AFB, Alaska, to Vice Cmdr., 7th AF, Osan AB, South Korea ... Maj. Gen. Michael C. Gould, from Cmdr., 3rd AF, USAFE, RAF Mildenhall, UK, to Cmdr., 2nd AF, AETC, Keesler AFB, Miss. ... Brig. Gen. Jan-Marc Jouas, from Cmdr., 18th Wg., PACAF, Kadena AB, Japan, to Cmdr., AIA, ACC, Lackland AFB, Tex. ... Maj. Gen. Frank G. Klotz, from Cmdr., 20th AF, AFSPC, F.E. Warren AFB, Wyo., to Vice Cmdr., AFSPC, Peterson AFB, Colo. ... Brig. Gen. Stephen L. from Lanning, from Spec. Asst. to Cmdr., AFSPC, Peterson AFB, Colo., to Dir., Log. & Comm., CIO, AFSPC, Peterson AFB, Colo. ... Lt. Gen. Daniel P. Leaf, from Vice Cmdr., AFSPC, Peterson AFB, Colo., to Dep. Cmdr., PACOM, Camp H.M. Smith, Hawaii ... Maj. Gen. (sel.) William T. Lord, from Cmdr., 81st Training Wg., AETC, Keesler AFB, Miss., to Dir., Info., Svcs., & Integration, SECAF, Warfighting Integration and CIO, Pentagon ... Maj. Gen. Stephen R. Lorenz, from Dep. Asst. Secy. for Budget, Asst. SECAF, Financial Mgmt. & Comptroller, USAF, Pentagon, to Cmdr., AU, AETC, Maxwell AFB, Ala. ... Brig. Gen. Harold W. Moulton II, from Dir., Standing Jt. Force Headquarters-North, NORTHCOM, Peterson AFB, Colo., to Cmdr., 18th Wg., PACAF, Kadena AB, Japan ... Maj. Gen. Gary L. North, from Dir., Ops., PACOM, Camp H.M. Smith, Hawaii, to Cmdr., 9th AF, ACC, Shaw AFB, S.C. ... Lt. Gen. John F. Regni, from Cmdr., AU, AETC, Maxwell AFB, Ala., to Superintendent, USAFA, Colorado Springs, Colo. ... Maj. Gen. Edward A. Rice Jr., from Cmdr., 13th AF, PACAF, Hickam AFB, Hawaii, to Dir., Air & Space Ops., PACAF, Hickam AFB, Hawaii ... Brig. Gen. (sel.) David J. Scott, from Vice Dir., Ops., NORAD, Peterson AFB, Colo., to Cmdr., 354th FW, PACAF, Eielson AFB, Alaska ... Brig. Gen. (sel.) Janet A. Therianos, from Sr. Mil. Asst. to SECAF, Pentagon, to Spec. Asst. to Asst. Vice C/S, USAF, Pentagon ... Maj. Gen. Loyd S. Utterback, from Cmdr., 2nd AF, AETC, Keesler AFB, Miss., to Dep. Cmdr., PACAF, Hickam AFB, Hawaii.

SES CHANGES: Fred. P. Lewis, to Dep. Dir., Distribution Portfolio Mgmt., TRANSCOM, Scott AFB, Ill. ... Joseph M. McDade, to Dep. Dir., Airman Dev. & Sustainment, DCS, Personnel, USAF, Pentagon ... Paul F. McManamon, to Chief Scientist, Sensors, AFRL, AFMC, Wright-Patterson AFB, Ohio ... Kenneth E. Miller, to Senior Advisor, Acq. Matters, OSAF, Pentagon ... Stan C. Newberry, to Senior Tech. Dir., AFC2ISR Center, OSAF, Warfighting Integration & CIO, Langley AFB, Va. ... Winifred E. Okumura, to Dep. Dir., Capabilities Integration, AFMC, Wright-Patterson AFB, Ohio ... Kenneth I. Percell, to Exec. Dir., Warner Robins ALC, AFMC, Robins AFB, Ga. ... Leif E. Peterson, to Dir., Personnel, AFMC, Wright-Patterson AFB, Ohio ... Gregory H. Petkoff, to Principal Dep. Staff Judge Advocate, AFMC, Wright-Patterson AFB, Ohio ... Eric L. Stephens, to Dir., 31st Human Sys. Wg., ASC, AFMC, Brooks-City Base, Tex. ... Robert E. Tarleton Jr., to Dir., Comm. Functional Integration Office, OSAF, Natl. Security Space Office, Pentagon ... Barbara A. Westgate, to Exec. Dir., AFMC, Wright-Patterson AFB, Ohio.

China Buys Aerial Refueling, Lift Aircraft

Amidst rising concerns about its military buildup, China has inked a deal to buy 38 large aircraft from Russia, for aerial refueling and cargo missions. The purchase is worth about \$1.5 billion. The move is seen as boosting China's power-projection capabilities.

Thirty of the aircraft will be Il-76TD airlifters, roughly similar in size and capability to the C-141 cargo aircraft soon to be phased out of the USAF inventory. The other eight are Il-78M aerial tankers, which will give China a new capability to refuel its most advanced fighter and strike airplanes.

With aerial refueling from the new tankers, Chinese fighters can now reach Andersen AFB, Guam, according to the International Assessment and Strategy Center.

The order was signed on Sept. 9. The pace of delivery was not announced.

China has converted an Il-76 into an airborne warning and control platform similar to the US E-3 AWACS. After taking delivery of the new airlifters, it will have about 50 modern jet-powered transports.

Russia provided Il-78 tanking support to Chinese fighters during Peace Mission 2005, the joint exercises between Russia and China in August. (See "Aerospace World: China, Russia Stage Large Exercise, October, p. 20.) China also used its Il-76s to conduct large paratrooper drops during the exercise.

Sept. 26 and the final commercial flight on Sept. 30.

Strategic US airlift capability has been relocated from Rhein-Main to Ramstein and Spangdahlem Air Bases in western Germany.

Minuteman Launches Bunch Up

In a flurry of test activities, space operators at Vandenberg AFB, Calif., launched three unarmed Minuteman IIIs in a period from late August through September.

An Aug. 26 flight tested the integration of a safer re-entry vehicle.

Two September launches—on Sept. 7 and Sept. 14—were used to test the Minuteman's reliability and accuracy.

All of the flight hardware landed in a predetermined target area near Kwajalein Atoll in the Pacific Ocean's Marshall Islands.

Why the brisk pace of launches? Two of the tests had been planned for earlier months, but they had been scrubbed for routine reasons, noted spokesman Maj.

Todd Fleming. The launch pace was "not unprecedented, but it is unusual," he added.

USAFA Commandant Cleared ...

USAF investigators cleared Brig. Gen. Johnny A. Weida, Air Force Academy commandant, of the last remaining charges that he improperly proselytized non-Christian cadets.

In June, the Air Force inspector general's office dispensed with six of seven allegations. The IG dropped the seventh and final charge on Sept. 7, according to an Air Force spokeswoman.

Weida was accused of using his position to "publicly" endorse religious beliefs and that his actions, "taken overall," "improperly established a religion within the USAFA environment," wrote the IG. The last charge concerned a "communicative code that could have been used to facilitate the proselytization of non-Christian cadets."

A task force set up earlier by the Air Force to investigate claims of religious intolerance throughout the academy found no religious discrimination. It did find what it called a lack of sensitivity and confusion about what is acceptable when it comes to sharing religious faith. (See "Washington Watch: No 'Overt' Religious Discrimination Found at USAFA," August, p. 11.) The Air Force has issued new religious tolerance guidelines.

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News Notes

By Tamar A. Mehuron, Associate Editor

■ Correcting earlier guidance, Air Force Personnel Center officials at Randolph AFB, Tex., gave notice Sept. 2 that airmen with cumulative credit awarded for combined joint task force deployments may not combine those credits with present or future joint duty assignments. The earlier guidelines said that such credits could be combined.

■ Predator MQ-1B unmanned aerial systems and their operators assigned to the 15th Reconnaissance Squadron, Nellis AFB, Nev., achieved record combat hours earlier this year. They flew a record 27,000 hours from June 2004 through June 2005.

■ In late August, Pratt & Whitney engineers started assembling the first flight-test F135 engine for the F-35 Joint Strike Fighter. The conventional takeoff and landing engine version is being assembled in Middletown, Conn.

■ Air Force Reserve Command broke two records in its recruiting efforts this year, attaining its 2005 goal of 8,800 accessions on Aug. 11, well ahead of the Sept. 30 deadline. As of Aug. 22, the command had gained 9,048 recruits. Its mandated end strength is 76,100.

■ Air Combat Command concluded that an engine fire caused the March 27 crash of an MQ-1 Predator UAS in Southwest Asia. The accident investigation report, released Aug. 26, determined that leaking fuel made contact with the turbocharger, alternator, or cylinder head. That sparked a fire. The Predator, assigned to the 15th RS, Nellis AFB, Nev., was destroyed on impact.

■ USAF tapped 68 airmen out of 467

considered for Officer Training School, Air Force officials announced Sept. 2. That is a 14.6 percent selection rate.

■ Northrop Grumman on Aug. 25 received a \$60 million USAF contract for five Global Hawks with airborne signal intelligence processors. Four will have enhanced integrated sensor suites. The contract also includes one mission control element and one launch recovery element. Work is to be completed by May 2006.

■ Air Force Reserve Command needs qualified officers and enlisted personnel to fill 1,900 positions in high demand but thinly populated fields such as security forces, combat rescue, and intelligence. Information about vacancies and applications can be found at the Web site, www.re.hq.af.mil/agr/agrhome2.html.

■ A small, inexpensive spacecraft developed by Air Force Research Laboratory technicians has conducted repeated rendezvous maneuvers with the Orbital Science Minotaur that launched it into orbit, Space.com reported Sept. 12. The XSS-11 is demonstrating capabilities for in-space servicing and repair of other spacecraft and close-in inspection of objects in space—capabilities USAF deems essential for military space.

■ All five Air Force Reserve Command combat logistics support squadrons were inactivated Oct. 1, as part of an effort to realign force structure. The units affected were: 419th CLSS, Hill AFB, Utah; 433rd CLSS, Lackland AFB, Tex.; 445th CLSS, Wright-Patterson AFB, Ohio; 507th CLSS, Tinker AFB,

Okla.; and 622nd CLSS, Robins AFB, Ga. They will go to other units.

■ Four National Reconnaissance Office employees were named the NRO Pioneer Class of 2005, in recognition of their singular achievements in the field of national reconnaissance. They are: Robert E. Eisenhower, Roger C. Marsh, Edward A. Miller, and Wayne L. Proffitt.

■ Satellite operators at Schriever AFB, Colo., successfully moved four aging Cold War military communications satellites 200 miles away from their geosynchronous orbits to an area designated for space junk. The four Defense Satellite Communications System spacecraft, orbiting at 22,000 miles above the Earth, were relocated during a four-month period.

■ Gen. Robert H. Foglesong, commander, US Air Forces in Europe, was honored Aug. 26 with induction into the Order of the Sword, the highest tribute given by the enlisted force.

■ The American Association of Museums recently awarded national accreditation to the Museum of Aviation, located next to Robins AFB, Ga. The seal of excellence places the museum in a select group of only nine aviation museums in the US that attained the AAM measures of achievement.

■ AT&T Government Solutions, Vienna, Va., received a \$95 million contract to provide engineering and technical personnel to the National Air and Space Intelligence Center Directorate of Data Exploitation Division. Work will end in September 2010.

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... And His Promotion Sought

The disposal of the charges against Weida immediately revived USAF's effort to promote him.

In July, the Senate put on hold Weida's planned promotion to major general, but Acting Air Force Secretary Pete Geren wrote a letter to the Armed Services Committee on Sept. 6 asking for full Senate approval of Weida's promotion, according to wire reports.

Geren said that Weida had acknowledged that his actions "were inappropriate."

Air Force officials announced in early October that Weida would leave the academy—after just a year on the job—to become the director of capability integration and transformation at Wright-Patterson AFB, Ohio. ■

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Action in Congress

By Tom Philpott, Contributing Editor

Senate Votes To Stop PTSD Review

The Senate has voted to block the Department of Veterans Affairs from conducting a review of documents concerning 72,000 supposedly settled cases of veterans rated 100 percent disabled from post-traumatic stress disorder.

On a voice vote Sept. 22, the Senate barred the VA from executing plans to review five years' worth of PTSD cases until it justifies the action to Congress. The amendment also would prohibit the VA from withholding PTSD compensation, except in cases of fraud.

A House-Senate conference committee will decide whether the amendment survives. House Veterans' Affairs Committee Chairman Steve Buyer (R-Ind.) has expressed concern about recent growth of PTSD claims.

The VA had announced that, starting in January 2006, it would begin a document review of PTSD claims settled from Oct. 1, 1999, through Sept. 30, 2004, and resulting in an award of a 100 percent disability rating.

The massive case review was triggered by a VA inspector general review of 2,100 randomly selected PTSD cases. The IG found that 25 percent lacked documents to verify traumatic incidents on which PTSD findings were based.

In light of this evidence, VA officials decided to restudy the paperwork.

VA spokesman Scott Hogenson said the second look would not reconsider diagnoses but would only verify that veterans provided the necessary paperwork to support their post-traumatic stress claims.

From 1999 through 2004, annual payments of PTSD compensation jumped from \$1.7 billion a year to \$4.3 billion. If the error rate is 25 percent, "questionable payments" would have cost \$860 million in 2004 alone.

Swamped by complaints about the review from PTSD veterans and advocacy groups, Senate Democrats stepped in. Sen. Barack Obama (D-Ill.) called the planned PTSD case review "unnecessary and costly."

The amendment, he added, seeks to ensure that the VA "cannot correct its errors by taking money away from veterans."

Aiding Katrina Employers

Congress passed the Katrina Emer-



Sen. Barack Obama (left), an Illinois Democrat, took on the VA. He is joined at a news conference by Sen. Richard Durbin (D-Ill.)

gency Tax Relief Act of 2005 (HR 3768) with a provision from the Senate to help small businesses, including those that employ National Guard and Reserve personnel.

Current law allows employers to deduct the cost of salaries paid to employees. This bill would provide a 40 percent tax credit for wages of up to \$6,000 after Aug. 28, 2005, and before Jan. 1, 2006, by employers located in the disaster zone.

Employers of activated Guardsmen and Reservists would be eligible for the tax assistance if they participate in a "pay protection" effort for their deployed employees.

Companies would continue to pay reservists enough that the troops' total income did not fall while they are deployed, when their pay was combined with military pay and allowances.

Helping Vets Weather Katrina

Also because of Katrina, the Senate Veterans' Affairs Committee modified legislation aimed at improving veterans' health care, with new protection for military veterans displaced by the storm.

The Veterans' Health Care Act of 2005 would provide free VA health care, through Jan. 31, 2006, to veterans affected by Katrina.

The legislation already had many other provisions to help veterans. The

most significant would:

- Allow reimbursement to eligible veterans of certain expenses incurred while receiving emergency care in non-VA facilities. To qualify, veterans must be enrolled in the VA health care system, have received care from the VA in the 24 months prior to the emergency episode, and meet other conditions.

- Exempt veterans from VA co-payments for hospice care and—if they are former prisoners of war—for extended care services.

- Allow VA to furnish care to a newborn child of a female veteran for up to 14 days after birth, if the child was delivered in a VA or VA-contract facility.

Posse Comitatus

Sen. John Warner (R-Va.), Senate Armed Services Committee chairman, wants to review the Bush Administration concept of broadening the role of the military in national emergencies.

On Sept. 25, the President urged Congress to study whether the Defense Department should take the lead in coordinating the nation's response to hurricanes and other domestic catastrophes.

Bush conceded that the much-criticized federal response to Hurricane Katrina, and federal coordination and communication with state and local authorities, was inadequate in the first days after the hurricane destroyed

AP photo by Susan Walsh

portions of the levees surrounding New Orleans.

A few weeks later, during Hurricane Rita, Bush watched the storm push ashore in rural areas of Louisiana and Texas from US Northern Command headquarters at Peterson Air Force Base in Colorado Springs, Colo.

Bush said he was impressed by NORTHCOM and its capabilities and urged a robust discussion of the best ways to organize and deliver help to portions of the country hit by natural disasters or terrorist attacks.

For example, Bush suggested the military could determine and mobilize the national assets needed to respond to disaster.

Warner said the issue "deserves serious, timely review" by both Congress and the executive branch. Warner promised that his panel would review the ramifications of an expanded military mission on US soil.

Meanwhile, the committee awaited "more specifics" from the Administration.

Warner noted that expanding the military's current role in large disasters would affect "the power of the states to respond to emergencies in their own localities, and, second, it would increase the power of the federal government."

He urged Defense Secretary Donald H. Rumsfeld to study implications of an expanded military role in disaster relief. The Posse Comitatus Act bans active duty military from performing domestic law enforcement.

SBP Open Season

Retirees who declined Survivor Benefit Plan coverage as they left service have until Sept. 30, 2006, to enroll in a much-improved SBP. But the entry fee will not be cheap.



AP photo by Dennis Cook

Warner will study Bush idea.

Under SBP, new retirees forfeit 6.5 percent of their monthly retired pay to fund the plan premiums. In return, the surviving spouse, ex-spouse, or dependent children receive an annuity when the retiree dies.

Most surviving spouses, for example, get 55 percent of "covered" retired pay until age 62, when benefits drop as low as 35 percent.

Congress last year voted to phase out that drop in SBP benefits at age 62 in four steps. On Oct. 1 this year, SBP benefits payable at age 62 rose to 40 percent of covered retired pay. By April 2008, the offset will be gone.

Total SBP benefits are projected to climb by \$6.8 billion over 10 years.

Retirees who once turned down SBP now have a better plan to consider for their spouses. Most can buy in during the open season for a lump-sum amount plus future premiums.

The lump sum, by law, must cover all missed premiums since initial SBP eligibility at retirement, plus an interest charge of 6.25 percent.

Delayed enrollment, however, is more expensive for those who retired in the last six years. For them, the lump-sum buy-in formula includes an extra cost to cover any added "risk" to the retirement fund from delayed enrollments during the open season. Their lump sum payments are set high enough to end subsidy of their SBP coverage.

Retirees can get more information on the open season and help in calculating lump sum payments at: <http://www.defenselink.mil/actuary/>.

Lottery Tickets

Defense officials have asked Congress for authority to sell state lottery tickets in Stateside exchanges. Advocates argue that the lottery sales could help offset a sharp drop in revenues expected from decreased use of slot machines at overseas bases.

Profits from lottery ticket sales, like those from slot machines, could be used to fund on-base recreational activities that, by law, must be self-sustaining.

Slot machine revenues overseas will decline, officials predict, as the Defense Department implements a plan to bring home more than 70,000 US troops, and their families, now based in Europe and South Korea.

Peter Isaacs, chief operating officer for the Army Community and Family Support Center, estimates that the Army inventory of slot machines will drop by 800. Total revenue to support Army morale, welfare, and recreational activities is estimated to decline by \$50 million.

The Air Force won't see the same impact. Net USAF revenue from slot machine operations in Fiscal 2004

was \$10.6 million—about one-sixth the Army's net revenue.

The Army and Air Force Exchange Service drafted the lottery ticket proposal now before Congress. John M. Molino, deputy undersecretary of defense for military community and family policy, said the motivator for AAFES is the obvious business opportunities that Stateside lottery sales present.

In 2004, more than 178,000 retail outlets sold state lottery tickets, earning commissions of more than \$3 billion. Military exchanges want a part of that business.

Lottery retailers earn five percent to eight percent on each ticket sold, depending on state rules and incentives.

Authorization Bill Delayed

The Senate was expected to delay re-opening floor debate on its 2006 defense authorization bill (S 1042) until Oct. 19—almost three weeks into the new fiscal year.

The House passed its defense authorization bill June 6.

Military personnel, retirees, reservists, and their families still had much at stake in proposed amendments to the Senate bill. The most important, and costly, would:

- End a reduction in military survivor benefit annuities for survivor spouses who also receive VA Dependency and Indemnity Compensation and see a dollar-for-dollar offset.

- Move up by three years, to Oct. 1, 2005, the start date of the paid-up premium rule for the Survivor Benefit Plan. This would allow retirees who have paid premiums for at least 30 years, and have reached age 70, to end those deductions from their retired pay.

- Immediately provide full retired pay, in addition to full VA disability compensation, to retirees with 20 or more years of service who are rated unemployable. These 28,000 retirees now are seeing their retired pay restored but on a 10-year phase-in.

Before suspending action on the defense bill, the Senate approved an amendment to provide a premium-based version of Tricare Standard to drilling National Guard and Reserve members. House Republicans shelved a similar measure as too costly.

Congressional staff members predicted a compromise will be reached by House-Senate conferees to approve an unprecedented health benefit for drilling reservists but that it perhaps will require an extended service commitment in return.

The Senate Appropriations Defense Subcommittee marked up its version of the 2006 defense appropriations bill on Sept. 26; the full Senate passed the measure on Oct. 6. ■



The

USAF photo

Gen. T. Michael Moseley, the Air Force's new Chief of Staff, delivered a blunt and basic message to all USAF airmen and anyone who might get in their way. "Let me be clear," he declared. "We cannot now, nor ever, lose sight of the fact that the mission of the United States Air Force is to fly and fight."

Moseley, speaking at the Air Force Association's 2005 Air & Space Conference in Washington, D.C., used his first major speech as Chief to declare a no-frills approach to airpower. The work of the Air Force includes flying fighters and unmanned air vehicles over Baghdad, satellites in orbit, an A-10 into Afghanistan, a command and

control aircraft over US territory, or an HH-60 helicopter over storm-ravaged Biloxi, Miss.

In short, said Moseley, "This is what we do."

The top priority must be maintaining focus on the dangers and demands of the Global War on Terrorism, Moseley went on in his Sept. 14 address. All of the missions that airmen have flown in recent years have allowed the Air Force to fine-tune its expeditionary processes. Today, "we have the most combat-experienced Air Force in our history," said Moseley.

The new Chief pointed out that the Air Force has been fighting the war on terror "for 1,438 days straight."

He worried that, with the global terror campaign already more than four years old, attention might begin to wander. A lackadaisical attitude could prove to be deadly.

Taking up the theme was Acting Air Force Secretary Pete Geren. There is a widespread perception, said Geren, that the war in Iraq is a land-force affair, and this is not helpful. In Iraq and Afghanistan, the application of US airpower has been so effective that it is largely unseen. Most observers erroneously view the wars as Army and Marine Corps operations.

"Our support for the global war on terror has been so dependable and successful," Geren said, "that to the

At AFA's Air & Space Conference, top Air Force leaders warned this is no time for complacency.

Air Force Sharpens Its Edge

By Adam J. Hebert, Senior Editor and Peter Grier



Today, Operations Noble Eagle, Iraqi Freedom, and Enduring Freedom also are added to the equation.

The Air Force is contending with a broad range of other difficulties, including natural disasters and internal problems. Yet such challenges are not new, and the Air Force will come through, said Moseley. Though airmen “live in difficult times and face difficult challenges,” Moseley said, they have a long list of airpower heroes they can look to for inspiration.

Given the demands of the war in Southwest Asia, worldwide counterterrorism operations, response to hurricanes and tsunamis, and enduring missions such as homeland air defense, the Air Force has been undeniably busy. However, officials said at the Sept. 12-14 conference that they are committed to meeting the challenges and building an Air Force that meets US needs for the future.

American airpower pioneers since World War I “overcame countless obstacles and some skeptics to achieve their vision,” Moseley said. In September 1918, Col. Billy Mitchell planned an air campaign that “looks familiar even today,” the Chief said.

Mitchell built a series of expeditionary airfields, “stocked them with fuel and munitions,” and sent US fighters “deep into German airspace to chiefly attack the German Air Force.” This, Moseley said, cleared the way for “bombardment squadrons to directly attack German headquarters, troop concentrations, staging areas, transportation infrastructure, and airfields.”

Eighty-seven years later, the Air Force must “continue to look for better ways to operationally exploit the air and space domain,” Moseley said. Efficiency is needed, whether it’s looking for ways to build and operate 50 expeditionary airfields in Southwest Asia or provide keystone capabilities such as mobility, intelligence-surveillance-reconnaissance, and strike.

Overcoming current problems may take an intensity of effort reminiscent of that expended by airpower’s great pioneers—Mitchell, Henry H. “Hap” Arnold, and Bernard A. Schriever, to name a few. Each one of these pioneers, said the new Air Force Chief, has “given us a proud heritage, and they have shown us an unlimited horizon.”

Evolving Tactics

The duration of the war means that combat tactics continue to evolve—as both the US and its enemies adapt. Insurgents in Iraq and Afghanistan keep changing their tactics to try and stay one step ahead of US forces. US forces adapt, too, as the case of targeting pods makes clear. The Litening II targeting pods carried by many Air National Guard F-16s were not designed to be surveillance tools. Yet, the same sensor used to aim weapons can track insurgents as they attempt to evade ground forces, and that is exactly how some Guard pilots have been using them.

In one case, said Geren, tracking by a Litening II helped an Army patrol nab four wanted men hidden in deep reeds. The targeting pods and their laser designators tracked and “painted” the

general public it is almost invisible.” USAF continues to play a “vital role,” he noted.

The Air Force’s continuing commitment to prosecuting the war on terrorists does not end in Iraq and Afghanistan but extends around the globe. That should come as no surprise to USAF airmen.

Fifteen Years of War

While the struggle with al Qaeda may have begun on Sept. 11, 2001, the Air Force itself has been in non-stop combat for the last 15 years, beginning with Desert Shield, then the never-ending no-fly zone enforcement over Iraq, with an air war in the Balkans mixed in for good measure.



The Air Force has met steady demands in Afghanistan, Iraq, and for disaster relief and homeland defense in the United States. Air defense is exemplified by this F-15 from Langley AFB, Va., flying a combat air patrol.

insurgents. The targeting is “invisible to the insurgents, [but] clear as day” to soldiers equipped with night vision goggles, said Geren.

He added, “Without the Air Force’s help, it would have taken a battalion to hunt them down. Instead, it took two soldiers and two airmen—one

battlefield airman and one fighter pilot equipped with the latest technology.”

In another case of technology being put to new use, an Air Force E-8 Joint STARS aircraft (designed to track and target large armored formations) followed a single vehicle as it left a residence, drove to an oil pipeline, then

drove off. The pipeline was then rocked by an explosion. Armed with that surveillance information, Iraqi and US security forces swooped in—within hours—to a remote farmhouse. They then “arrested an insurgent who is still wondering how we knew,” said Geren.

Air Force adaptability also has been a key factor in keeping supplies moving, in the face of continued insurgent activity. As bomb attacks on coalition truck convoys in Iraq increased, the Air Force ramped up its C-130 and C-17 sorties into isolated compounds to take trucks off the roads and reduce ground force vulnerability.

In addition, more than 1,000 airmen have been trained to provide convoy support. Overall, 2,500 airmen deployed to US Central Command’s area of responsibility are filling Army slots, working at everything from intelligence, to civil engineering, to base operating support.

“Each of those airmen frees up a soldier to fill Army-specific billets,” said Geren. Both the Acting Secretary and new Chief said the Air Force is currently fighting three battles, though the exact way they defined the campaigns differed.

Both top officials called attention to

Airmen Need “Expeditionary Mind-Set,” Right From the Start

The Chief Master Sergeant of the Air Force wants the American people to know a remarkable statistic. Today, said CMSAF Gerald R. Murray, 64 percent of the force is engaged in operations to project US airpower.

Given that a certain number of airmen are in training and others are in transit from one assignment to another, not much of the force is on the sidelines these days. “It’s truly a historic time that we serve in,” observed Murray.

In this situation, he said, it is vital that USAF’s senior leaders communicate with their airmen. Murray himself got a chance to do just that at the Air Force Association’s 2005 Air & Space Conference, as he moderated a panel of command chiefs that fielded questions from the audience and engaged in frank discussion about issues affecting the enlisted force.

“We sit behind closed doors a lot, and sometimes we agree to disagree on things, and we work a lot of hard issues,” said CMSgt. Ronald G. Kriete of Air Force Space Command, referring to the command chief master sergeants of the Air Force’s nine major commands and the Air National Guard,

“but I guarantee you, one thing that we do not disagree on is taking care of our most precious asset, and that’s our airmen.”

Training Is Big

Training is a big issue for the enlisted force, if the questions are any guide. With so many airmen rotating through Iraq and Afghanistan, some may be thrust into jobs they did not envision when they enlisted. Example: manning a machine gun to protect a convoy of trucks traveling through bad-guy territory in Iraq.

Air Combat Command has an Expeditionary Combat Airman’s Course that teaches basic lifesaving skills before deployment, noted CMSgt. David W. Popp, the command chief of Air Combat Command. In addition, the command is running courses in convoy operations at bases. ACC personnel have traveled to Southwest Asia in an attempt to ensure that this training at home matches up with real-world operations.

The Air National Guard is supplementing majcom training with its own combat skill and survival training, said ANG CMSgt. Richard Smith. It is also looking at supplemental train-

ing for Guard personnel. “It’s very important that we train our airmen properly before we ... deploy them,” said Smith.

Kriete said basic training includes a WarriorWeek that introduces recruits to the basics of ground combat and promotes a warrior ethos. Now the service is looking at how that approach might be expanded.

“Maybe it’s time now that we take a hard look and enter the expeditionary mind-set right from the day they put that uniform on until the day they leave our Air Force,” said Kriete.

Questioners also wondered whether fitness scores are going to become a factor in determining promotions. The short answer is “maybe,” though nothing is yet set in stone.

Ten to 15 years ago, commanders were not that concerned about the physical fitness of the force, said some of the command chiefs, but the increase in deployments has changed that, as the Air Force wants to ensure that its personnel are ready to meet the physical demands of service in austere locations around the world.

Differences in fitness scores at the top

the global war on terror and the need to “continue our culture of excellence,” in Moseley’s words. He added that USAF “must recapitalize and modernize almost everything in our inventory.”

Enduring Missions

Geren, meanwhile, highlighted the perpetual and enduring missions—homeland air defense and the recent battles with Mother Nature. Extreme weather over the past year has wreaked havoc from Indonesia to the US Gulf Coast, and the Air Force has responded in force.

When a tsunami overwhelmed Southeast Asian nations at the beginning of the year, Air Force aircraft were a key cog in the overall US response. Over a span of six weeks, USAF pilots flew 1,300 sorties, brought in 8,000 rescue workers, and delivered 18 million pounds of desperately needed supplies to Thailand, Indonesia, and other hard-hit nations.

When Hurricane Katrina swamped Louisiana and Mississippi this August and September, all components of the service—active duty, Guard, and Reserve—raced to respond. Air Force Special Operations Command teams were heavily involved, called in for their search and rescue expertise. Pave



USAF photo by TSgt. David W. Richards

SSgt. Duane Hebert prepares a Pave Hawk for a training flight at NAS Fallon, Nev. HH-60 aircrews applied their combat search and rescue expertise to a new mission after Hurricane Katrina, and helped save thousands of Americans.

Hawk HH-60 helicopters swung into action, even as their crews were being evacuated from Hurlburt Field, Fla., said Lt. Gen. Michael W. Wooley, AFSOC commander.

The Air Force, said Wooley, “took every flyable helicopter” belonging to the active duty, Guard, and Reserve,

and deployed them to Jackson, Miss. Thirty-five combat search and rescue helicopters pulled survivors from flooded New Orleans immediately following the disaster. They were later joined by helicopters from as far away as the Arizona desert and Wyoming’s missile fields.

The rescue helicopters were joined by HC-130 and MC-130P refueling tankers, Wooley said.

The rapid response helicopters and on-call refueling capability allowed Air Force rescue teams to perform extensive searches for those trapped by New Orleans’ floodwaters. The very first day, three Air Force Reserve Command HH-60 helicopters “flew 17 hours each,” noted Lt. Gen. John A. Bradley, AFRC chief.

“Bottom line,” said Wooley, “about 5,500 folks” were plucked off rooftops, dragged into Zodiac boats, or otherwise brought to safety.

Contingency response teams also reopened New Orleans Airport while Air Force medical personnel set up field hospitals along the Gulf Coast.

AFRC had another concern, however: An A-10 fighter wing is based in New Orleans. As Katrina approached, the wing relocated to nearby Barksdale AFB, La., but Bradley reported that as of mid-September he was “very concerned about it, because we’ve only found about 65 percent of our people from that wing.”

Many of these airmen could be dealing with other concerns. “Jobs are gone, homes are gone, and we don’t know if

end of the scale are unlikely to make a corresponding difference in an individual’s chances for advancement, said Murray, but low scores may matter.

“It’s a readiness issue for us,” said Murray. “We’re not going to back away from that.”

Professional Education

Asked whether the Air Force intends to start some type of professional military education for newly promoted chief master sergeants, the chiefs responded in the affirmative.

“There is a new Chief Leadership Course, ... an eight-day course that’s held at the Senior [NCO] Academy on Gunter [Annex] in Alabama,” said CMSgt. Jackson A. Winsett of Air Force Reserve Command.

The chiefs noted that there are a lot of questions out in the field about uniform standards, ranging from the proper use of headphones while working out to the length of the physical training shorts.

An October uniform board should answer many of these questions, said the chiefs.

“Most things about the wear of the uniform can fall into the common sense category, and

master sergeants can make the decision on it,” said Murray.

The chiefs as a group declared they had never in their careers seen a force of higher quality. They said that, in their travels, they had seen firsthand that in all current Air Force missions, from hurricane response to the war on terrorism, airmen are well-trained and doing the job.

“I’ve never been more proud to be called an airman,” said CMSgt. Rodney J. McKinley of Pacific Air Forces.

Because of ICBM upgrades and retirements, Air Force Space Command is experiencing its highest operations tempo ever. The Air National Guard has deployed more than 5,000 airmen to the Gulf Coast to support relief efforts in the wake of Hurricane Katrina. Air Force Reserve Command has deployed more than 3,000 personnel in support of the war on terrorism. Many are volunteers.

The Air Force is taking care of business with fewer enlisted troops than it had last year. “We’re still doing the same amount of work, maybe even more, but we’re doing it in an outstanding manner,” said McKinley.

—Peter Grier



The Air Force's Hurricane Katrina response was a Total Force effort. Shown here are airmen from Alabama, Illinois, and Maryland, offloading veterans from an Air Force Reserve C-130 at Andrews AFB, Md. The evacuees were rescued from the Armed Forces Home in Gulfport, Miss., which was devastated by the hurricane.

our people are gone or not," Bradley said. Fortunately, there were no casualties among those members of the wing who had been located.

The total Air Force response to Hurricane Katrina included the participation of at least 8,000 airmen. Overall, these airmen evacuated more than 27,000 citizens.

Air Guardsmen, who initially served as first responders, went on to create an air bridge used for bringing in supplies and taking out evacuees.

The first Air National Guard aircraft to arrive in the hurricane zone was a C-130 from the 137th Airlift Wing, based in Oklahoma City. The Hercules evacuated patients from the New Orleans Veterans Hospital as the Gulf disaster was unfolding.

During the next critical days, the Air National Guard flew more than 300 sorties a day, said Lt. Gen. Daniel James III, ANG director. Guard forces formed the backbone of the mobility response: On Sept. 3, for instance, Air Mobility Command flew fewer than a dozen sorties while the Air National Guard flew 153.

The Lion's Share

"When the story is told, it will be told as a Total Force story, and it should be," James declared to the AFA audience. "However, if you break the numbers

out, you'll see that the bulk of the airlift that was flown was in fact flown by the Air National Guard."

Added Geren, "These are our finest, ... using skills they learned for the battlefield to help their fellow Americans at home."

Operations today exemplify the strength of the Air Force's Total Force. Both the short-term hurricane response and the long-term Global War on Terrorism rely on USAF's Guard and Reserve airmen and equipment.

As of August, Air National Guard aircraft had flown almost 200,000 sorties in support of antiterrorism efforts. Those sorties comprise 83 percent of all fighter sorties flown for Operation Noble Eagle, the campaign to enforce US air sovereignty. ANG is also providing 25 percent of the tanker sorties and 23 percent of the airlift sorties. Guard fighters provide 70 percent of the fighter sorties over Iraq.

The Air Guard has been flying at an increasing rate since 1991, said James. The percentage of Guard aircraft operating as part of the Total Force has more than tripled.

"We're currently providing over 35 percent of operational aircraft in support of current contingencies," said James.

As it has with the active force, increased tempo has put heavy stress on

Guard and Reserve families. Retention rates remain good, but recruitment is a challenge. For 2005, the Guard will fall about 400 people short of its recruiting goal, after missing its goal in 2004 by 200 people.

One solution to this problem may be to increase the number of Guard recruiters. By way of comparison, the Army National Guard is three times larger than the Air Guard. Yet the Army Guard has 10 times as many recruiters—4,000, compared to the Air Guard's 400 recruiters.

The ANG will have to boost its recruitment budget and increase its recruiter force to meet the challenges of recruiting ahead, said James, who added that he has asked Congress to "add an additional 100 authorizations for our recruiters."

Flexibility Needed

More flexibility in deployment schedules might help as well. Increasing the duration of an Air and Space Expeditionary Force (AEF) rotation from 90 to 120 days has had a disproportionate impact on Guard pilots. Many are airline pilots, and after 60 to 90 days away, the airlines must retrain them, at considerable expense.

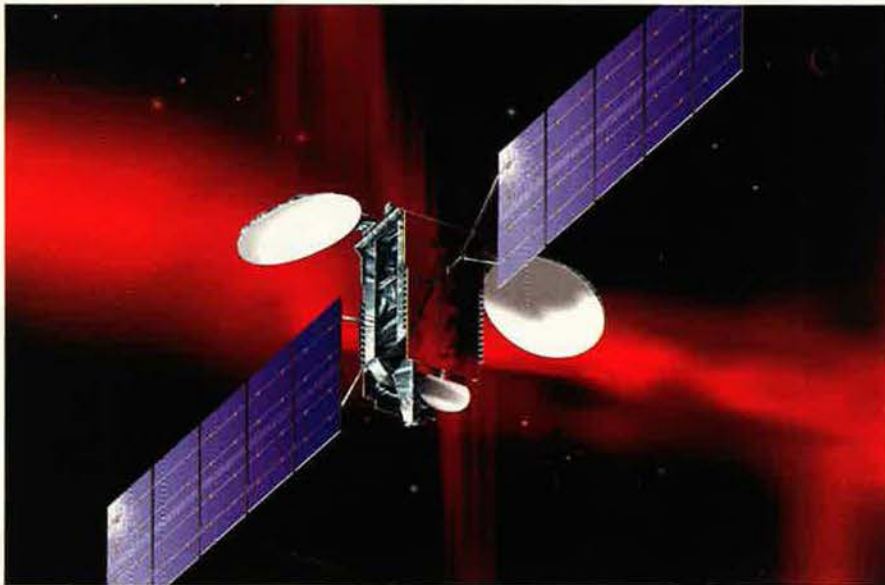
"So it's very important that we're allowed to do change outs within our rotation period after 60 to 90 days so that we can maintain our presence in the AEF but yet not cost our employers a great price," said James.

Reservists are also running into schedule problems overseas, Bradley observed. "I don't have as many people who can go for 120 days," he said—but four-month assignments are increasingly becoming a requirement on deployments.

It is easy to get a pilot to volunteer to deploy to Southwest Asia and fly F-16 or A-10 combat missions for 40 days, he said. "They like going where the action is."

The problem is that inflexible schedules have "crept over" into other areas of responsibility, he continued. AFRC, for example, has been told by US European Command that "we can't send somebody for less than 120 days" to Moron AB, Spain. "This one doesn't make sense to me," Bradley said. "That's not a combat zone."

The Guard and Reserve leaders, looking ahead, said that those components need to move into new and emerging missions such as space and cyber-warfare because its fighters and



Space-based capabilities have revolutionized warfare, making it safer, faster, and less destructive. Gen. Lance Lord compared military space to aircraft at the dawn of the jet age, saying this is no time for complacency or a lack of imagination.

other types of aircraft are old and will fade out. Plans call for the reserve components to have approximately one-third fewer manned aircraft in the future.

"We have embarked on a very aggressive program with the Air Force to identify and to start a transformation into these new emerging missions," said James. This should prevent the Guard from falling into the "trap" of focusing "so strongly on the Global War on Terrorism that we don't recapitalize and acquire the right capabilities" needed to counter threats 20 years out, he said.

Moseley agreed with this view. "Our future Total Force must be ... adaptable to this afternoon's fight—but also tomorrow's fight," the Chief said.

The military space arena is one area where the Air Force clearly is looking at tomorrow's fight. In fact, Gen. Lance W. Lord, commander of Air Force Space Command, described space operations as being at the "end of the beginning." By that, he means that military space is "at a similar point to where we were in aircraft at the dawn of the jet age."

Space has already transformed the modern battlefield. Overhead imagery, advanced communications, remotely piloted aircraft, and satellite guided weapons have revolutionized combat, making it less deadly for both friendly forces and noncombatants. American forces deployed around the world can work together on a single real-time

mission, such as tracking a suspected insurgent vehicle in a remote area.

Complacency in Space?

Yet this is no time to sit back and admire the view, Lord and other space leaders remarked. They expressed concern that complacency could set in. "I also see a bit of a loss of excitement

about space," said Lt. Gen. Michael A. Hamel, commander of AFSPC's Space and Missile Systems Center at Los Angeles AFB, Calif.

Officials say it is not a matter of if, but when, US superiority in space is challenged. China has had 45 successful space launches, noted Lord, and that huge nation is only one of America's potential competitors.

In addition, the Air Force still needs to take better advantage of technical advances. Payloads still must be matched up with rockets two years before launch—an eternity in today's fast-paced high-tech world.

"Complacency or lack of imagination in space is something we simply cannot afford," said Lord.

What's needed is a new generation of space pioneers. "Exploration has always been a part of our DNA in this country," said Hamel. Pioneers need vision, extraordinary technical capability, and a sense of mission and urgency, said space officials.

Space is a medium that is likely to remain firmly embedded in the traditional Air Force. Lord said he did not think the US was anywhere close to developing a separate national space force, nor is an independent space corps necessary.

Such a force wouldn't increase efficiency, since "we'd still have to in-

Search and rescue personnel, such as these airmen training in Nevada, saved more than 5,500 Americans trapped by rising floodwaters in New Orleans. Acting Air Force Secretary Pete Geren said the response to Hurricane Katrina involved "our finest, ... using skills they learned for the battlefield to help their fellow Americans at home."



USAF photo by MSgt. Robert W. Valencia

tegrate the output” with the Air Force, noted Lord.

In the future, efficiency will be critical. The Air Force has an internal war to fight, said Geren. It is the war to pull together and hone to a sharp edge the most capable air and space force the world has ever seen. This includes the push to improve procurement processes and Moseley’s concern about recapitalizing the Air Force’s increasingly elderly aircraft fleet.

To keep personnel ready and effective in war, the Air Force will expand its training exercises. Major force exercises such as Red Flag, Cope Thunder, Air Warrior, Green Flag, and Eagle Flag will all involve additional joint forces. These training events also will become more dynamic and complex, Moseley said. This accomplishes two things.

First, it gives airmen the opportunity to innovate. “Why not force that on ourselves when lives aren’t actually at stake?” Moseley asked. The Air Force is looking at a “complete rebuild of the [Red Flag] aggressor program,” he said. “We owe it to this Air Force and these airmen to develop these skills, to capture these lessons learned, and to be much more effective.”

Second, “this recommitment to composite force training will allow us to eke out every last ounce of capability [that is] left in our legacy platforms,” said Moseley. The Air Force does not know when many of its legacy systems—in particular its aerial refueling tankers—will be replaced, so airmen must “maximize everything that we have.”

Previous modernization efforts have

TSgt. John Reiland, a security forces airman, recovers his gear after parachuting in to Ali AB, Iraq. The Air Force is battling the misperception that today’s wars only affect soldiers and marines. CENTCOM has 2,500 airmen filling Army positions, but Geren said the Air Force is “so dependable and successful” that it is “almost invisible.”



USAF photo by Maj. Jon Anderson

been undermined by missteps. “Shortcomings in the way we define and execute our acquisition programs,” said Geren, “have left us more determined than ever to reform our acquisition processes.” This was made even more urgent by the “shameful actions” of a former USAF acquisition official, Darleen A. Druyun, who was prosecuted and jailed for improper dealings with an official of Boeing.

The need is obvious. Decades ago,

the Air Force “took the F-15 from first operational requirements to initial operational capability in just seven years,” said Geren. “Today we project that the F/A-22 will take 14 years to make the same trip.”

The acquisition slowdown is partly responsible for the service’s slow pace of recapitalization. “We are operating the oldest fleet of aircraft in our history,” said Moseley. “We’ve gone from an average age of 8.5 years when I put on a uniform at Texas A&M in 1967-68 to an average of 23.5 years today, and it’s getting older.”

“All too often the Air Force has suffered from development costs and schedule overruns which have in turn led to fielding delays, lower production quantities, and even reduced capability,” said Geren.

The acquisition system problems are widespread. Fixing them requires an attack on the root causes, he said. Poor program execution, unstable requirements, inadequate system engineering, and unpredictable funding must all be addressed.

“By getting a handle on each of these challenges and improving discipline throughout the process, we will restore stability and credibility to our acquisitions,” said Geren.

“This force must be affordable,” Moseley observed. ■



USAF photo by MSgt. Rob Valencia

Predator aircraft, pictured here in Nevada, are delivering real-time video to new customers and now fire Hellfire missiles. Gen. T. Michael Moseley, Chief of Staff, said the service must continue to innovate, to “maximize everything that we have.”



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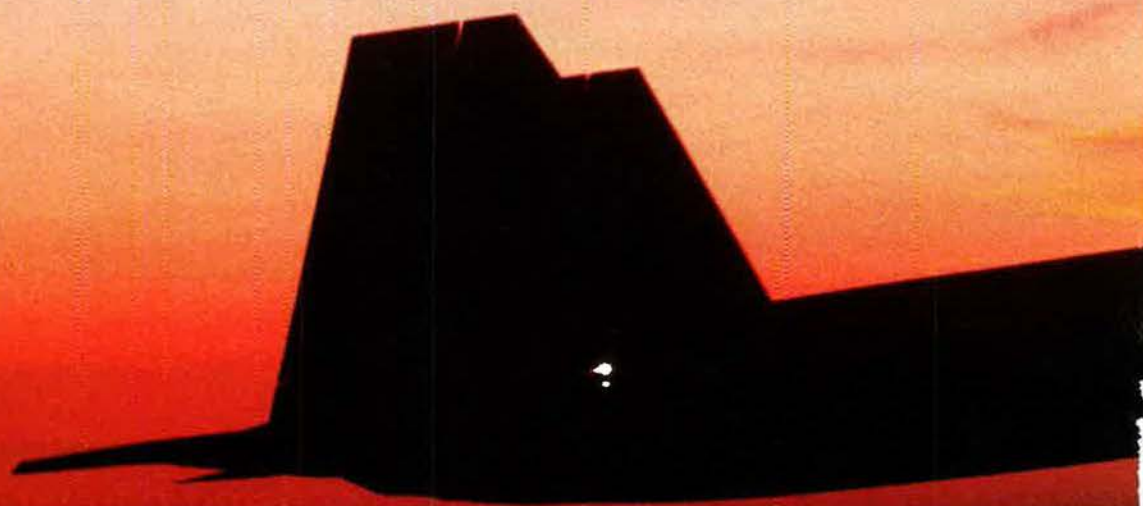
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New forms of airpower will give Washington more military options at an affordable price.

Paths to Air



For the public, the wars and subsequent stabilization efforts in Iraq and Afghanistan have accentuated the actions of US ground forces, but airpower has been a key behind-the-scenes factor all along. Air warfare will, if anything, grow even more critical to American military operations in years to come.

Modernization of the combat Air Force is not only a strategic necessity, but it is also a fiscally sensible course of action.

So said a wide variety of speakers

at AFA's Air & Space Conference held in September in Washington, D.C.

Taking full advantage of new aerospace technology in the form of the F/A-22 and F-35 fighters—as well as some nascent capabilities for future strike and sensor platforms—will provide a greater range of military options for Washington and drive down both the size and cost of the force, presenters said.

Significant new capabilities becoming available in the form of upgrades and munitions will help the Air Force

bridge the gap from its existing fleet of aging fighters and bombers to a force of mostly stealthy aircraft in the coming decade.

The stealthy F/A-22 fighter, the Air Force's top priority, has cleared operational tests, is in production, and is ready for duty, speakers pointed out.

Gen. Ronald E. Keys, head of Air Combat Command, said, "I'll be prepared to declare initial operating capability" with the F/A-22 on schedule in December.

Keys said he expects that, by then,



Dominance

By John A. Tirpak, Executive Editor

Local/News/Martin photo

The F/A-22 soon will be declared operational. Air Force budgetary health no less than its combat power hinges on having a sufficient number of Raptors, service leaders explained at AFA's Air & Space Conference.

he will have 18 Raptors on the 1st Fighter Wing's flight line at Langley AFB, Va. By mid-September, the 1st FW had eight F/A-22s, and more were arriving at a rate of "about two every week." Keys said he anticipated no problem in getting the aircraft he needs to make the declaration.

What IOC Means

The aircraft are not test or evaluation systems but combat-ready fighters, Keys said, and even though the first squadrons will be optimized for air

superiority missions, they also will be capable of strike missions with the Joint Direct Attack Munition. His main criterion for deciding whether to declare IOC is the "ability to pick up and go for 90 days" to a deployed location and operate a dozen of the aircraft. The biggest conditional item will be having sufficient spare parts for the war readiness kit that must accompany the unit to a deployment.

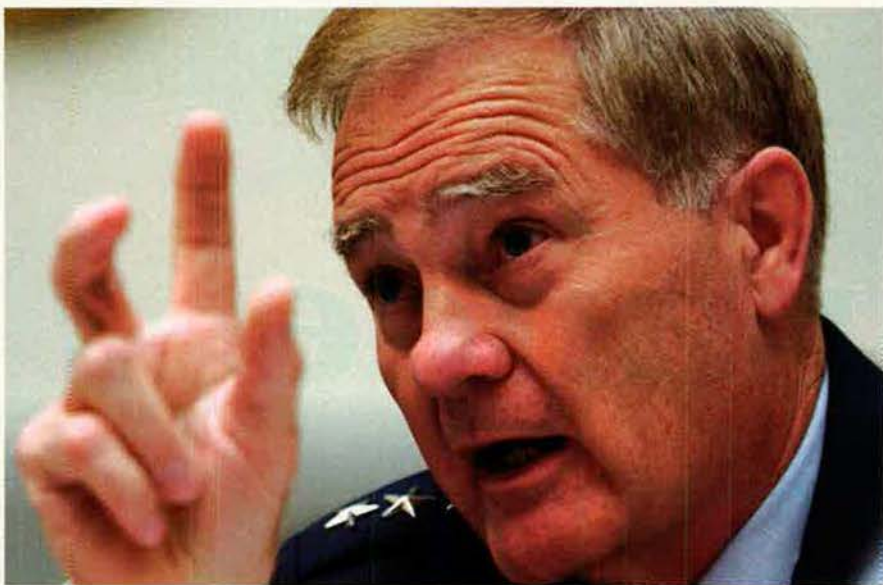
"IOC means I can use them," he explained.

Keys added that he does not need to

wait for the conclusion of follow-on test and evaluation, which is now under way and which will continue for many months.

He asserted that the Air Force needs 381 F/A-22s to be able to guarantee air dominance in any conflict from terrorist hunts to all-out war.

"We believe 381, in exchange for 880 fighters" of earlier types, such as the F-15, F-117, and F-16, "is a good investment trade to make," Keys explained. The F/A-22 requires fewer personnel, fewer tankers, and can operate more



Gen. Ronald Keys, head of Air Combat Command, said budget-driven cuts to tactical aircraft accounts shouldn't masquerade as elements of strategy. "The threat doesn't get any smaller just because you can't afford to meet it," he said.

frequently than earlier types and so will save considerable money in the long run, he added.

He acknowledged that it has been tough to get full Pentagon funding for the F/A-22, which is challenged within the department by what Keys called "antibodies" that reject the Air Force's analysis and math supporting the 381 figure, validated over more than a dozen independent reviews. He would rather that, if funding is the issue, arguments not be made suggesting that strategy is somehow driving a smaller fleet.

"If we can't afford it, we can't afford it," he commented, "but the threat doesn't get any smaller just because you can't afford to meet it." He added, "When they tell you, 'It's not about the money,' [then] it's about the money."

Keys also said that the required number of F/A-22s varies from scenario to scenario, and it makes the most sense to outfit each of the 10 Air and Space Expeditionary Forces with a supportable and militarily adequate number of F/A-22s. That means 24 "combat coded" Raptors per AEF, which is what a fleet of 381 will allow, including aircraft for training, test, maintenance, and attrition. Combat coded refers to the number of aircraft available for fighting, once you have deducted a certain number devoted to training, test, maintenance, and attrition reserve.

Keys joked that his toughest problem with the F/A-22 is finding an

adversary unit willing to fly against it in exercises.

In fights against the Raptor, said Keys, "everybody dies."

Maj. Gen. Richard B.H. Lewis, the F/A-22 program executive officer, said the new fighter, despite just emerging from its development phase, is delivering a 78 percent mission capable rate, which is comparable to the rates achieved by today's "mature" systems. In operational tests last year, the aircraft proved unbeatable when outnumbered 2-to-1 by today's fighters.

Four Times Better

By 2009, with additional improvements to its sensors and weapons, the F/A-22 will be at least four times better than legacy fighters, Lewis asserted.

Some have argued that the F/A-22 can be replaced with a new-build F-15 equipped with active electronically scanned array radars. Lewis acknowledged the belief in some quarters that a souped-up F-15, armed with standoff weapons, can do the job as well as the Raptor.

The problem with that argument, Lewis said, is the fact of modern surface-to-air missile defenses linked with good-quality, fourth generation fighters. Against such a threat, even an enhanced F-15 would have to fire standoff weapons from such a distance that mobile targets would have ample warning and time to move to a safe location. This will waste weapons and lengthen air campaigns, he added.

Conversely, stealthy—and very

fast—aircraft such as the F/A-22 will be able to penetrate defenses and attack their targets before the enemy has time to defend himself or escape.

Even after they were overtaken long ago by events, old notions of air warfare persist, Lewis continued. He noted that, in Vietnam, the thinking was that a pilot who actually saw a SAM fired at him could probably outmaneuver it.

That's not true anymore, Lewis said, noting that modern SAMs are faster, longer ranged, and dramatically more agile than their 1970s-era forebears.

In Iraq, Lewis noted, well-known examples of fratricide saw Navy and British fighters inadvertently targeted by the Army Patriot system. "The pilots knew what was going on, and they did everything they could to defend themselves," Lewis said. "They still got shot down."

The Patriot is comparable to the S-400 system now being sold by Russia, with double the range. A single S-400 battalion—eight launchers and 32 missiles—can be bought for \$1 billion, Lewis said. This threat would pose an extremely difficult challenge for the fourth generation fighters that make up most of today's Air Force.

The F/A-22's ability to cruise supersonically is an essential feature. If you didn't buy it for stealth, you'd buy it for speed, Lewis said. He noted that F/A-22s at Langley can get to Washington, D.C., in just seven minutes and be able to loiter in the area for 41 minutes before going home. This marks a vast improvement over F-15s, which would take longer to arrive and would have to refuel almost immediately.

Accept No Substitute

None of the suggested alternatives to the F/A-22 is a true substitute, Lewis said, and they all cost more in the long run. With the advanced radar, a new F-15 would have greater detection range but lack the survivability of the stealthy F/A-22. Raptors are more cost-effective because more of them will survive combat, and each can destroy more enemies.

It takes two to three aircraft to replace the killing capability of the F/A-22, he said. He quoted a similar number for the F-35, for, while the F-35 is stealthy, it lacks the speed and altitude capability that allows the F/A-22 to so dominate air combat. Those capabilities, Lewis observed, are what makes the Raptor "a huge problem" for enemy air forces.

If the F/A-22 program is stopped prematurely, he added, the cost of the F-35 also will spike up, because the two share overhead and development costs. The F-35 has benefitted from F/A-22 engine work, for example, while the F/A-22 will use an adapted version of the F-35's radar, which is newer than that developed for the Raptor. The cross-pollination has improved both systems.

Lewis said the F/A-22's cost-to-go is usually misstated.

The "\$28 billion sunk cost" on developing the Raptor and building a factory to produce it is gone, Lewis explained, and won't be refunded if the program is stopped. Rather than dwell on the sunk investment, the better question, he said, is "what does it cost now?"

An F/A-22 at \$113 million a copy is a better deal than buying at least two \$75 million F-15s to accomplish the same effects, he said. The first 172 aircraft have essentially already been paid for, Lewis noted. Still to come are the ones that take full advantage of an up-and-running assembly line and production efficiencies after amortizing the first batches of aircraft.

"We gave up our cheapest aircraft when they cut us back in December," Lewis noted. He also said the F/A-22, by virtue of doing the job with a smaller fleet, will "reduce manpower, airlift, O&S [operation and support costs], and [the overall number of] tankers."

Lewis said the Air Force welcomes the latest DOD review of tacair plans which was launched by new Deputy Secretary of Defense Gordon R. England. (See "Washington Watch: England Launches New Fighter Review," October, p. 12.) "This is good," Lewis argued. The more people who know about what the F/A-22 and F-35 can do, "the better we can make our case."

Rear Adm. Steven L. Enewold, the new program manager for the F-35, told reporters at the symposium that he thinks the number of F-35s the Pentagon plans to buy will "come down some."

While he's not a participant in the Quadrennial Defense Review, he has been asked to provide the review with data on cost and impacts of killing the program, accelerating it, or eliminating one or two of the three variants.

He also said the Air Force has indicated it may want a larger percentage of the F-35s it buys to be of the short

takeoff and vertical landing variety, except that it would be interested in doing short, rolling takeoffs and landings. "The Air Force doesn't have the vertical landing requirement," Enewold said.

Keys reported that he still sees a USAF requirement for the STOVL version of the F-35 to be between 200 and 300 aircraft.

Lockheed Martin, which makes the F/A-22 and F-35, presented a program describing the results of a classified analysis of how many of the two aircraft are needed. It was intended to mirror similar "air dominance" studies being done for the Pentagon's QDR, according to Lockheed Vice President Rob Weiss.

Key Enabler

The main conclusion of the study was that air dominance "continues to

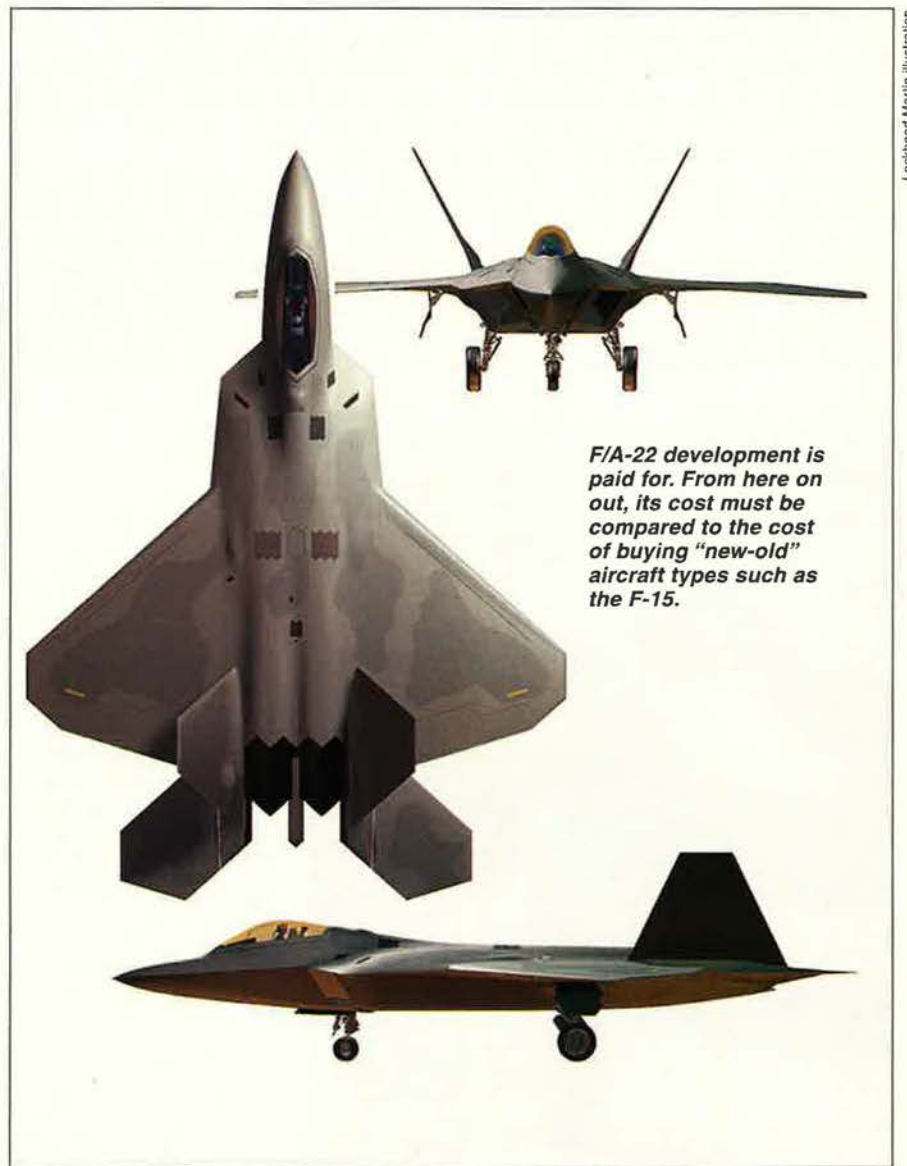
be a key enabler" for the entire military, regardless of the kind of campaign under way. Another conclusion was that in-service legacy aircraft such as the F-15, F-16, and F/A-18 are "at parity with threat aircraft or at a disadvantage" because the overseas designs are increasingly stealthy and fitted with advanced avionics.

The legacy aircraft are "at a significant disadvantage against advanced SAMs," Weiss said.

Even with advanced radars, legacy types fitted with the latest radar consistently showed "an inability to close the target without being detected." The result was usually "a mutual kill," meaning both sides flew to a deadly draw, he explained.

"Unless you start with a stealth design, you can't get out of a mutual kill situation," Weiss asserted.

By Lockheed's calculations, the



Lockheed Martin illustration

combination of the F/A-22 and F-35 was “five times more effective than legacy aircraft,” in most scenarios, and could accomplish the same number of targets destroyed with “50 to 70 percent fewer aircraft.”

He added that tankers were a key consideration, insisting that the number of new tankers required to keep a legacy force fueled for combat “is unaffordable” and that the tanker fleet would be less stressed with a smaller fleet of more modern fighters.

Weiss also said the study indicated that the newer aircraft would quicken an air campaign by being able to strike more targets more quickly than is possible today, given new weapons and full-up capability with the F/A-22 and F-35. A longer time in-theater would translate to far more losses, he suggested.

Against a near-peer competitor, the US would need to deploy a combat coded force of 250 F/A-22s and 100 F-35s, Weiss said the study showed. The numbers tip in favor of more F-35s in other scenarios, such as unseating the government of a “rogue state.”

“Overall, the cost of fifth generation aircraft [such as F/A-22 and F-35] is one-third the cost of legacy aircraft,” said Weiss.

If the F/A-22 production run is halted at about 180 aircraft, said Weiss, there will be at least a three-year gap in this nation’s fighter production, an event

unprecedented in the post-World War II era. He also said the cost to restart the Raptor line would be “prohibitive.”

End of the Line

“If you stop the F/A-22, you’re not going to restart,” Weiss said, noting the high cost of hiring and training new workers, taking tooling out of storage, and recertifying the thousands of suppliers needed to make the airplane’s parts. Once the suppliers and workers are released, he noted, “they’re gone.”

Regarding future wars, Weiss maintained that “we’re not saying that legacy aircraft can’t do it.” He is, however, saying that it would require substantially more aircraft and a large number of expensive standoff weapons.

Lockheed would need long-lead funding before the Fiscal 2008 budget if the F/A-22 is to continue production in 2009 or later, Weiss said. He reported that the company has shared its data with various Pentagon agencies and departments, and “most people we’ve spoken to are very pleased to have the input.”

Buying new weapons is just the beginning of the process of modernizing the Air Force. Maj. Gen. Stephen M. Goldfein, commander of the Air Warfare Center at Nellis AFB, Nev., said it’s the job of his organization to “certify equipment for combat, ... find

the best way to use that equipment, ... teach all the premier schools how to use it, ... [and] provide a venue for integrated joint training.” He’s also looking for new and more cost-effective means of honing the force.

Goldfein said the Joint Red Flag exercise at Nellis this spring was a huge success and signaled the beginning of a new era in the way the wargame is run. (See “Red Flag With a Difference,” August, p. 38.)

Goldfein said USAF ran 29,000 sorties, of which some 20,000 were “constructed”—that is, they were computer generated, with missions and players fed into the overall virtual battlespace. Another 6,000 of the sorties were “live,” flown with real crews and real machines, and the rest were virtual sorties, meaning that crews in simulators at widely separated locations were plugged into the wargame and participated by long distance.

The event proved “it can be done,” said Goldfein, who underscored the “real value” of distributed mission operations. The exercise showed a new way to “stress the operational level” of command. Joint Red Flag “has helped us shape doctrine,” he added. The exercise included Navy, Army, and Marine forces, as well as guest units from other countries.

“We’ve just scratched the surface” of applying distributed mission training to combat exercises, Goldfein asserted.

However, despite the value of the exercise, he said, “All training should not be joint training.” Air Force crews must have the chance to practice and develop their own expertise without other organizations looking over their shoulders.

“If we were constantly encumbered by ‘joint,’ we would never do it right,” Goldfein said.

Scenarios

Symposium attendees also were given a chance to contemplate a wide range of possible conflicts, requiring a diverse range of military capabilities.

Rebecca Grant of IRIS Independent Research asserted that the Air Force undoubtedly will play an early and leading role in any military conflict of the future because of its sensor aircraft, its cargo aircraft, and its aerial striking power at long ranges.

In any scenario, airmen will respond with AWACS, Joint STARS, reconnais-



Compared to other fighters, the Raptor offers a better deal, USAF officials argued. A buy of 381 F/A-22s will allow USAF to replace more than 800 other, aging types now in service, with big savings in manpower and transport costs.

Lockheed Martin photo



Under current plans, there will be a gap of at least three years between production of the last F/A-22 and the first F-35 (prototype shown here). USAF leaders think the fighter industrial base should get attention equal to that paid to the shipbuilding base.

sance aircraft, and, probably, tactical aircraft.

Based on the experience of Operation Iraqi Freedom, airpower offers the option “to start a bit early” with an air campaign before a ground offensive, or to cover the flanks of a ground offensive, substituting for ground forces, Grant said. It also offers a chance to provide “tailored close air support” whether ground forces are engaged in a sprawling battle or “block to block.”

Cargo aircraft also have started taking over some of the convoy missions, and ground convoys “don’t move without ... air support,” Grant said.

Airpower supports troops in contact, hunts down terrorists and weapons caches, delivers intelligence-surveillance-reconnaissance assets, and provides “presence” in a flexible way, Grant said. The new fighters, she continued, offer the US the chance to project the same amount of power to a forward base with “a much smaller expeditionary footprint.”

However, the Air Force’s fleet is getting older. She noted that in recent months, mission capable rates have dropped by 10 percent, due to age-related maintenance hassles.

The average age is “about 18 years on the strike platforms,” Grant noted.

The Navy is well on its way to recapitalizing its air fleet, phasing out the F-14s, and replacing them with 235 F/A-18E/Fs so far. For the Air Force, however, the “procurement holiday” is still largely under way, she said. Large

numbers of new fighters have not been purchased since the 1980s, and “right now, our nation’s air dominance is somewhat at risk.”

It’s necessary to get on with buying both the F/A-22 and F-35, Grant maintained. “This is our chance to bring true advanced technology into the force in the form of a fifth generation fighter” and reap not only operational advantages guaranteeing US air dominance in any future conflict but also saving money by avoiding expenses in maintenance, manpower, and other support costs.

“Do we really want a fighter production line for advanced aircraft to go cold for a number of years? Or even just dip down?” Grant asked. There are “key questions” about our industrial base that have not yet been addressed by the Pentagon leadership, she said.

Michael E. O’Hanlon of the Brookings Institution sketched out more than a dozen scenarios requiring military involvement by the US, concluding that no one service has cornered the market on the right kinds of forces needed for the future.

While there have been frequent calls for the Pentagon to shift its spending to one or another service that is more likely to carry most of the burden in the future, “I see a pretty strong case for more or less maintenance of the current budget shares,” which rough out to about one-third each to the Army, Navy/Marine Corps, and Air Force, O’Hanlon said.

In his war scenarios, O’Hanlon said

there are three wars the US probably doesn’t have to plan too much for. He doesn’t see Russia invading the Baltic countries, nor a Chinese invasion of western Siberia in a grab for resources, nor a Chinese invasion of a unified Korean peninsula.

Instead, the nightmare scenario about which the US should be most concerned is a collapse of the Pakistani government.

With 150 million people—“six times the size of Iraq”—high unemployment, poor education, a significant population of Islamist radicals, and nuclear weapons, a collapsing Pakistan is the “worst case” challenge to US security, according to O’Hanlon.

Given attempted assassinations of President Pervez Musharraf and a strong anti-American sentiment in the population—even among the military—Pakistan is risky, O’Hanlon asserted. The US might have to conduct air strikes to destroy Pakistan’s nuclear weapons if the government fell and may also have to “seal off border areas” to keep nuclear weapons from being removed from the country.

Iran is another key danger because of its role in energy markets and potential choke hold on oil shipping lanes, O’Hanlon said.

India, also a nuclear power, has been toe-to-toe with Pakistan in a nuclear face-off within the last few years and has fought four wars with Pakistan to date, O’Hanlon noted. The US might have to enforce an international trusteeship of the hotly contested Kashmir region, he said.

Another major threat to security is instability in Indonesia—an Islamic nation with a large population, among which are some number of active terrorists—sitting astride major shipping lanes. As a widely dispersed archipelago, Indonesia could see some regions declare independence, or terrorists could attempt to block the Strait of Malacca.

One of the most pressing threats to deal with is the Taiwan situation, O’Hanlon insisted. “We have to do a better job within the military and defense community of planning for this,” he said.

“The stakes are enormous,” he explained, since a confrontation with mainland China would be “the first major war between nuclear powers.” O’Hanlon said US plans overemphasize “quick attacks” on the mainland that could result in nuclear retaliation, probably against US forces. ■

Spirits of Guam

Airmen of USAF's 325th Bomb Squadron took their bombers from Missouri to Guam in the most ambitious B-2 deployment yet.



High above the Pacific, B-2 bomber pilots carry out a training mission in Spirit of Texas. It is one of four stealthy Spirits that operated from Andersen AFB, Guam, for six months, the longest B-2 deployment yet.

Guam, a US territory in the Western Pacific, has become an important staging area for Air Force bombers. Various long-range aircraft—B-1s, B-2s, and B-52s—based on the US mainland rotate through Andersen Air Force Base, an immense facility on the island, maintaining a continuous presence in the region. While at Guam, units report to Pacific Air Forces and US Pacific Command. The bomber rotations in Guam began in early 2004. When on station, aircraft and airmen are under the 36th Air Expeditionary Wing. Individual aircraft are attached to expeditionary bomb squadrons.

The bombers deployed to Guam give PACOM greater force-projection and global strike capability. Moreover, regular flying from Guam gives units valuable deployment training and allows personnel to participate in coalition training exercises. The four B-2As most recently in Guam were deployed with their unit, the 325th Bomb Squadron, part of the 509th Bomb Wing of Whiteman AFB, Mo. The 325th deployed its entire squadron, which included 24 combat ready pilots and more than 200 other personnel.



Photos by Ted Carlson

Above, SrA. Kristopher Castro of the 325th BS guards a B-2 parked at Andersen. Security is heavy throughout the base.



At left, flight equipment specialist SrA. Joshua Buckholtz assists two B-2 pilots—Lt. Col. Paul Tibbets IV (center) and Capt. Ryan Bailey—in the flight equipment shop. Buckholtz is helping Tibbets adjust his survival vest.

Each B-2 staged three or four seven-hour sorties per week, and each pilot flew about three sorties per month. In addition, PACAF sent the stealth bombers on longer global power sorties. Below, Tibbets and Bailey (in flight suits) review a mission with two maintainers under the B-2 Spirit of California.



Above is a view from the rear of a B-2 cockpit, with its two crew positions. Despite the cramped quarters, B-2 pilots regularly fly missions lasting 20 hours or longer, and there is room for a pilot to lay down and rest during a mission.



The sophisticated B-2s recently received a designation of "forward operating location approved." Andersen is one of three forward locations to which the stealthy bombers deploy. The other two are RAF Fairford in Britain and the Indian Ocean atoll of Diego Garcia. In April, the 325th BS replaced the 393rd BS, another B-2 outfit. During the latest deployment, the B-2s carried weapons such as 500-pound and 2,000-pound versions of Joint Direct Attack Munitions.

In the photos from top to bottom, a maintainer performs a final check on airplane #80330, Spirit of California; the same airplane prepares for launch; and the B-2 gets airborne.





Photos by Ted Carlsson

Taking to the skies over Guam are Spirit of Hawaii (left) and Spirit of Texas (below).

Throughout the Guam deployment, USAF's 325th Bomb Squadron and Navy units conducted joint, large-force exercises. B-2s operated alongside Navy E-2C Hawkeyes, F/A-18 Hornets, and EA-6B Prowlers. The 325th also worked with F-15E fighters deployed from Mountain Home AFB, Idaho. About 30 percent of the B-2 sorties involved integration training with other aircraft, and more than 25 percent featured weapons drops.

In the photo at bottom left, Spirit of Hawaii takes on gas from a KC-135R refueler flown by a crew of the California Air National Guard's 163rd Air Refueling Wing.

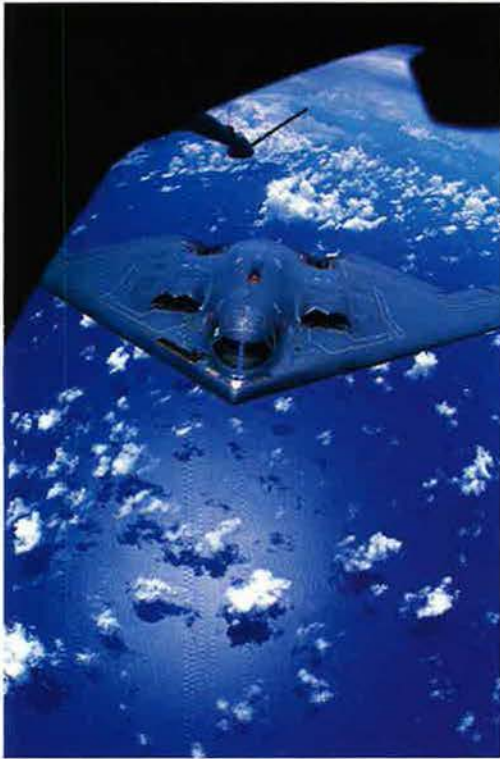


Above, pilot Lt. Col. Tom Pritchard and copilot Lieutenant Rick Alvarez, from the ANG's 163rd ARW, fly a KC-135R as it refuels Spirit of Hawaii. SMSgt. Jim Blucher (not shown) was the boom operator on this mission. At right, a pilot checks an aircraft display.





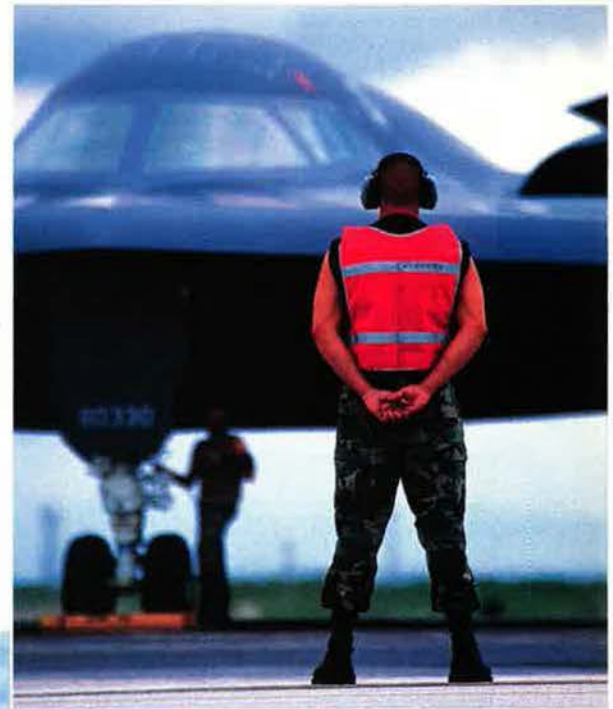
Photos by Ted Carlsson



The top left photo offers a view of Spirit of Texas taken from a tanker aircraft overhead. Left and above, Spirit of Hawaii first pulls back from the tanker then banks into a turn over glistening water.

Lt. Col. Tom Bussiere, commander of the 325th BS, said this was the first time that these B-2s had embarked on a deployment as part of a rotational Air and Space Expeditionary Force, or AEF. Normally, he said, B-2s are in "an AEF in place," meaning they are prepared to fly and fight directly from Whiteman.

In the photo at right, airmen of the 325th BS marshal a B-2 for takeoff. USAF has invested heavily in Andersen. It has lengthened and strengthened the runways, expanded the fuel delivery system, built a concrete, typhoon-resistant hangar, and built new quarters for deployed airmen.



The photo at right provides a side view of Spirit of California.

In the not-too-distant-past—the Vietnam War era—Andersen was a huge center of Air Force operations. Strategic Air Command in mid-1965 launched a raid on Vietnam comprising 30 Guam-based B-52s. It was the first step in a major air campaign emanating from Guam. Use of B-52s in a conventional bomber role lasted, with some interruptions, until 1972. In that year, Andersen hosted more than 150 B-52 bombers and more than 15,000 US troops. So crowded was the base that the Air Force set up improvised quarters such as "Tin City" and "Tent City" in open fields.





Guam's first regular rotational bombers came from Minot AFB, N.D., in February 2004. The force comprised six B-52s and some 300 support personnel. Since that time, Andersen has never been without heavy bombers in the stable. Because Guam is within relatively easy flying distance of North Korea, Taiwan, and other flash points in the Western Pacific, it is viewed as a linchpin in Washington's commitment to allies in East Asia and to deterrence of aggression throughout the theater. Guam also is valued for its nearly unrestricted airspace and the availability of a nearby naval bombing range.

At left, Tibbets and Bailey return from a sortie. Tibbets (left) is a fourth generation pilot and the grandson of retired Brig. Gen. Paul Tibbets Jr., pilot of the B-29 Enola Gay, which dropped the first atomic bomb. "My grandfather flew in enormous formations with thousands of men's lives at stake, perhaps trying to take out a single bridge," said the younger Tibbets. "Today we can have a B-2 with two guys and 80 500-pound JDAMs ... to surgically hit many more targets."

At right is Spirit of Hawaii against a glorious Pacific sunset, and below is Spirit of Texas on the runway at night.

Members of the B-2 team concluded Guam is an excellent place to train. Having such a base also means the bombers would be much closer to a fight in the Pacific and thus able to respond much faster than would be possible from home base in Missouri. The attitude was summed up this way by B-2 pilot Maj. Brian Gallo: "Being able to forward deploy here and train in a region where we may have to fight someday is important. We learn, grow as a unit, and fight together—crews, support personnel, and maintainers. It helps us know how to work together efficiently and makes our mission happen effectively. You cannot do that well unless you deploy, practice, and train." ■





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Capping a remarkable test-program performance, two Boeing X-45A Joint Unmanned Combat Air Systems aircraft recently completed their final demonstration flights, a perfect transition to the production of the X-45C. This graduation flight adds one more milestone to a long list of aviation firsts and underscores the leadership of the DARPA, U.S. Air Force, U.S. Navy, and Boeing J-UCAS Team in maximizing the potential of unmanned combat air systems.



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Distributed Control

If a Pentagon report can be believed, robotic systems will spark a broad reshaping of air fleets.

Will We Have an Unmanned Armada?

By John A. Tirpak, Executive Editor

UNMANNED aircraft will perform a remarkable range of missions over the next two decades. No longer mere reconnaissance platforms, these systems will be, in some cases, near-sentient robots able to carry out airlift, long-range strike, and even air-to-air combat missions.

That, at least, is the forecast and plan that is outlined in the Pentagon's new "Unmanned Aircraft Systems Roadmap: 2005-2030," released in August.

Robotic aircraft—formerly called "unmanned aerial vehicles" but now called "unmanned aircraft systems," or UASes—are sure to elbow aside many manned airplanes that now conduct endurance missions of many hours; this has long been expected. However, the report's confident prediction of more dynamic and autonomous roles suggests that a broad reshaping of the US military aircraft fleet may be in store.

In fact, the Defense Department may have been cutting back on manned aircraft programs—particularly fighters such as USAF's F/A-22 and the joint service F-35—because defense leaders believe that equally powerful

but cheaper unmanned replacements could be around the corner.

The roadmap explicitly forecasts the availability of unmanned fighter aircraft comparable to the F/A-22 and F-35 less than halfway through the expected service life of these new systems.

The document notes that UASes have been embraced by combat commanders at every level. Demand far surpasses the capabilities that current programs can produce. The systems have brought dramatic gains in knowledge of the battlefield and have "helped reduce the complexity and time lag in the sensor-to-shooter chain for acting on 'actionable intelligence,'" says the new study. The aircraft also offer new options for both kinetic and passive tasks.

Mushrooming Programs

At the same time, heavy demand has spawned a rush of development in all of the services. Mushrooming programs could easily end up producing redundant capabilities and wasting resources.

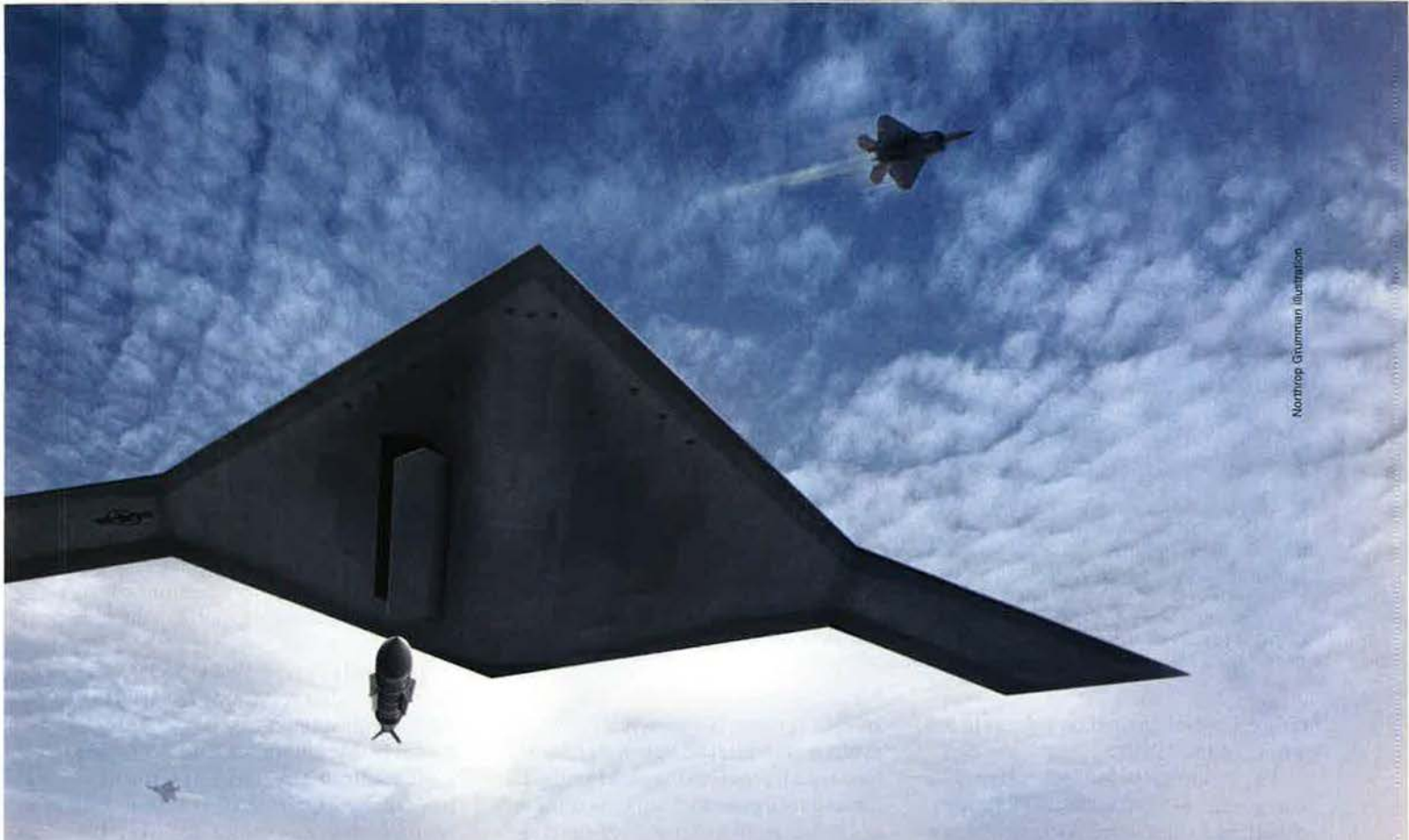
In the foreword, senior officials report that the roadmap is aimed at

guiding the Defense Department toward a systematic migration of UAS mission capabilities, focused on the most urgent warfighter needs.

Those overseers included Stephen A. Cambone, the undersecretary of defense for intelligence; Marine Corps Gen. Peter Pace, then vice chairman (now Chairman) of the Joint Chiefs of Staff and head of the Joint Requirements Oversight Council; Kenneth J. Krieg, undersecretary of defense for acquisition, technology, and logistics; and Linton Wells II, acting assistant secretary of defense for networks and information integration.

The roadmap is addressed to the service Secretaries and heads of the Defense Advanced Research Projects Agency and National Geospatial-Intelligence Agency.

The 200-plus-page document includes a catalog of the myriad UASes now in the inventory as well as an appraisal of foreign systems either in service or in development. It also assesses the enabling technologies that are now emerging to allow UASes to be more capable and flexible. Such tech-



Northrop Grumman illustration

In this Northrop Grumman concept image, a stealthy J-UCAS releases a satellite guided bomb while working in concert with F/A-22s.

nologies include computer processing power and miniaturization.

The report also acknowledges some high barriers to achievement of the vision, barriers such as the reluctance of government officials to cede weapons release authority to a machine or, in the near term, to allow UASes to operate in civilian airspace. Another concern focuses on the reliability of the systems, which have had a tendency to crash.

As Air Force leaders see it, Pentagon officials should be cautious about rushing to push UASes into every feasible mission area. Lt. Gen. Donald J. Hoffman, military deputy to the assistant secretary of the Air Force for acquisition, said at a Capitol Hill UAS seminar in September that USAF doesn't necessarily see a huge cost advantage to UASes in every role.

"If it's big enough to hold a man, our analysis says to go ahead and put a man in it," Hoffman said. That point of view is not driven by white-scarf mentality, he said, but by the cost trade-offs when a UAS reaches the size of a comparable manned vehicle.

Hoffman acknowledged that UASes

can be made smaller, lighter, and cheaper by deleting the displays, ejection seat, and other man-specific hardware on an aircraft.

However, "what you save by taking out the physiological aspects, you have to replace with connectivity mechanisms" to ensure positive control over the vehicle and its weapons. For near-term applications, "it's a wash; ... there's no cost driver" to eliminating a human, onboard pilot.

From UAV to UAS

The roadmap discards the term UAV in favor of UAS because such platforms must be connected to other elements for control and management as well as the dissemination of their intelligence "take." Now in its third iteration, the roadmap for the first time discusses "near-space" aircraft.

In an August briefing for reporters, the deputy director of the Pentagon's UAS planning task force, Dyke Weatherington, noted that the roadmap is "not a budget document" but a "technology roadmap." It does not direct "anybody to do anything," he said.

Nevertheless, he said the roadmap was built with the full participation of each service, and "there's pretty good agreement on [its] goals and initiatives."

The authors do not believe that a single entity should control or direct the Pentagon's multitude of UAS programs. Weatherington had previously told reporters that selection of an executive agent for DOD's unmanned systems would be premature.

Instead, DOD decided it would create two joint organizations—one for doctrine and concepts and another for the development of hardware. (See "Washington Watch: Sorting Out the UAV Situation," September, p. 14.) The Air Force had sought to gain the status of executive agent for unmanned aircraft.

Now commanding some \$2 billion a year of the DOD budget, UASes will account for about \$13 billion in production funding through the end of the Pentagon's six-year plan ending in 2011 and more than \$1 billion in operations funding through the same period. By contrast, the Defense Department spent



Some uninhabited aircraft fly themselves while others have remote pilots. Here, Capt. Andy Beitz trains to fly the MQ-1 Predator. A new Pentagon study expresses a preference for unmanned systems wherever possible.

only \$3 billion in total on UASes in the whole of the 1990s.

The roadmap puts UASes into four categories: Major, Special Operations, Small, and Unmanned Airships. Major UASes include the Global Hawk and Joint Unmanned Combat Air System. Special Operations UASes are unique to US Special Operations Command. Small systems are those that can be operated by one or two persons. The airships are aerostats or blimps.

In looking at the missions that might be performed by UASes in the future, the authors of the roadmap set out their “themes,” which clearly indicate the potential and reasoning behind what could be a broad recasting of the aircraft in a military context.

First, they say, UASes have matured to the point where they are no longer to be considered for “niche missions” but can be applied across the range of military activities. “Instead of asking, ‘Can we find a mission for this [UAS]?’ one will ask, ‘Why are we still doing this mission with a human?’” the authors say.

Second, the authors seem ready to rely on commercial initiatives to meet future requirements; to accept capability that is delivered in installments, rather than all at once; and to think of UASes as disposable—which, so far, has not been the case.

Varied Solutions

“A 50 percent solution tomorrow is often better than a 70 to 80 percent solution in three years and better than a 95 percent solution in 10 years,” say the

study’s authors. “Commercial solutions avoid using defense development dollars, which provides the opportunity for other developments,” such as thinking of UASes as short-term, “consumable” systems.

Rather than buying UASes in large lots, they might be bought in barely sufficient quantities and replaced or augmented a few years later with new and improved models. The authors make the analogy to TVs, DVD players, and desktop computers—items often cheaper to replace than to repair.

The authors want a thorough understanding of the mission to be performed

before developing UASes to meet it, since they believe that UASes can be tailor-made with precisely the amount of capability needed—and not more.

“Do NOT,” the authors warn in capital letters, “make a [UAS] and then find a mission for it ... [or] design a low observable aircraft and then try to figure out how to make it do a strike or suppression of enemy air defenses (SEAD) mission.”

Another emphasized theme is the view that progress in miniaturization will allow more and more capability to reside in a smaller and smaller package. The capabilities inherent in the original version of the Predator UAS, it is noted, now can be accomplished on the much smaller RQ-7 Shadow. Because of the high turnover in UAS development, it will not be necessary to build them with much growth capacity.

The final theme is that UASes “have the potential to solve a wide variety of difficult problems that may be unaffordable by trying to find solutions with traditionally larger platforms.” In other words, a UAS solution will be preferred automatically over the creation of a large new system.

In the near term, the Defense Department should focus on UASes in the roles of SEAD, strike, electronic attack, and intelligence-surveillance-reconnaissance, concludes the report. There should be a concerted effort to develop secure common data links to operate the aircraft and standardize their ISR products to be compatible with all weapon systems. Any system should

Shown here is a Lockheed Martin concept for the Falcon Program, which seeks to develop the means to reach anywhere on Earth within two hours. Unmanned aircraft are being considered for almost every mission, from strike to airlift.



Lockheed Martin illustration



Now at hand are technologies to change an aircraft's shape in flight. This Lockheed Martin concept shows how a UCAS can reconfigure itself from a long-range sensor platform to a high-speed attack aircraft while on the same mission.

be able to use data collected from any other UAS.

There should be a heavy push to develop, in the near term, safe and secure means of flying unmanned aircraft in civilian airspace, such that the Federal Aviation Administration is comfortable with their use. The unmanned aircraft should be given the ability to "see and avoid" other aircraft as soon as possible and also acquire the means to operate in adverse weather.

The roadmap notes that, in urban operations, geography can change quickly as buildings, scaffolding, and other obstacles appear and disappear in the course of days. A UAS onboard database would have to be refreshed constantly by a global geo-mapping function or risk being "useless" in an urban setting.

Commanders Want More

According to the roadmap, UASes are seen as a major response to meeting emerging needs of regional combatant commanders. When the commanders listed their top 50 "capability gaps" for the Fiscal 2006 budget process, "27 (54 percent) [were] capabilities that are currently, or could potentially be, addressed by UAS," and the commanders specified UASes as the "desired solution" in at least four of those areas.

When polled, for all classes of UASes, combatant commander staffs rated "reconnaissance" as the No. 1 mission for which they wanted unmanned aircraft, with precision target designation as the second or third most-wanted product.

The roadmap forecasts UASes supplementing or perhaps even replacing manned aircraft on the following mission timetable:

- 2005-10: Communication relay and SEAD (replacing the EA-6B jammer with the Joint Unmanned Combat Air System, or J-UCAS).
- 2010-15: Signals intelligence collection (Global Hawk), maritime patrol

(the Navy's Broad Area Maritime Surveillance system), and penetrating strike (with J-UCAS).

- 2015-20: Aerial refueling and integrated SEAD/strike.

- 2020-25: Surveillance and battle management (replacing E-3 AWACS and E-8 Joint STARS) and counterair missions (replacing the Air Force F-15 and F-16 and Navy fighters).

- 2025-30: Airlift (replacing C-5, C-17, C-130) and integrated strike/SEAD/counterair (replacing Air Force F/A-22 and Navy F/A-18E/F).

In the last category, it is noteworthy that the currently planned 180 F/A-22s in the Air Force inventory will average fewer than 20 years in service when unmanned systems will (according to the report) be available to replace them. That is less than half their planned service life.

How will it be possible to replace fighter pilots with robots? The roadmap maintains that the human brain is "rated" at about 100 million MIPS (million instructions per second) and

100 million megabytes in memory and that processors capable of achieving this level of function are close at hand. The authors note that Moore's Law, which anticipates a doubling of computing power every 18 months, means that computers will attain the processing level of the human brain in 2015, but "others estimate the memory capacity of a PC will equal that of a human memory closer to 2030."

Moreover, "by 2030, the cost of a 100 million MIPS processor should approach \$10,000," meaning that an artificial, human-equivalent brain could become an eminently affordable "component" of a UAS.

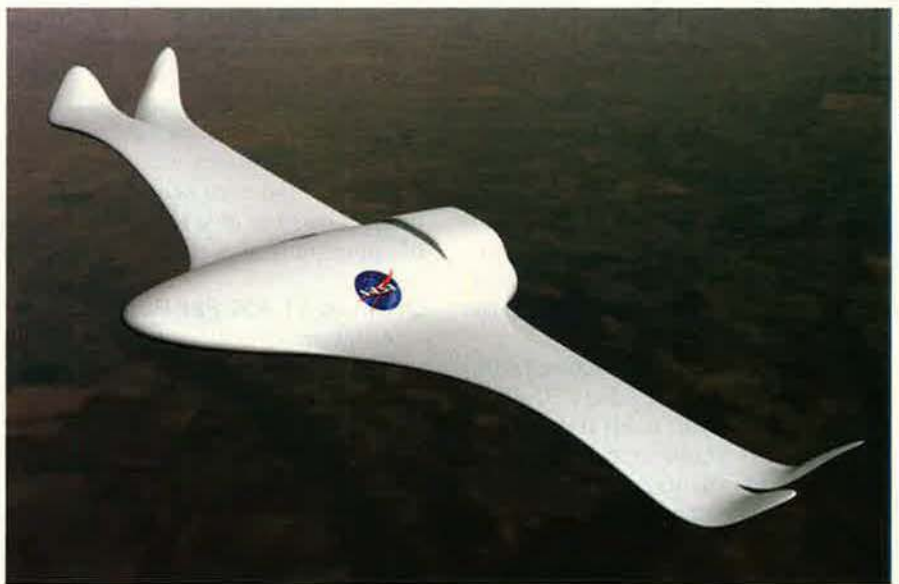
The study adds: "As for inculcating a fighter pilot's training and experience into a robot brain, the equivalent of Top Gun school for tomorrow's J-UCAS will consist of a postflight download in seconds."

Those processors will be vastly smaller than what we have today, the roadmap continues, and will likely be enhanced by "optical, biochemical, quantum interference switching, ... and molecular ('moletronics') processors, or some combination of them, to achieve ever faster speeds and larger memories."

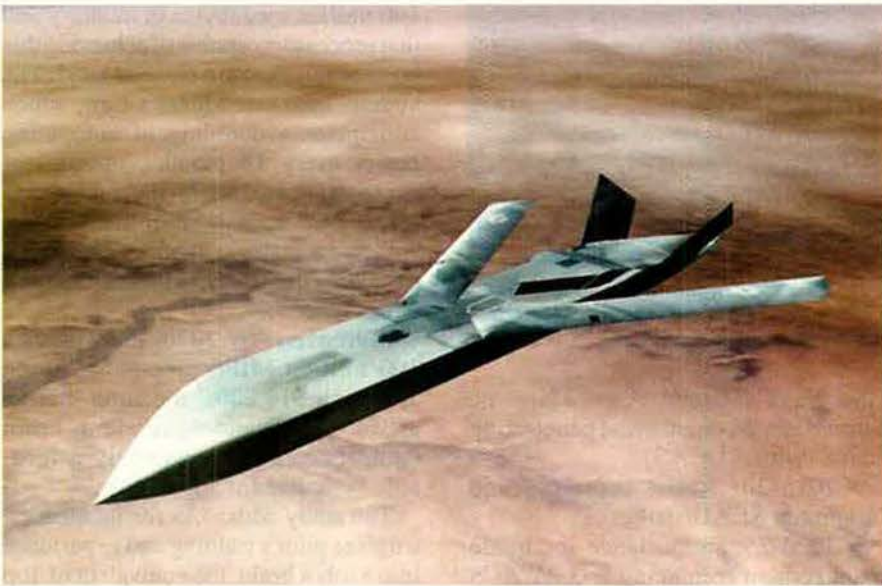
The roadmap contains a series of assessments of state-of-the-art technologies, along with recommendations as to what areas should receive special funding and attention.

Bandwidth Bottleneck

In contemplating use of large fleets of UASes, officials worry greatly about



Another version of a morphing airplane is this unmanned vehicle being researched by NASA, shown here in an artist's conception. Instead of folding, the surfaces would change contour, merging together or splitting apart to optimize for the mission.



The differences between a UAS and a missile have blurred. This concept shows a recoverable, reusable UAS (Lockheed Martin's MINION) used for loitering over a battlefield and attacking pop-up targets.

the amount of electronic bandwidth available to send control signals to the vehicles and receive and distribute their sensor findings. The roadmap anticipates a self-healing solution for this problem.

"Eventually, onboard processing power will outstrip data link capabilities and allow [UASes] to relay the results of their data to the ground for decision-making," says the report. "At that point, the requirement for data link rates in certain applications, particularly imagery collection, should drop significantly."

Twenty years hence, UASes also may bear little resemblance to those of today, many of which would not look out of place at a radio-controlled-airplane enthusiast show. To provide lighter and stronger materials, the roadmap forecasts use of "transgenic polymers" with "twice the tensile strength of steel yet ... 25 percent lighter than carbon composites." These aircraft also will be able to alter their shape in flight, constantly morphing to obtain the best speed, longest duration, or smallest radar cross section.

They also will be manufactured with microcapsules of "glue" that will allow the aircraft to repair itself if damaged in flight. This would not be a patch but a regeneration "to original condition." The authors recommend investment in such materials research.

Likewise, the roadmap envisions antennas that can be "sprayed on," eliminating the weight and power draw of existing systems. Human factors and

simulation research also will make it possible for a remote human operator to receive an orchestrated variety of cues that will make it possible to have virtual presence in the UAS. "The future [UAS] pilot will transition from seeing the plane to being the plane."

Power plants for future UASes will vary in power and complexity as much as the aircraft themselves. The roadmap suggests investment in a wide variety of propulsion mechanisms, ranging from scramjets and fuel cells to "reciprocating chemical muscles, beamed power, and even nuclear isotopes." Photovoltaic (solar power) systems and reduced fuel consumption power plants, which can extend endurance and range 100 percent, are targeted for special attention.

Future UASes will be able to employ hyperspectral imagery techniques at long ranges, able to see beneath the surface of the earth and distinguish between types of vehicles and even people, following priority lists but able to exploit targets of opportunity as well.

Down to \$1,800 Per Pound

A significant goal (and design driver) will be to cut the cost per payload pound that UASes can carry. Currently, it costs about \$8,000 per pound for an average UAS to carry sensors. By comparison, the F-35 Joint Strike Fighter cost per payload pound is \$7,300. On the J-UCAS, the goal is \$5,500 per payload pound, and the long-term goal is to reduce the cost to \$1,800 per payload pound across the UAS fleet.

Bobby W. Smart, USAF director

for information dominance programs, noted that Global Hawk, as an example, costs "\$40 million to \$50 million a copy" just for the airframe, while the sensor package aboard costs \$10 million. Because Global Hawks consume a great deal of manpower—needed in operations and maintenance of the aircraft and its systems, and people needed to collate its data, analyze, and disseminate it—the life cycle cost of some of the larger UASes "is not trivial," Smart said.

Hoffman pointed out that UASes are made more costly and complex because of the need for "encrypted comms," or unjammable communications with the aircraft. "You have to make sure only you can control it," he observed, "especially when it's armed."

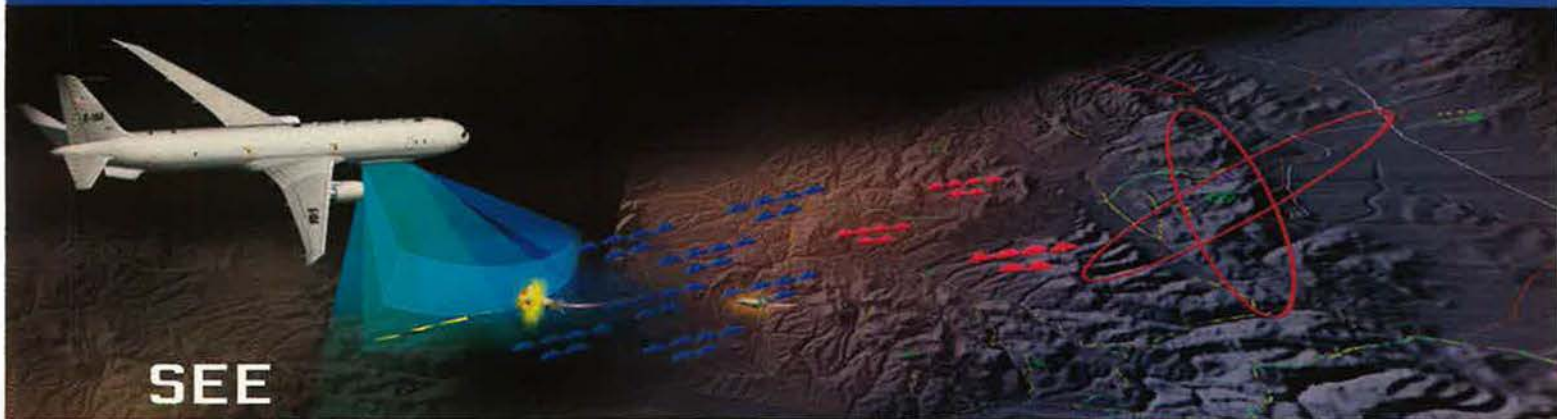
One of the most prominent challenges to widespread use of UASes will be frequency spectrum, Hoffman said. Within the US, "we've sold a lot of the frequency spectrum" to cell phones, satellite communications, high-definition TV, and the like. Broad use of UASes will require a new area of core competency, which Hoffman called "frequency dominance," or getting other users off the frequencies when operating in a battle zone. While that's possible over an enemy country, in peacetime exercises, "we can't do it in [South] Korea," for example.

Echoing the roadmap, Hoffman also noted that it has not been figured out yet how to safely deconflict what could be hundreds or even thousands of UASes buzzing around a battlefield. It will add cost "to add systems that will keep them from hitting things ... or running into each other."

In one of his last interviews as Air Force Chief of Staff, Gen. John P. Jumper in August said of the manned/unmanned question, "It's hard to say what the right ratios are going to be." He anticipates that long-range strike will be a natural UAS mission, as will ISR. He's reluctant to give the air-to-air fighter mission, for example, to a UAS until it can be shown that it "doesn't give up any of the quality we now have by having the greatest trained pilots in the world."

However, if the technology bears out, he sees no obstacle to UASes taking on the fighter job, too.

"That's the great thing about our system: Once it's proven that it can do the work and it competes, then we'll make those transitions if it's appropriate." ■



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AP photo by Tong Thany

The outcome of the war depended on the infiltration of troops, weapons, and supplies through Laos into South Vietnam.

The Ho Chi Minh Trail

A long line of communist porters carry supplies along the Ho Chi Minh Trail.

By John T. Correll

During the Vietnam War, US pilots could see weapons, military equipment, and war supplies moving on 40-car trains on the railroad near Hanoi and being unloaded from ships in the Haiphong harbor.

They could look, but not strike. Preventing these war supplies from reaching South Vietnam was a primary goal of US strategy, but Air Force and Navy aircraft were seldom allowed to go after them in the North Vietnamese

heartland, where they were concentrated and wide open to attack.

The White House, fearing that bombing Hanoi and Haiphong might escalate the war, would not allow the shipments to be targeted until they were broken up into small loads and headed south on jungle pathways. Transported by trucks, bicycles, and porters with A-frames on their backs, they were difficult to find and even more difficult to stop.

The route south was the Ho Chi Minh Trail. The critical stretch was in Laos,

which was supposedly neutral but which in actuality was one of the major battle areas of the war.

North Vietnam's name for the trail was the Truong Son Strategic Supply Route, after the long mountain chain that separates Vietnam from Laos.

The jumping-off point was Vinh, in southern North Vietnam. Trucks went west to one of three passes—Mu Gia, Ban Karai, or Ban Raving—that cut through the mountains north of the Demilitarized Zone. The trail began on the other side, in Laos. It was 80 miles from the Mu Gia Pass to Tchepone. From there, Khe Sanh, on the South Vietnamese side of the border, was only 25 miles away.

The route went south through Laos for hundreds of miles with mountain passes allowing access to South Vietnam at various places along the way.

The Ho Chi Minh Trail was not a single road but rather a honeycomb of routes, passing through country that was alternately limestone karst, triple-canopy jungle, and grassland.

Some of it was open to the sky, especially where the bombing had been severe, but much of it was concealed by thick vegetation. There were major sections of the trail that US forces never knew about. Late in the war, the North Vietnamese moved tanks, undetected, all the way south.

Military historian John Prados says there were five main roads, 29 branch roads, and many cutoffs and bypasses, adding up altogether to about 12,000 miles of trail.

Both sides tried to keep the war in Laos a secret. The North Vietnamese denied that they were using Laos to infiltrate South Vietnam. The US government did not want to acknowledge publicly that the war had expanded beyond Vietnam.

Origin of the Trail

The trail was in use long before the first US Air Force Farm Gate commandos arrived in Vietnam in October 1961.

In May 1959, the Lao Dong, the Communist Party of Vietnam, ordered the creation of a "special trail" to support the war it was fomenting in South Vietnam. Construction, maintenance, and operation was assigned to the 559th Transportation Group, so named for the month and year of the decision to establish the trail.

Great care was given to prevent discovery of the trail's existence. In the beginning, it led across the Demilitarized Zone and followed Route

9 past Khe Sanh. The first infiltration down the trail was June 10, 1959. Each porter carried four rifles or a 44-pound box of ammunition. These goods were delivered to local insurgents at the head of the A Shau Valley.

The trail was discovered in 1960, when the owner of a plantation found a bundle of rifles that was mistakenly left behind. In early 1961, the North Vietnamese began shifting the route to the other side of the mountains, where the Laotian panhandle had long been a communist stronghold. The Laotian government, fighting another war against the Pathet Lao in the northern part of the country, was unable to stop this use of its territory.

Porters crossed the mountains into Laos, followed the jungle trails, then recrossed the mountains into South Vietnam to deliver their shipments. Bicycles, outfitted with extra suspension, widened handlebars, and pallets could carry 400 pounds or more. French and Czech bicycles were the preferred models.

In 1964, the North Vietnamese

launched a huge project to upgrade the trail for use by trucks. They used Chinese and Soviet machinery to build roads and bridges and established elaborate way stations, complete with underground barracks, storage facilities, workshops, and fuel depots.

Soldiers going south also used the trail. Infiltration—which had been about 8,000 troops in 1963—leapt to 12,000 in 1964, then doubled in each of the next two years. Road watchers at the Mu Gia Pass between North Vietnam and Laos reported the passage of 2,294 trucks between December 1964 and May 1965.

By 1965, some 6,000 porters and 80,000 laborers were occupied in the operation of the trail. In good weather, they built new roadways at the rate of two miles a day.

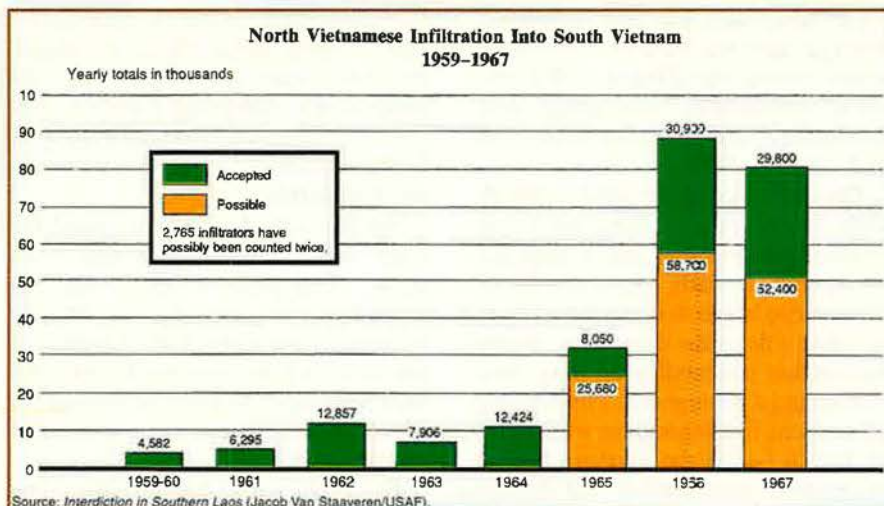
The Secret War

In 1962, the United States and North Vietnam were among the nations signing the Geneva Accord agreeing to the neutrality of Laos. The United States duly removed all of its troops, but the

The Ho Chi Minh Trail stretched hundreds of miles through Laos and Cambodia before terminating in South Vietnam. Mountain passes allowed access to that beleaguered country.



Staff map by Zaur Eyanboikov



This chart shows troop infiltration in the first part of the war. "Accepted" numbers are those that could be reasonably confirmed. The actual total was considerably higher. "Possibles" are infiltrators that are believed to have moved South.

North Vietnamese withdrew only a token number, leaving 6,000 in place.

North Vietnam also continued using the Ho Chi Minh Trail to send troops and supplies into South Vietnam. They denied doing this. In 1966, Prime Minister Pham Van Dong told journalist Stanley Karnow that allegations of North Vietnamese troops in the South were "a myth fabricated by the US imperialists to justify their war of aggression." After the war, he told Karnow that combat forces had been sent down the trail by the tens of thousands.

The White House announced in August 1964 that US aircraft were flying reconnaissance missions over Laos at the request of the Laotian government and that the pilots had instructions to "fire when fired upon."

At US urging, Laotian aircraft flew interdiction strikes against the trail. The first mission was Oct. 14, 1964. Laotian T-28s escorted by US Air Force F-100s and RF-101s struck storage facilities near the Mu Gia Pass.

In December, following attacks on US bases in South Vietnam, US aircraft struck targets in the central Laotian panhandle, but these were more on the order of reprisal and warning rather than interdiction. In April 1965, the United States began flying regular air strikes against the Ho Chi Minh Trail. The American public was not informed of this.

Congressional committees, however, had full details on the "secret war." News reporters filed occasional articles about it, although they were not allowed to witness it for themselves.

When airmen were killed or captured

in Laos, their families were told they had been lost in "Southeast Asia." President Johnson, whose 1964 election campaign had included a pledge of "no wider war," did not want to acknowledge that hundreds of combat sorties were being sent against the trail every day.

Less widely known, "unconventional warfare" ground teams of South Vietnamese mercenaries, led by NCOs from the US Army Special Forces, went into Laos in February 1965. These teams, designated with deliberate vagueness as "Studies and Observation Groups," conducted hundreds of classified missions in Laos over the next six years.

SOG patrols scouted the Ho Chi Minh Trail, identified targets, called in air strikes, captured prisoners, planted mines, and performed such "direct action" missions as attacking North Vietnamese facilities on the trail. These "over the fence" operations eventually employed 2,500 US Army volunteers and 7,000 Vietnamese irregulars.

The secret war would not be officially disclosed to the American public until March 1970, when pressure from the news media and opposition politicians forced President Nixon to confirm that the United States had been, for several years, flying interdiction missions against the trail in Laos.

Steel Tiger Begins

Contrary to the propaganda from Hanoi, the war in the South was not a simple, homegrown insurgency. It was a conflict directed and sustained by North Vietnam and the lifeline for it was the Ho Chi Minh Trail.

US leaders recognized this. Secretary of Defense Robert S. McNamara said the US objective in the war was not to overthrow or destroy North Vietnam but rather to stop its infiltration and activities in the South.

Gen. William C. Westmoreland, commander of Military Assistance Command Vietnam (MACV), saw the infiltration to be of such importance that he proposed a ground invasion of Laos to block the trail. His plan was rejected, partly because it would have required three Army divisions to carry it out and also, Westmoreland said, because President Johnson "would take no step that might possibly be interpreted as broadening the war, which he had publicly announced he would not do."

In its seven-year war on the Ho Chi Minh Trail, the United States would have to rely on airpower.

In March 1965, after North Vietnamese and Viet Cong attacks on US air bases, the Air Force and the Navy launched the Rolling Thunder air campaign against North Vietnam.

About the same time—but less openly—the US began use of sustained air strikes on the Ho Chi Minh Trail. Steel Tiger was the name applied to both the operation and to the geographic area, which was the Laotian panhandle south of Mu Gia Pass.

On April 3, 1965, two B-57 light bombers, supported by a C-130 dropping flares for illumination, flew the first Steel Tiger mission against the trail. Combat aircraft of all kinds would soon join in the attack.

In December 1965, the eastern part of Steel Tiger was designated Tiger Hound. It was regarded as an extension of the war in South Vietnam and operations were controlled by MACV. (Air operations in Steel Tiger were controlled by US Pacific Command. All air strikes in Laos had to be approved by the US ambassador in Vientiane.)

"Failure to stop the supply flow at the head of the system [in North Vietnam] made it most difficult to pinch off supplies for the enemy's army in South Vietnam," said Gen. William W. Momyer, commander of 7th Air Force from 1966 to 1968.

In his 1978 book, *Air Power in Three Wars*, Momyer wrote, "The intent of the interdiction campaigns from 1965-1972 was not to 'strangle' the flow of traffic. This misconception led some to believe that the interdiction campaign was not succeeding because the flow of traffic wasn't stopped."



This map shows air operations in Laos. Barrel Roll in northern Laos and Steel Tiger in the south referred both to operations and geographic designations. Steel Tiger East, also called Tiger Hound, was considered an extension of the fight in South Vietnam. Air operations, both south and north, were conducted by 7th Air Force, employing aircraft based in Thailand and South Vietnam. SAC B-52s also operated extensively in Laos.

“Traffic wasn’t stopped in the European or Korean campaigns, either, but it was reduced to such an extent that the enemy couldn’t get enough supplies for sustained operations. This, too, was the objective in Vietnam; by slowing the traffic with a series of calculated choke points in the rail and road system, we could destroy trucks and supplies piled up by the blockage.”

Night on the Trail

Air operations in the Laotian panhandle occurred mostly at night and were concentrated into six months of the year.

Much of the trail was concealed by triple-canopy jungle. However, the jungle did not provide sufficient cover from the air strikes, and in 1966, the trucks essentially stopped moving in daylight. When they did move during the day, they were camouflaged with green paint and tree branches.

The truck drivers drove the same segments of the trail every night, so they could navigate with little or no light. They moved out soon after nightfall and around 3 a.m. began looking for a place to park, unload, and hide before sunrise.

Air operations also were paced by the semiannual monsoons. Activity on the trail surged during the northeast monsoon—the dry season—which lasted

from the middle of September to the middle of May.

Both infiltration and air strikes declined sharply during the wet season, the southwest monsoon, from May to September. The rains washed out roads and trails. To some extent, supplies could move on swollen waterways, but Viet Cong and North Vietnamese soldiers in the South depended mostly on stores built up during the dry season.

When Steel Tiger began, the Air Force relied mainly on F-100 and F-105 fighter-bombers and B-57 light bombers for attack missions. Propeller-driven B-26 bombers, which had a long loiter time, were pulled out of storage and reconfigured as A-26s for hunter-killer missions on the trail. In December 1965, B-52 bombers made their first strike in the Laotian panhandle.

The strike crews were supported by a full range of aircraft. C-130s dropped flares to illuminate the targets. UC-123s sprayed the jungle growth with defoliant to make the trail more visible. Other aircraft flew in forward air control, electronic countermeasures, and reconnaissance roles.

The AC-47 gunship, effective in the early going, was withdrawn from operations in Laos in 1966 because of vulnerability to ground fire. It was succeeded by more advanced gunships, the AC-119 and the AC-130.

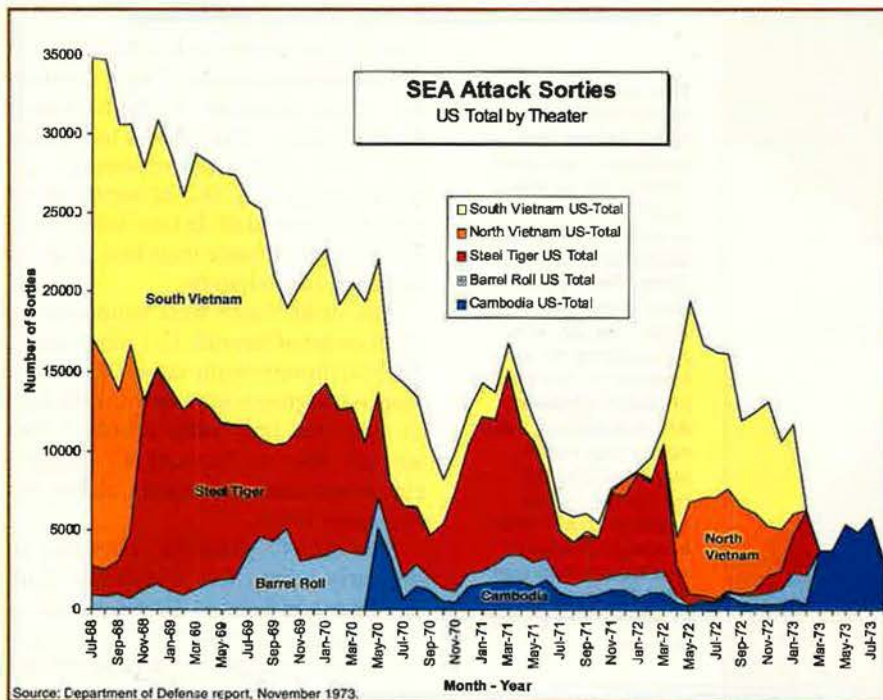
The Air Force replaced many of the propeller aircraft in Steel Tiger with jets, which were faster, more flexible, and better able to survive the enemy guns. After 1967, F-4 Phantoms made more than half of the air strikes on the trail.

Between 1964 and the end of 1967, US aircraft flew about 185,000 sorties against the Ho Chi Minh Trail. The Air Force flew about 80 percent of these. Of the 132 aircraft shot down in the Laotian panhandle in those years, 107 belonged to the Air Force.

In March 1968, President Johnson ordered a partial halt of the bombing of North Vietnam. It merged into a total



In this 1964 photo, a US military advisor and South Vietnamese troops patrol a point where the trail entered South Vietnam. On the right are crude benches offering a resting place for those carrying supplies.



bombing halt—and the end of Rolling Thunder—on Oct. 31.

The halt, however, did not apply to Laos. With more resources available for Laos, a new phase of the war against the Ho Chi Minh Trail was about to begin, and it would be considerably more intense than the early Steel Tiger and Tiger Hound operations.

McNamara's Line

By 1966, McNamara had lost faith in the air war against North Vietnam and was ready for change. An alternative was proposed by John T. McNaughton, the assistant secretary of defense for international security affairs, who had heard the idea from a colleague at Harvard.

End the Rolling Thunder campaign in the north, McNaughton suggested to McNamara, and build a "high-tech barrier" to block infiltration of troops and supplies.

As McNaughton described it, the barrier would "run from the sea across Vietnam and Laos to the Mekong, a straight line distance of about 160 miles." In Vietnam, it would consist of minefields, barbed wire, ditches, and military strong points. In Laos, it would be an "interdiction and verification zone," about 10 miles wide, seeded with road-denial mines and all sorts of sensors to target trucks moving on the trail.

Against the advice of military leaders, McNamara launched the project in

September 1966. The barrier in Vietnam would be called Dye Marker. The portion in Laos was Muscle Shoals, and the technology for it—as well as the name by which the program is best remembered—was Igloo White. (See "Igloo White," November 2004, p. 56.)

Word of the program leaked to the newspapers and it became popularly known as "the McNamara Line."

The barrier in Vietnam was eventually canceled, but the Igloo White portion of the project was implemented. The trail was sown with 20,000 seismic and acoustic sensors, dropped by aircraft and placed by Special Forces teams. The sensors had to be replaced every few weeks as the batteries ran down.

An infiltration surveillance center called Task Force Alpha opened at Nakhon Phanom, Thailand, in July 1967. EC-121 Batcat aircraft began flying from Korat, Thailand, in November to monitor the signals from the sensors and relay them back to Task Force Alpha.

Sensors tracked the direction and speed of convoys on the trail. From this, it was possible to predict where the trucks were going and when they would get there. Air strikes were sent in, and as the aircraft approached the strike zone, the sensors updated the location of the trucks.

Some aircraft, notably the AC-130 gunship, were able to find trucks on their own. The AC-130 had its own sensors, including low-light-level TV, forward-looking infrared, and the shad-

ow "Black Crow," which could detect truck engines from 10 miles away.

When the air campaign against the trail escalated in 1968, Igloo White would be central to it and would remain so for the rest of the war.

Commando Hunt

Operation Commando Hunt began promptly on Nov. 1. In fact, every interdiction campaign after 1968 was called Commando Hunt. The numerical designations changed with the monsoon season. As before, most of the strikes were in the dry season. Commando Hunt I, III, V, and VII were the most intensive. A key characteristic of the seven Commando Hunt campaigns was the use of the Igloo White sensors.

In addition, the Air Force relied on "blocking belts" to impede infiltration on major routes. The drill was to cut the road at several places with laser guided bombs and seed the ground between the cuts with mines, which made it more difficult for the enemy to repair the road cuts. This forced the North Vietnamese to divert their trucks to out-of-the-way routes, and it created traffic jams—lucrative targets for air attack.

There were two problems. North Vietnamese forces had bypasses unknown to the Air Force, and they were very good at clearing the blocking points. They threw rocks tied to cords into the mined area and drew them backward to set off the mines. Once they had a path through the antipersonnel mines, the rest of the clearance was easy.

The B-52s continued to pound the mountain passes, but they were unable to close them.

"After years of heavy bombing, the landscape of the passes, stripped of vegetation and pockmarked by craters, was lunar," Air Force historian Eduard Mark said. "This probably made it easier for the North Vietnamese to keep the passes open."

Mark went on, "The pattern of the bombs dropped by a cell of B-52s was so adjusted that they were distributed evenly through a box. Relatively few bombs would, on average, strike the narrow roads. Where they did, temporary bypasses could be readily constructed in treeless areas where the soil, tilled by thousands of bombs, had become easier to work. Craters in the road could be filled with the spoil from adjacent craters."

The most effective weapons in Commando Hunt were the gunships. They flew a comparatively small percentage

of the sorties, but accounted for an exceptionally large share of the results. At the peak of Commando Hunt VII, the average number of trucks reported as destroyed or damaged per sortie was as follows:

■ AC-130 gunship	8.3
■ AC-119 gunship	3.3
■ B-57 bomber	2.0
■ Fighters (all)	0.3

Between 1966 and 1970, North Vietnam used a second infiltration route that was considerably less hazardous than the Ho Chi Minh Trail. At the request of China, Prince Norodom Sihanouk of Cambodia gave the North Vietnamese access to the ports of Sihanoukville (Kompong Som) and Ream. From there, they sent military supplies north through Cambodia, then east to South Vietnam along the "Sihanouk Trail."

This alternative route became more important in 1968, when Commando Hunt air strikes intensified on the Ho Chi Minh Trail. In the covert "Menu" operations from March 1969 to May 1970, US bombers repeatedly hit supply dumps and staging bases along this route.

When Sihanouk was ousted in 1970, the ports and the Sihanouk Trail were lost to North Vietnam. In May and June 1970, a US "incursion" into Cambodia took out most of what was left of the sanctuaries. The Pentagon's estimate was that enough weapons to equip 74 infantry battalions had been destroyed and that the North Vietnamese cause had been set back by 15 months.

Disclosure

Soon after the Nixon Administration took office in 1969, the secret war in Laos—which had been under way for the past four years—became a political issue.

That summer, the Senate Foreign Relations Subcommittee on US Security Agreements and Commitments Abroad began hearings. By the end of the year, a growing list of Senators was complaining about Administration secrecy in Laos, and national newspapers had joined the fray.

"This was the culmination of a campaign extending over many months in the Senate and in the media to get at the 'truth' in Laos," said Henry Kissinger in 1979. "The issue was not to obtain the facts—they were widely known—but to induce the government to confirm them publicly, which was quite a different matter."

US involvement in Laos was publicly acknowledged for the first time in a statement by President Nixon on March 6, 1970.

He said the North Vietnamese started violating the Geneva agreement "before the ink was dry" and that, "since 1964, over a half-million North Vietnamese troops have crossed the Ho Chi Minh Trail in Laos to invade South Vietnam. This infiltration provides the great bulk of men and supplies for the war in South Vietnam."

(Nixon's estimate may have been low. By the end of the war, North Vietnam had sent as many as a million troops south on the trail.)

"We have used airpower for the purpose of interdicting the flow of North Vietnamese troops and supplies on that part of the Ho Chi Minh Trail which runs through Laos," Nixon said. "Our air strikes have destroyed weapons and supplies over the past four years which would have taken thousands of American lives."

Gen. Creighton W. Abrams, who had succeeded Westmoreland as commander of MACV, renewed Westmoreland's notion of a ground invasion of Laos to cut the Ho Chi Minh Trail. The Pentagon and the White House agreed that it was worth trying.

The Cooper-Church amendment to the defense appropriations act in 1970 prohibited the use of US ground troops in Laos, so the task fell to the South Vietnamese Army, supported by US airpower. The operation was called Lam Son 719.

South Vietnamese forces entered Laos on Feb. 8, 1971. To go beyond the border, they stopped digging in. They did not begin moving again until March 3. They reached Tchepone, but retreated after two days when the enemy counterattacked. A large number of tanks and trucks were abandoned, and South Vietnamese forces withdrew from Laos on March 24 under massive US air cover.

The Air Force flew four more Commando Hunt campaigns after that, two in the dry season and two in the wet season.

Interdiction of the trail essentially ended in early 1972. On March 30 of that year, North Vietnam launched its massive Easter invasion of the South. US airpower was suddenly diverted to counter North Vietnam's attack. Shortly after that, the bombing of North Vietnam resumed with Operation Linebacker on April 6. The emphasis never shifted back to Laos.

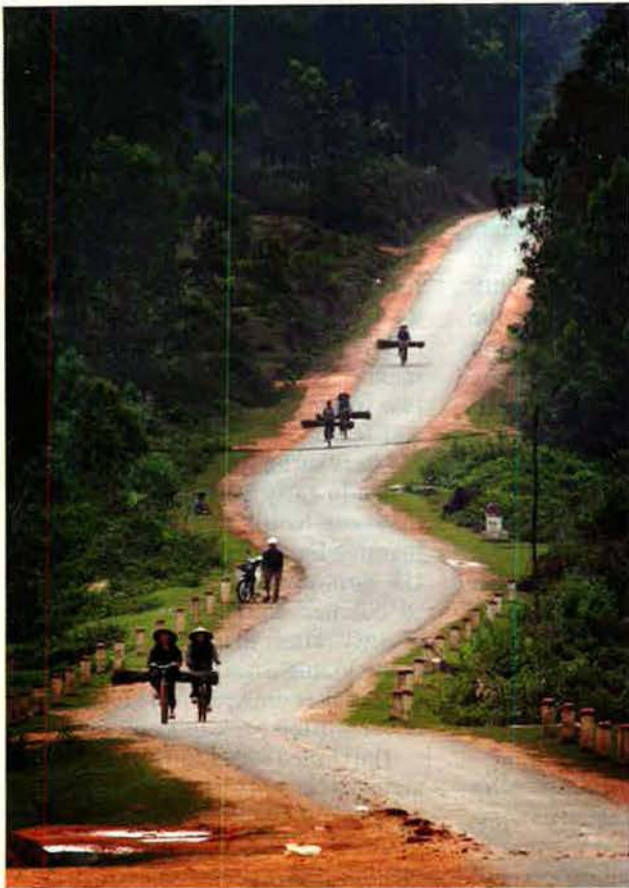
The United States and North Vietnam signed a cease-fire in January 1973. It covered the fighting in Laos as well as in Vietnam. Major US participation in the war had come to an end.

Disputed Results

How effective was the seven-year air war against the Ho Chi Minh Trail? On that, opinions vary widely. Many of the strikes were at night against targets moving through jungle cover. Even when there were fires or explosions, it was difficult to be certain about the damage inflicted.



Gunships gave the Air Force the most bang for the buck against the trail. At the peak of Commando Hunt VII, AC-119s hit 3.3 enemy trucks per sortie, while the new AC-130 (shown) hit 8.3 North Vietnamese trucks per sortie—by far the best result.



In modern Vietnam, the Ho Chi Minh Trail is legendary. A highway from Hanoi to Ho Chi Minh City (Saigon) goes under the name "Ho Chi Minh Trail," but it is entirely in Vietnam. Shown are bicyclists traveling the highway earlier this year.

The Air Force reported 46,000 trucks destroyed or damaged during the four Commando Hunt dry season campaigns, with the count distributed as follows:

- 1968-69 6,000
- 1969-70 10,000
- 1970-71 20,000
- 1971-72 10,000

Critics in Washington found great sport in disparaging such bomb damage assessments. "These figures are not taken seriously by most officials, even Air Force officers, who generally apply something on the order of a 30 percent discount factor," said a staff report for the Senate Foreign Relations Subcommittee on US Security Agreements and Commitments Abroad in 1971. "One reason why there is some skepticism about the truck kills claimed by the Air Force is the total figure for the last year greatly exceeds the number of trucks believed by the embassy to be in all of North Vietnam."

There was, no doubt, inflation and error in the numbers the Air Force reported. However, if Air Force claims could be cast in doubt, so could the criticism. Political axe-grinding was an element in the Congressional report, and the "discount factor" apparently referred to the intelligence agencies, which arbitrarily

cut as much as 75 percent from any pilot claims that came their way.

Furthermore, North Vietnam imported 4,500 to 8,000 trucks a year from the Russians and Chinese during the Commando Hunt campaigns. That, plus the number of damaged trucks the North Vietnamese were able to repair, does not necessarily validate the Air Force claims, but it does indicate they are more supportable than the ridicule of the critics would suggest.

After Commando Hunt VII, Brig. Gen. Richard G. Cross Jr., 7th Air Force assistant deputy chief of staff for operations, said, "This interdiction effort failed to prevent the enemy from positioning sufficient supplies to initiate an all-out offensive against South Vietnam" in March 1972.

That was probably the case, although some of the supplies for the Easter invasion may have been accumulated and stored over a period of years.

Looking back at Steel Tiger, Tiger Hound, and Commando Hunt, Momyer said, "The interdiction campaign was able to limit the number of forces the

North Vietnamese could support in the South. Not until the interdiction campaign ended with the termination of US involvement could the North Vietnamese logistically support and deploy their full strength of 18 to 20 divisions. Before the 1975 offensive, they never deployed more than 11 or 12 divisions, apparently for fear of the destruction they would suffer by exposure to our airpower."

The "Trail" Today

In Vietnam today, the trail is a legend. Those who built it, ran the way stations, and transported the arms and supplies south are revered as heroes of the war.

In April 2000, Vietnam began building the Ho Chi Minh Highway from Hanoi to Ho Chi Minh City, formerly Saigon. It is a needed addition to the nation's road system, but it also is billed as running "along the historic Ho Chi Minh Trail" and commemorating the famous route. It will eventually be 1,050 miles long. So far, about 750 miles are open to traffic.

Western news media—notably the Associated Press, *Time Magazine*, and *National Geographic*—have reported that the highway will follow the course of the wartime Ho Chi Minh Trail and have made much of the symbolism.

In fact, the Ho Chi Minh Highway will be entirely in Vietnam. It will go through Vinh, cross what was the DMZ, pass close to Khe Sanh, and run down the eastern side of the mountains through the Central Highlands to the former capital of South Vietnam. The actual Ho Chi Minh Trail ran through Laos, of course.

The historical significance of the Ho Chi Minh Trail is certainly real, however. In recent years, Vietnamese leaders have confirmed that their strategy for winning the war depended on infiltrating troops and supplies into South Vietnam.

They have said they were pressed at times but that they were able to move what they truly had to move. Their strategy worked because US policy ruled out stopping the flow at its source by striking the ports and logistics centers in the North.

That left Air Force and Navy airmen to chase down the trucks, one by one, on the Ho Chi Minh Trail, and that was never a realistic or reasonable objective. ■

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

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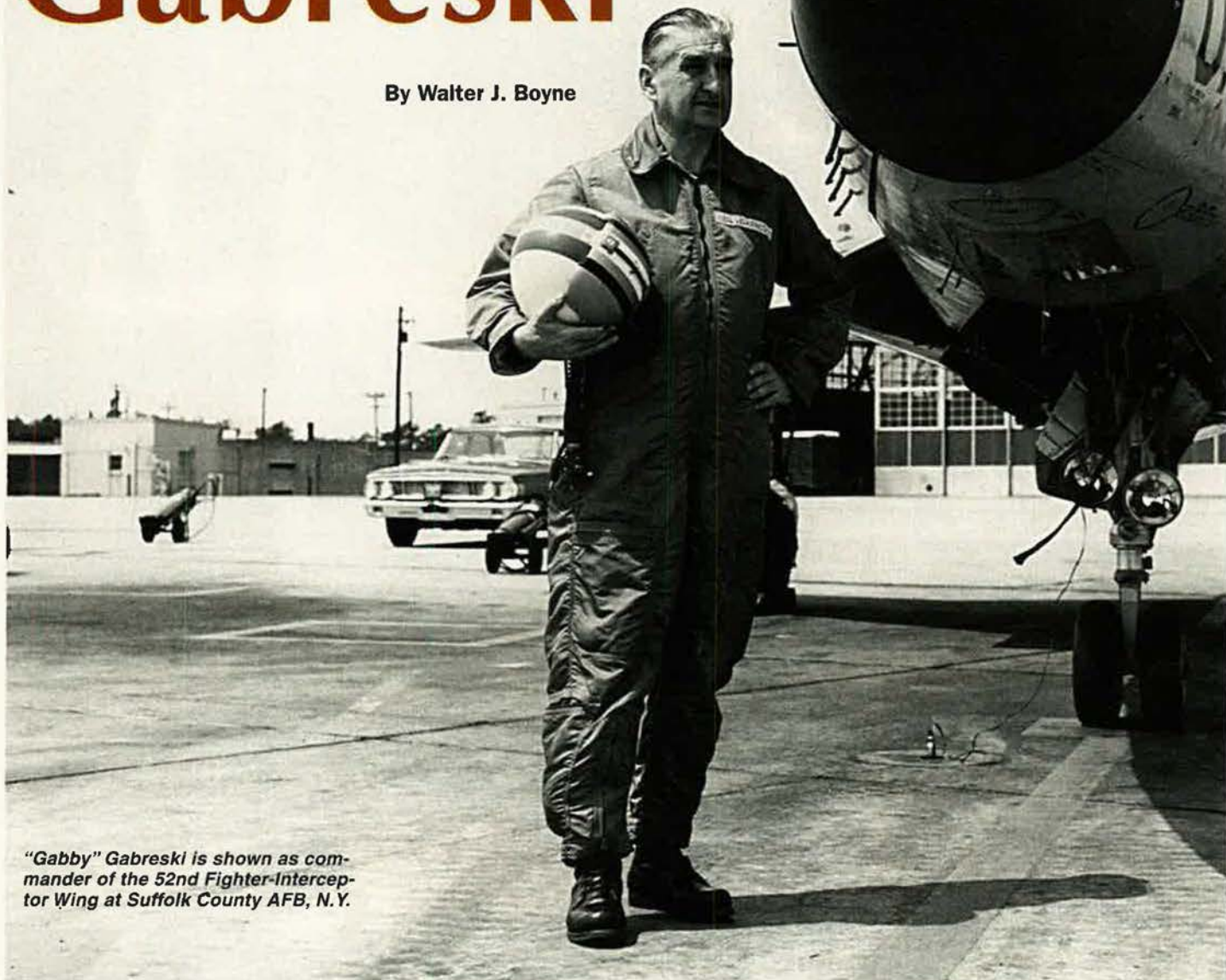
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He came perilously close to washing out as a pilot. Then, he became one of the greatest aces of all time.

Gabreski

By Walter J. Boyne



"Gabby" Gabreski is shown as commander of the 52nd Fighter-Interceptor Wing at Suffolk County AFB, N.Y.

JUST as Capt. Eddie Rickenbacker fought his way up from humble circumstances to become the top American ace in World War I, so did Col. Francis S. "Gabby" Gabreski surmount many major obstacles to rise to the peak of the fighter pilot profession. Gabreski, with 28 aerial victories, became the top-scoring American ace

in Europe in World War II. He added 6.5 victories in Korea.

Gabreski's life was, in many ways, a classic American story. Many of the details presented here are drawn from Gabreski's 1991 autobiography, *Gabby: A Fighter Pilot's Life*, which was written in collaboration with Carl Molesworth and published by Orion

Books. Others come from official sources.

Gabreski's father, Stanley Gabryszewski, came over from Poland in 1909 and, despite poor health, worked hard in Oil City, Pa., to create opportunities for his five children.

Like many American towns of the period, Oil City was ethnically divid-



ed. Various groups—Polish, German, Italian, Irish—stayed in their own communities, speaking their native languages at home, in their parochial schools, and in their churches. (In all her life, Gabreski's mother spoke just a few words of English.) Gabreski spoke Polish at home, in the streets, and in school. It was his facility with language that eventually put him into

position to become a fighter ace.

It was often tough during the Depression when Gabreski was growing up, but his father purchased a grocery store, the Purity Market, and the entire family worked to make it a success. The elder Gabreski later parlayed the profits from the store into real estate and other investments to make himself a wealthy man in Oil City.

During his youth, Gabreski's chances for future success seemed dim. Something of a ladies' man, he had trouble keeping up with his brothers academically, graduating from high school in 1938 with mediocre grades and faring poorly as an undergraduate at Notre Dame.

The Flying Bug

Gabreski frequently stated that in high school and college he was a bit of an outsider, not quite "one of the boys." Consequently, he was quite depressed when he did not do well at something he found he loved, flying. In 1938, Gabreski took lessons from Homer Stockert in a Taylorcraft, the little brother of the Piper Cub. After six hours of instruction, the young Gabreski reluctantly accepted Stockert's judgment that he didn't have the touch to be a pilot.

Gabreski was struggling through his second year at Notre Dame when Germany invaded Poland on Sept. 1, 1939. The attack infuriated him, for strong loyalty to his Polish heritage made him feel as if Germany had insulted him and his family. In the following year, he volunteered for flying training in the Army Air Corps, hoping to prove Stockert wrong.

After passing his physical, Gabreski went to Parks Air College near East St. Louis, Ill., for primary flight training, part of the Civilian Pilot Training Program that did so much for the war effort. For Gabreski, this was a do-or-die test. He knew his father was disappointed about his performance at Notre Dame; washing out of flying training would be the last straw.

Unfortunately, he found that he was no more talented in a Stearman PT-17 than he had been in the Taylorcraft. He soloed, but, in September 1940, his civilian instructor gave up and recommended him for an elimination flight with an Army flight examiner, Capt. Ray Wassel. As many an ex-aviation cadet knows, elimination rides are all too often just that. However, Wassel was a good instructor and, even though

he probably didn't see Gabreski as a future ace, he considered him worth keeping in flying school.

Things immediately improved for Gabreski, and he was sent to Gunter Field at Montgomery, Ala., for basic flight training, then to Maxwell for advanced training. In March 1941, his proud family came to Maxwell to see him collect his wings and his commission as a second lieutenant.

Gabreski often reflected that his happiest assignment was his first one, as a fighter pilot in the 15th Fighter Group at Wheeler Field, Hawaii. To a poor boy from Oil City, the islands were too beautiful for belief, and the duty was perfect. He got to fly Curtiss P-36 and P-40 fighters virtually every day and spent the evenings talking, drinking, and otherwise relaxing.

Things got very serious in December, however. Japan bombed Pearl Harbor on Dec. 7, 1941. Gabreski got airborne in a P-36 on that day, but attacking Japanese aircraft had long since returned to their carriers, and he and his colleagues spent their sorties avoiding friendly fire and agonizing over the still-burning ships and airfields.

Over the next year, Gabreski continued his flying. The war was where he wanted to be. He put in a request to be transferred to Britain to serve with one of the Royal Air Force's Polish squadrons. He argued that his command of the language would enable him to fly with the Poles and pick up valuable battle experience.

Fast Burner

Gabreski's persistence paid off, and in December 1942, he was assigned to the famous RAF 315 Squadron. Manned by Polish pilots and flying Spitfire Mk IX aircraft, the best Allied fighter at the time, it was exactly what Gabreski wanted. He also was promoted to captain only 17 months after he was commissioned.

After the German invasion of Russia on June 22, 1941, the air war in Europe shifted, and the majority of the Luftwaffe was being employed on the Eastern Front. Only two German fighter units, the famous Jagdgeschwader 26 and Jagdgeschwader 2, were positioned to defend Western Europe. While the RAF carried out almost daily attacks to provoke German fighters, the Luftwaffe reacted only to threats to targets it perceived as vital.

Gabreski flew more than two dozen



On Jan. 30, 1944, two days after his 25th birthday, Gabreski (right) got his 10th and 11th victories while flying with Eighth Air Force's 56th Fighter Group. Here, Maj. Sylvester Burke greets him after a mission on Jan. 25.

missions with the Poles, but saw combat only once. Nonetheless, he learned the latest RAF tactics and methods. On Feb. 27, 1943, he left 315 Squadron to resume duty with the US Army Air Forces, joining the soon-to-be-famous 56th Fighter Group under Lt. Col. Hubert "Hub" Zemke.

The 56th would carve a fantastic record in the skies over Europe, scoring 677 aerial victories. Known as "Zemke's Wolfpack," the unit carried on a long and ostensibly friendly rivalry with the 4th Fighter Group over which was the top scoring outfit. The 4th claimed more than 1,000 destroyed, with 539 aerial victories and the remainder destroyed on the ground. Later analysis revealed that the record for aerial victories probably went to the 354th Fighter Group, which claimed 701. The point is moot. They were all crack outfits.

In the 56th, Gabreski's experience proved invaluable to him personally, because at first he was viewed again as an outsider. Famous ace Gerald Johnson commented later that he felt Gabreski was not treated fairly by the group. Most of the men had been with the 56th since its activation in early 1941, and together they had brought the brand-new and unproven Republic P-47 to operational status. In that long hard process, almost a score of young pilots had been killed. The survivors—including such illustrious future aces as Walker M. Mahurin, David C. Schilling, Robert S. Johnson, and Gerald W. Johnson—viewed Gabreski as a "green bean" with the P-47.

Nonetheless, he had to be assigned a position commensurate with his rank. Assigned as B Flight commander of the 61st Fighter Squadron, Gabreski went into combat again in April. The P-47 seemed huge compared to the lithe Spitfire, but he soon came to appreciate its diving speed and firepower. Later, when it was equipped with a paddle-blade prop, its new-found climbing ability would save his life.



A ground crew reloads Gabreski's P-47. The 24 victory flags indicate Gabreski was nearing his World War II final total. "One last mission" left him a POW in Germany.

On June 9, 1943, Zemke picked Gabreski to command the 61st FS, despite his lack of seniority. It was a tough call for Zemke, who had to pass over some pilots who had been with the squadron since its inception. Yet Zemke liked the way Gabreski had imposed his aggressive flying style on B Flight and how he handled his new duties as squadron operations officer.

In return, Gabreski looked up to Zemke as the ideal commanding officer, leading from the front. He approved of Zemke's strict disciplinary policies.

The 56th scored its first kill on June 12, when Capt. Walter Cook blew the wing off a Focke-Wulf FW-190. It was the start of a long hard battle that would not end until the 56th's last combat mission on April 21, 1945.

Festering Disappointment

Gabreski scheduled himself to fly as many sorties as possible, gaining the confidence of his squadron in the process. His festering disappointment about not scoring a victory was assuaged on a bomber-escort mission on Aug. 24. Flying at 27,000 feet, he spotted a formation of seven Focke-Wulfs some 10,000 feet below, preparing for an attack on the bombers. Gabreski immediately engaged, leading his flight of four down to come behind the German fighters. Remembering his

training with the Polish 315 Squadron, he kept firing on the German flight leader until he closed to within 250 yards. The badly damaged FW-190 dove into the ground.

Gabreski celebrated, but there was a slight edge to the celebration. His wingmen complained that his attack had been so swift and direct that they were unable to inflict damage on their own targets. As his career developed, it became apparent that Gabreski was a shooter, and his wingmen would have to adjust to that fact.

His second victory came on Sept. 3. It was another 190, and then he hit an aggravating dry spell while watching Zemke, Schilling, Mahurin, Bob Johnson, Jerry Johnson, and Frank E. McCauley all become aces.

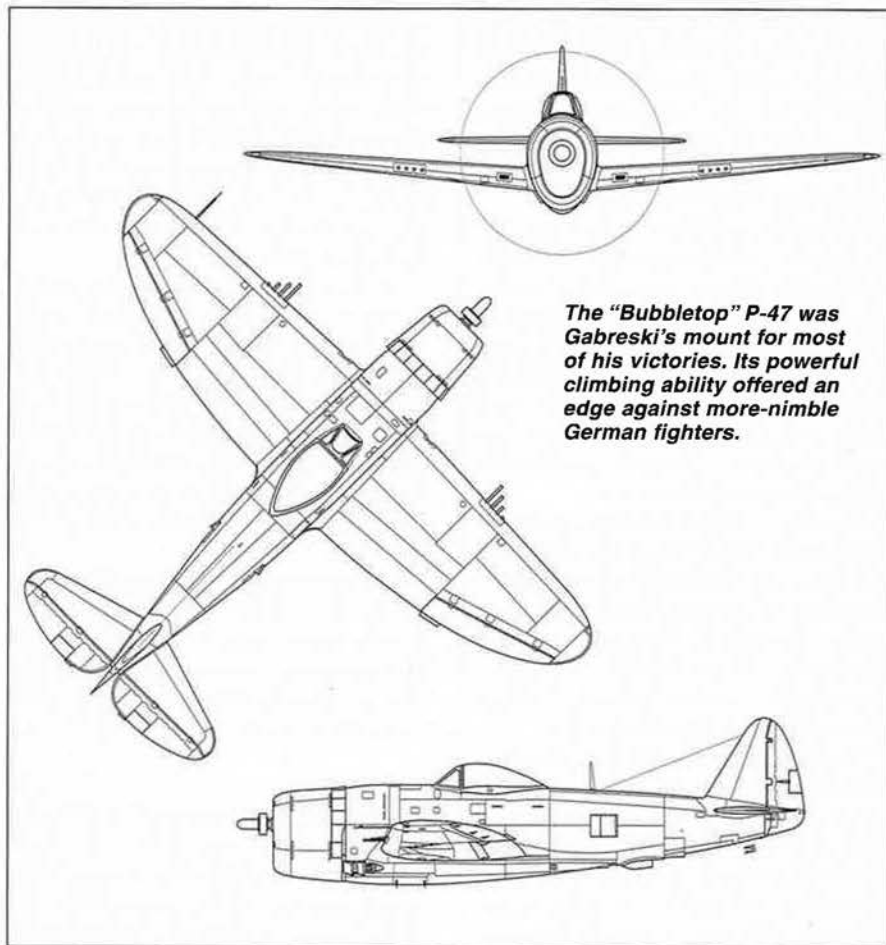
On Nov. 5, while escorting bombers on a mission to Munster, Germany, the dry spell ended. The entire 56th was airborne, with Zemke leading. Gabreski spotted a formation of 20 enemy fighters and immediately signaled for the 61st FS to attack head-on.

The German fighters rolled and dove for the ground, a fatal error in a dogfight with Thunderbolts. Gabreski opened fire early, from about 500 yards, and continued to blaze away until the 190 adversary rolled over into a spin, spewing smoke. Gabreski shifted his fire to another 190, but after a short burst he was out of ammunition. His wingman, 1st Lt. Eugene E. Barnum, finished off the 190.

Becoming an Ace

Three weeks later, Gabreski shot down two Messerschmitt Bf-110s on a mission near Bremen, Germany. He opened fire from 700 yards on the first of the twin-engine fighters (which are sometimes recorded as Me-210s), firing all the way in until he had to dive to avoid ramming the burning aircraft. Minutes later, he attacked another Bf-110, hitting it in the wing root and sending it down to the ground in a massive fireball. He was now an ace.

Gabreski continued to score but often with long intervals. He took hits as well, being almost shot down by the gunner in a Junkers Ju-88 on Dec. 1, 1943. Then 10 days later, he was bested in a battle with a Bf-109 that caught him low on fuel and ammunition. Gabreski persistently evaded the initial attacks by the 109, but the German pilot put a burst into Gabreski's airplane that shot his rudder pedal away, numbed his foot with a glancing blow, and knocked



The "Bubbletop" P-47 was Gabreski's mount for most of his victories. Its powerful climbing ability offered an edge against more-nimble German fighters.

Staff illustration by Zaur Elyanbekov

his turbocharger out. The big Pratt & Whitney R-2800 stopped, and Gabreski prepared to bail out. Fortunately he stayed with the airplane until it reached a lower altitude where the turbocharger was not needed, and the engine began running again. He nursed the P-47 back to an emergency landing in Great Britain, where he was relieved to find that he was not wounded.

As the character of the air war changed in early 1944, things improved for Gabreski. Ever newer fighters were available, and the P-47's range was extended by larger external tanks. Tactics changed as well, for the new commander of Eighth Air Force, Lt. Gen. Jimmy Doolittle, had decreed that the mission of fighters was no longer simply to protect the bombers. They were now charged with destroying the Luftwaffe.

This suited the 56th Fighter Group to a T, and Gabreski's victories came more rapidly, often in multiples. On Feb. 20, 1944, he destroyed two Bf-110s in a single sweeping attack, using his now-standard technique of firing from a distance and keeping on shooting until he was within 50 yards of his quarry. His next victory, on Feb. 22,

was his 14th and one of eight scored by his squadron that day. It was doubly a red-letter day for Gabreski, for his 61st Fighter Squadron's eight kills brought its total to 100.

He also began to strafe. Strafing enemy airfields was extremely dangerous, and the iron rule was to make one pass and leave. Gabreski enjoyed getting down on the deck and shooting up airplanes on the ground, getting his first confirmed success on March 8.

By May 8, Bob Johnson had raised his score to 27, besting Rickenbacker's World War I score and making him the top American ace. He was soon shipped home to go on a war bond tour, leaving Gabreski, with 19 victories, in a position to catch him.

On May 22, Gabreski scored his first and only triple, on a bomber escort mission to Kiel. While flying top cover at 15,000 feet for another flight strafing an airfield, Gabreski spotted an air base from which FW-190s were taking off. He dove to attack, coming behind a flight of eight. His first burst blew up a 190, and he switched to a second and shot it down as well. When he was attacked by two Focke-Wulfs, he used the P-47's new paddle-blade climbing

power to pull up out of trouble. A few minutes later, he led his flight of P-47s to attack another group of 190s and shot down the last aircraft in the formation. Now he had 22 kills.

The High, Then the Low

Gabreski scored six more victories by July 5, and the outsider from the Polish 315 Squadron had become the top American ace in the European Theater. This catapulted him into an endless round of public relations events scheduled to culminate in a trip home to the United States to sell war bonds. However, Gabreski's persistent aggressiveness intervened.

On July 20, Gabreski was packed and ready to be flown home on a USAAF transport. He stopped by group operations and scanned the field order—an escort mission to Russelheim, near Frankfurt. On an impulse he volunteered to fly “one last mission,” which is exactly what it proved to be.

The mission was relatively peaceful until Gabreski saw an airfield and led his flight down to attack. Coming in fast, at treetop height, he began firing on a Heinkel He-111 bomber. When he missed, he violated his own strict rules and did a 180-degree turn for a second attack. This time his bullets seemed to be going high over the He-111, so he lowered the P-47's nose to compensate. When he did, his props struck the ground, bending the tips back and wrecking the control mechanism.

Gabreski made a successful crash landing and evaded capture for five days, until, weak from hunger and fatigue, he was captured and became a prisoner of war.

After the usual formalities, including an interview by the interrogator Hanns J. Scharff, he was sent to Stalag Luft I. There he met some colleagues from the 56th, including Jerry Johnson. They were joined a few weeks later by Zemke, whose P-51 had come apart in a thunderstorm over Germany.

Prison life was never good in Germany, and it deteriorated badly toward the end of the war, when food and fuel rations continually declined. Gabreski's tough constitution enabled him to survive, and when the war in Europe ended, he was flown out of Germany on May 14, 1945. He worked his way back to his old outfit, the 56th, then flew to New York in a C-54. Things were in a postwar turmoil, and he did not receive the customary hero's welcome.

Gabreski was promoted to colonel, but

his postwar assignment to flight testing was not as satisfying as he wished, and he elected to leave the service in May 1946. He joined the Douglas Aircraft Co. to sell DC-6s in South America. It was a short-lived experiment, and on April 7, 1947, he rejoined the Army Air Forces with a permanent rank of lieutenant colonel.

After a variety of assignments that he liked, including command of the 56th Fighter Group at Selfridge AFB, Mich., the World War II ace entered the jet age, flying both the Lockheed F-80 and North American F-86. When the 4th Fighter Wing was sent to Korea to contest the arrival of communist MiG-15s, Gabreski immediately volunteered.

Somewhat understandably, his wife, Catherine Gabreski, was upset. After having been home for only five years, he was going to war again—and she was pregnant with their fourth child (out of a future total of nine).

Jet Victory

Gabreski compromised. He waited until the baby was born. On June 17, 1951, he embarked on his first combat sortie of the Korean War as deputy wing commander with the 4th Fighter-Interceptor Wing. Flying out of K-14 at Kimpo, he was worried whether his eyes and reflexes would meet the demands of jet combat. On July 8, he answered his own question by shooting down a MiG-15 just south of the Yalu River. The MiGs were not making their presence felt so much at the time, but he shot down two more before being assigned to command the 51st FIW, on Nov. 8, 1951.

It was a perfect job for Gabreski, supervising the conversion from F-80s to brand-new F-86Es and scheduling himself to fly as many missions as possible. In addition to his flying, Gabreski was an effective wing commander.

The 51st operated out of K-13 at Suwon, about 20 miles south of Kimpo. The outfit flew its first combat mission with Sabres on Dec. 1, 1951. Gabreski had a good eye for talent and brought veterans such as George Jones and William T. Whisner Jr. along with him.

He selected an old colleague from the 56th, now-Col. Bud Mahurin, to be his deputy wing commander.

Under Gabreski's leadership, the 51st came up with new tactics, including the “fluid four” formation, and soon was gaining victories at a prodigious rate. Gabreski shot down his fourth MiG on Jan. 11, 1952. On Feb. 20, he shared a victory with Whisner, a 15.5-victory ace from World War II who became the 51st's first jet ace on Feb. 23, 1952.

Gabreski became the unit's second jet ace on April 1, 1952, knocking down a MiG across the Yalu River. He scored again on April 12, bringing his total to 6.5 in Korea, and placing him with only five other USAF pilots who have been aces in two wars. (The others include George A. Davis Jr., Vermont Garrison, James P. Hagerstrom, Harrison R. Thyng, and Whisner.)

When Gabreski approached his 100-mission limit, he simply stopped logging missions, afraid that he would be sent home. His ploy worked for about a month, but he was grounded and on June 4, 1952, ordered home, the highest-scoring US ace then alive.

This time the returning ace got a true hero's welcome, with a ticker-tape parade in San Francisco, a meeting with President Truman, and a great reception in Oil City.

Gabreski naturally entertained hopes for flag rank, but it was not to be. Instead he had a series of operational and staff jobs, retiring on Oct. 31, 1967, as commander of the 52nd Fighter Wing at Suffolk County AFB, N.Y. He went to work for Grumman Aircraft the next day and remained there for 20 years, retiring in 1987.

In his more than 266 combat missions, Gabreski earned many US and foreign military awards, including the Distinguished Service Medal, Distinguished Service Cross, Silver Star with one Oak Leaf Cluster, and the Distinguished Flying Cross with 12 Oak Leaf Clusters. He was always conscious and grateful that his life, which had begun with so little luster, would come to personify the American dream. ■

Walter J. Boyne, former director of the National Air and Space Museum in Washington, D.C., is a retired Air Force colonel and author. He has written more than 400 articles about aviation topics and 40 books, the most recent of which is Today's Best Military Writing: The Finest Articles on the Past, Present, and Future of the US Military. His most recent article for Air Force Magazine, "The Low-Drag World of Jack Northrop," appeared in the October issue.



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For information on the Air Force Association, see www.afa.org



Air Force Association

Delegates at the 2005 AFA National Convention gathered at Arlington National Cemetery to participate in a memorial service honoring AFA members who died during the previous year and to observe a wreath-laying ceremony at the Tomb of the Unknowns. Below, AFA's Chairman of the Board Stephen P. "Pat" Condon (left) and National President Robert E. "Bob" Largent salute as a bugler plays Taps.



Photos by Guy Aceto and Joe Chiarabò

National Convention 2005

By Tamar A. Mehuron, Associate Editor

THE entire Class of 2006 from USAF's Air Command and Staff College, Maxwell AFB, Ala., attended the Air Force Association's Air & Space Conference and Technology Exposition, held in mid-September at the Marriott Wardman Park Hotel in Washington, D.C. It was the first-ever venture of its type for ACSC.

The class of some 570 airmen, accompanied by faculty members, arrived Sunday, Sept. 11, and stayed through Wednesday, Sept. 14. The students' attendance was made possible by a grant from Boeing Co. and AFA. Their presence meant these future Air Force leaders got to know AFA, meet and talk with current USAF leaders, and acquaint themselves with defense and aerospace industry representatives, including executives. The students also attended a wide variety of Air & Space Conference panels and seminars and



visited the Aerospace Technology Exposition's samplings of advanced technology developments.

The students were joined by more than 6,300 attendees registered for the Air & Space Conference, along with hundreds of AFA members and delegates who gathered Saturday, Sept. 10, and Sunday, Sept. 11, to participate in the annual AFA National Convention preceding the Air & Space Conference.

Many delegates traveled by chartered bus to Arlington National Cemetery for a memorial service held on Sunday. Donald J. Harlin, AFA National Chaplin, officiated. He gave the invocation, offered a reflective message, and concluded with a closing prayer. The 2005 Memorial Tribute List was read by AFA Chairman of the Board Stephen P. "Pat" Condon and National President Robert E. "Bob" Largent. After the service, Condon and Largent laid a wreath at the Tomb of the Unknowns on behalf of AFA.

Gen. T. Michael Moseley, Air Force Chief of Staff, welcomed delegates, Air Force attendees, and members of industry at the conference opening on Monday morning, Sept. 12. Later that evening, AFA honored the 12 Outstanding Airmen of the Year, with an address by Lt. Gen. Arthur J. Lichte, assistant vice chief of staff of the Air Force. CMSAF Gerald R. Murray was toastmaster. The next day, Sept. 13, the Outstanding Airmen met with their Congressional representatives on Capitol Hill.

At the Air Force Anniversary Dinner that Tuesday evening, AFA honored retired Gen. Gregory S. Martin, former



AFA Board Members Jim Finch (a retired Chief Master Sergeant of the Air Force) and Air National Guard C-130J pilot Julie Petrina review an agenda item coming up for discussion.

commander of Air Force Materiel Command, with the H.H. Arnold Award in recognition of the year's most significant military contribution to national security.

In that same evening, AFA named Rep. Duncan Hunter (R-Calif.) as the 2005 recipient of the W. Stuart Symington Award for outstanding civilian contribution to national security. Hunter is the chairman of the House Armed Services Committee.

Sir Richard Branson, chairman, Virgin Atlantic Airlines and Virgin Galactic, London, England, was honored with

the John R. Alison Award for industrial contributions to the nation's security.

AFA also presented Lifetime Achievement Awards to Sen. Daniel K. Inouye (D-Hawaii), World War II veteran and recipient of the Medal of Honor and Bronze Star; William F. Perry, former Secretary of Defense; and Patty Wagstaff, aerobatic aviator. AFA paid special tribute to the Air Force's role in Hurricane Katrina relief operations and honored airmen, sailors, soldiers, and marines wounded in Iraq and Afghanistan.

Serving as master of ceremonies for these events was Tim White. Music by singer Andy Childs rounded out the evening's festivities.

On Sept. 14, Lt. Gen. Glen W. Moorhead III received the Sen. Ted Stevens Leadership Award as outstanding commander of a numbered Air Force. He is commander of Allied Air Component Command Izmir, Turkey; NATO's Joint Force Command Naples, Italy; and 16th Air Force, Aviano AB, Italy.

At the convention, there were 260 registered delegates representing 46 states and the District of Columbia. In addition to the more than 6,300 Air & Space Conference and Technology Exposition attendees, the expo drew 93 news media representatives.

Holding meetings concurrently were trustees of AFA's affiliate, the Aerospace Education Foundation, and trustees of the Air Force Memorial Foundation. Also meeting were the Air Force's Air National Guard Council, Civilian



Steven Lundgren (right), AFA's newly elected National Treasurer, accepts congratulations from Thomas McKee, a former Chairman of the Board.

Advisory Council, Company Grade Officer Council, Enlisted Council, and Reserve Advisory Council.

Election of Officers

Stephen P. "Pat" Condon, Ogden, Utah, was re-elected AFA Chairman of the Board for a second term. Robert E. "Bob" Largent, Perry, Ga., was re-elected National President for a second term. Thomas J. Kemp, Fort Worth, Tex., was re-elected National Secretary for a third term, and Steven R. Lundgren, Fairbanks, Alaska, was elected National Treasurer for a first term.

Other Elections

Elected to the Board of Directors for three-year terms were Robert C. Bienvenue, East Amherst, N.Y.;



Pictured at top is the 95th Airlift Squadron's "Crome 32," the recipient of the Outstanding Reserve Aircrew Award. Members (l-r): Maj. Rolf Breen, Maj. Jason Schroeder, Lt. Col. John Loranger, SSgt. Daniel Hayes, MSgt. James Grigsby, and TSgt. Robert Sczesny. Each was awarded a Distinguished Flying Cross for a 2004 counterinsurgency mission in Iraq.



At left, Gen. Ronald Keys, commander of Air Combat Command chats with Air Force Undersecretary Ronald Sega, and Acting Secretary of the Air Force Pete Geren.

Below, CMSAF Gerald Murray (right) and CMSgt. Ronald Kriete, the command chief of Air Force Space Command, meet at a Command Chief's conference.

Michael J. Bolton, Savannah, Ga.; O. Thomas Hansen, Steilacoom, Wash.; J. Ray Lesniok, Concord Township, Ohio; and Charles Thomas, Albuquerque, N.M. James R. Lauducci, of Alexandria, Va., was elected National Director At-Large.

Three new Leadership Development Directors joined the AFA Board. They are Elizabeth Burris, Bonaire, Ga.; Angela Dupont, Billerica, Mass.; and Michelle Ryan, Alexandria, Va.

Eleven new Region Presidents were elected, and three Region Presidents were re-elected. Newly elected are Joseph P. Bisognano Jr. (New England Region), Amos Chalif (Northeast Region), William Williams (Central East Region), David T. Hanson, (Southeast Region), Emil Friedauer (Florida Re-





Top (l-r), Coleman Rader Jr., then Region President for North Central Region, speaks with David Cummock, AEF Secretary-Treasurer and Victor Seavers, a member of AFA's Board of Directors.

At right, National President Bob Largent (l) and Chairman Pat Condon (r) are pictured with philanthropist Steven Udvar-Hazy, recipient of the Hoyt Vandenberg Award for contribution to aerospace education.

Below (l-r), AEF Trustee Joseph Price deals a hand to Dennis Davoren, Far West Region President, and other guests at AEF's Casino Night festivities.



gion), William A. Howard (Great Lakes Region), James W. Simons (North Central Region), Ted Helsten (Rocky Mountain Region), Robert J. Herculson Jr. (Southwest Region), Gary A. Hoff, (Northwest Region), and Dennis Davoren (Far West Region).

For a complete list of AFA Region Presidents and Directors, including those re-elected, see "This Is AFA" on p. 60.

AFA's Aerospace Education Foundation re-elected L. Boyd Anderson, Ogden, Utah, as Chairman of the Board. David R. Cummock, Port Orange, Fla., was re-elected Secretary-Treasurer.

AEF trustees newly elected to two-year terms are: Jodi H. Lunt, Layton, Utah; Joseph Price, Newport News, Va.; and Sanford Schlitt, Sarasota, Fla.

Other AFA Business

Delegates approved the AFA Statement of Policy and Top Issues for 2006.

In addition, the delegates approved two recommendations that will advance the progress of "afa21," a strategic roadmap that aims to set a new course for the association's future organization and structure. (For more on this key initiative, see "The 'afa21' Roadmap," p. 82.)

Congressional Activity

AFA state delegations sponsored 15 Congressional breakfasts on Tuesday, with 23 members of Congress participating. Among them were Sens. John Cornyn (R-Tex.), James M. Inhofe (R-Okla.), and John R. Thune, (R-S.D.), all

members of the Senate Armed Services Committee.

Members of the Senate Appropriations Committee attending the breakfasts included Sens. Robert Bennett (R-Utah), Byron L. Dorgan (D-N.D.), and Kay Bailey Hutchison (R-Tex.).

Also participating in the AFA breakfast meetings were Reps. Dan Boren (D-Okla.), Jim Marshall (D-Ga.), and Michael Turner (R-Ohio), all members of the House Armed Services Committee.

Members of the House Appropriations Committee attending the breakfasts included: Reps. David Hobson (R-Ohio), Jim Kolbe (R-Ariz.), and Tom Latham (R-Iowa).

Other Senators attending the breakfasts included: Max Baucus (D-Mont.), Tom Coburn (R-Okla.), Orrin Hatch (R-Utah), Bill Nelson (D-Fla.), Craig Thomas (R-Wyo.), and Michael B. Enzi (R-Wyo.), who is also co-chairman of the Air Force Caucus.

Other Congressmen attending the breakfasts were Reps. Rob Bishop (R-Utah), Barbara Cubin (R-Wyo.), Stephanie Herseth (D-S.D.), Frank D. Lucas (R-Okla.), and Jeff Miller (R-Fla.).

Meeting separately with their Congressional representatives were members of the Nebraska, Oregon, and Washington AFA delegations.

Pete Geren, Acting Secretary of the Air Force, visited breakfasts hosted by Arizona, Massachusetts, Midwest Region (Illinois, Iowa, Kansas, Missouri), Texas, and Utah. The Air Force



Gen. T. Michael Moseley (left), the Air Force's new Chief of Staff, confers with Gen. William Looney III, commander of Air Education and Training Command, before AFA's Four-Star Forum.

Chief of Staff visited breakfasts hosted by North and South Dakota, Oklahoma, Southeast Region, Texas, and Wyoming. Air Force Undersecretary Ronald M. Sega visited breakfasts hosted by Colorado, Florida, Minnesota, Virginia, and Wyoming.

Aerospace Education Foundation

A video on the theme "Why Freedom Is Not Free" won AEF's annual Jimmy Stewart Aerospace Education Award. The winning entry, from AFJROTC Unit LA-932 at Destrehan High School, Destrehan, La., noted that "freedom is the ability to enjoy choice without force

or pressure," but also cautioned that the world "has not allowed freedom to come without a cost."

The video cited the "extraordinary acts of courage, sacrifice, and loss" shown in the Revolutionary War, the two world wars, 9/11, and most recently in Iraq and Afghanistan. The cadets singled out the sacrifice of Army National Guardsman Sgt. Nicholas J. Olivier, a graduate of Destrehan High School, who was killed when a roadside bomb exploded in Baghdad.

"If freedom were indeed free, there would be no reason for the deaths of Sergeant Olivier and his fellow servicemen. ... If it were not for these sacrifices, we would not enjoy the freedoms prevailing in our lives today," concluded the video.

Patrick A. Welsh, from Central, S.C., won the Christa McAuliffe Memorial Award as the year's outstanding aerospace science teacher.

Acknowledgments

Parliamentarian for the AFA National Convention was Joan L. Blankenship. Inspectors of Elections were Mark Di-erlam (Chairman), Craig E. Allen, and Buster Horlen. Raymond Turczynski Jr. chaired the Credentials Committee, serving with Sheila K. Jones and Eric P. Taylor.

The association is grateful to volunteers who assisted the staff in convention support: TSgt. Shawn Baldy, Cecil G. Brendle, Maj. Jimmy R. Canlas, Capt. Francisco Flores, Debbie Snyder, Charlie Tippet, and Leola Wall. ■



AEF President Mary Anne Thompson and Chairman L. Boyd Anderson (far right) present the Christa McAuliffe Memorial Teacher of the Year Award to Patrick Welsh, a physics teacher at D.W. Daniel High School in Central, S.C.



AFA has now embarked on a far-reaching transformation program to meet future challenges.

The “*afa21*” Roadmap

By John J. Politi

MANY years ago, Will Rogers offered this sage advice: “You might be on the right track, but you’ll get run over if you just sit there.” And so it is for the Air Force Association and the Aerospace Education Foundation. We have been on the “right track” for many years and have enjoyed great success in achieving our mission objectives, but we now recognize more than ever that being on the right track isn’t enough—we must continue to improve our performance and periodically change the way we are organized and operate in light of the ever-changing environment in which we live. That environment has changed significantly in recent years.

Consider our three main constituencies—those groups that we support and represent—the United States Air Force, the defense industry, and the Air Force Association membership. Each of these three groups has experienced a significant decline in size. Both the Air Force and the defense industry have been reorganized a number of times, and both now employ significantly different operating procedures than they did just 15 years ago. The Air Force no longer generates AFA members through base membership drives as it once did, and the defense industry no longer has the financial or human resources to support AFA’s and AEF’s activities at the same level it once did. Participation of AFA members in field and national activities has dwindled, resulting in a reduced ability of AFA’s field-level entities to function effectively, and numerous

chapter and state organizations have been discontinued. Further, AFA field units have not been able to implement AEF programs at the desired level.

These examples represent but a few of the many changes that have taken place in our environment. However, they are indicative of a need to alter the way in which we do business if we are to remain relevant and successful in the future. Although AFA recognized the need for change as early as 1997, the changes that have occurred have not kept pace with the changes taking place within our constituent organizations. More is required.

Bloated Structure

The process began when it became apparent to AFA’s leadership that the governance structure was far too large to operate effectively and efficiently. Further, it became apparent that AFA’s field organizational structure was no longer equitable in terms of numbers of members and chapters assigned to regions, thereby making it difficult to govern the field in the larger regions and creating an imbalance in representation in the governance structure. As a result, a review was conducted, led by the National Vice Presidents (today’s Region Presidents), to determine how to address these issues. The result of that effort was a significant reduction in the size of the board and a reorganization of the regions, including removal of the National Vice Presidents from the board and a change in their title to Region President.

The AFA leadership also recognized that its volunteer leadership progression did not permit maximum effectiveness in that the senior executive (the National President) did not have the opportunity to gain experience in a senior position before being thrust into the top position. Therefore, in 2000, the responsibilities of the two senior officers of the association—the Chairman of the Board and the National President—were realigned such that the Chairman was designated as the senior executive and responsible for policy, and the National President was designated as the next senior executive and responsible for field operations.

That same year, the Membership Committee completed a field survey that indicated AFA had serious issues with regard to a lack of focus on external constituents, communications, and awareness in the field among members and potential members alike. It became apparent that significant membership inhibitors were present and that AFA would need to address them if it wished to stop its membership decline.

A further review of AFA’s performance during 2000 and 2001 indicated that the organization had little long-term focus and no means to ensure that all components of the organization were aligned and focused on mission execution.

As a result, AFA in 2001 developed and implemented a strategic planning process. The first strategic plan, developed in 2001 for the 2002 AFA year and beyond, had two requirements:

1. Evaluate the impact of the board and field changes and determine if further change was needed.

2. Identify AFA's true constituents and their needs, which would be needed to effect a philosophical shift from "serving the members" to "serving the constituents" as a top priority.

In 2002, ad hoc committees were formed to address the board and field changes, as well as the constituent issues. Each of these committees indicated that further change was needed for AFA to be successful in the long term. While some of the committees' recommendations were approved and implemented, many were deferred for further study.

Enter the ORG

To carry out that task, an Organizational Review Group (ORG) was formed in 2004. The ORG's report proposed that the association initiate *afa21*, a transformation approach that would achieve the following three basic objectives:

1. Restructure our tax status to become more inclusive and more efficient.

2. Restructure our governance to focus on agile policy and decision-making with accountability to the membership.

3. Restructure the field organization to focus on mission performance.

To achieve these objectives, the ORG recommended the following specific actions:

Tax Status

■ Take action to change AFA's tax status to a new type that would benefit AFA, its individual members, and the association's mission.

■ Determine the feasibility of combining the Aerospace Education Foundation with the Air Force Association into a single nonprofit, tax-exempt organization.

Governance Structure

■ Change from a delegate-based governance structure to a member-based structure to allow the entire membership to participate in the election process, and replace the National Convention with an annual membership meeting.

■ Modify the size of the Board of Directors and change the Board of Directors and officer election process.

■ Modify the committee structure and initiate a formal AFA council structure.

Field Organization Structure

■ Eliminate the chapter requirements for quarterly reporting.

■ Eliminate the present state and region organizations as they are known and put in place an intermediate organization between AFA national and field units.

These proposals and recommendations were reviewed by AFA's and AEF's executive committees and boards in August and September 2004. These groups concurred with the basic transformation approach outlined by the ORG and agreed to move forward with further evaluation of the specific recommendations to determine if they should be pursued and, if so, to define how they should be implemented. Consequently, the *afa21* Task Force was chartered to accomplish this work.

Meanwhile, the Aerospace Education Foundation, AFA's affiliate, was making changes of its own. AEF restructured its board and reduced its size, initiated a strategic planning process, and refocused itself to create an opportunity to expand its programming and enhance its fund-raising potential.

Major Issues

Recognizing the changes that AFA and AEF had already made, and using the ORG recommendations as a starting point, the *afa21* Task Force set out to refine the AFA and AEF structure to increase their ability to maximize execution of their stated missions and generate a higher level of performance.

To do this, the task force identified a number of issues that would have to be addressed. These included:

■ Continued decline in AFA membership.

■ Decline in the participation of members in activities of AFA and the governance process.

■ Constraints on becoming a member of AFA and participating in AFA activities.

■ Slow decision-making process within the governance structure.

■ Imbalance in the election process for board members (at-large board members few in numbers as compared to "region" and leadership development directors).

■ Limited ability to establish representation of key constituencies on the board.

■ High cost of the governance system.

■ Lack of mission execution in the field.

■ Inefficient use of resources to support field operations.

■ Increased number of underperforming chapters.

■ Lack of quality control over field operations.

■ Disconnection between field reporting requirements and the strategic plan.

The task force also identified characteristics that AFA and AEF would need to posture themselves for success in the long term. These supplemented the formal task force objectives stated in the charter and included:

■ Few or no constraints on membership and participation.

■ Broad ability to generate revenue.

■ Efficiency in all operations.

■ High visibility and awareness throughout the country.

■ Enhanced ability to execute the aerospace education mission.

■ Agile decision-making.

■ Significant involvement of and accountability to the membership.

■ Focus within chapters on mission execution.

The task force believes that, if these characteristics can be achieved, AFA/AEF will have an excellent opportunity to become something different and more effective. It would demographically reflect a younger, more diverse, and larger membership. It would operate with an agile governing body capable of rapid decision response to needs and increased efficiency in the allocation of financial and human resources. Finally, it would have a field organization that actively executes the AFA/AEF mission "at home."

New Thinking

This is the type of organization that the *afa21* Task Force seeks to create. The task force attempted to inject new thinking in doing its work and brought forth some key recommendations that were approved by the AFA and AEF boards and the convention delegates and a number of new ideas that will be further evaluated over the next year.

The boards and the convention delegates in 2005 approved combining AFA and AEF into one organization, with the major activities of both organizations merged into a single IRS Section 501(c) (3) entity to be named AFA. The existing AFA organization, a 501(c) (19), is to be retained and will hold AFA's insurance business and the AFA building and be called AFA Veterans' Benefits Association in order to provide a favorable tax environment for these business activities.

This action is tentatively planned to take place on April 1, 2006.

To prepare for implementation, a transition governance structure was created by combining the AFA and AEF Executive Committees and boards on Oct. 1, 2005, with authority delegated to the combined board to approve the necessary document changes and financial transactions to effect the tax status change.

Once the tax status change is complete, all AFA chapters will become IRS Section 501(c)(3) entities under the national organization umbrella. The impact on chapter operations will be minimal, as all chapter and state activities currently allowed still will be permitted. States and chapters can continue to function exactly as they currently do. Further, the change would not have any impact on existing 501(c)(3) organizations that have been established at the state or chapter level.

By taking this action, the association effectively changes its tax status from a veterans organization to an aerospace education organization focused on support of the United States Air Force. As a result, there will be no restriction on membership or participation (no "patron" category), membership recruitment opportunity will grow, and the stated objective of becoming more inclusive will be achieved. Further, as a 501(c)(3), AFA will be able to accept charitable gifts, enhancing its fund-raising potential, and a combined AFA and AEF will provide significant opportunities for more efficient operations and enhanced revenue generation.

The boards and convention also approved, in concept, a proposal to revise the association's governance structure to support the tax status change and create more efficiency and agility. The AFA and AEF boards will be fully integrated and ultimately reduced in size. In addition, a formal council structure will be established, consisting of an empowered Aerospace Education Council to address aerospace education programming matters and an empowered Field Council to address field-related issues. The AFA and AEF committee structure will be revised to include establishment of a Development Committee to oversee fund-raising activities, and the AFA and AEF officer structure will be revised to include changing the title of the AFA National President to Vice Chairman of the Board-Field Operations; the Executive Director to President; and a new position, Vice Chairman of the Board-Aerospace

Education, will be established. In addition, a Board of Directors Orientation and Training Program will be created. All of these concepts will be further developed before final approval is requested at the 2006 AFA National Convention.

By taking these actions, the association will create a highly effective governance structure for the combined AFA/AEF and achieve the stated objective of agile policy and decision-making through a smaller board, higher level of empowerment for the board, and establishment of empowered councils.

In addition to these approved actions, the *afa21* Task Force presented information during the convention concerning a number of ideas that are undergoing further analysis. These include a member-based governance structure that would afford all AFA members the opportunity to vote for national officers and directors. Members would have the opportunity to vote in a variety of ways, which may include a mail-in ballot from *Air Force Magazine*, online, by telephone, or in person at an annual membership meeting. A membership survey regarding this issue produced a healthy 22 percent response rate and revealed the following:

- More than 84 percent of the respondents indicated they would vote if they were given the opportunity.
- More than 45 percent of the respondents indicated they would increase their participation in AFA activities if they were given the opportunity to vote (about 54 percent indicated their participation would remain same).
- About 70 percent of the respondents indicated that they would have a greater sense of involvement (connection) with AFA if they were given the opportunity to vote.
- More than 76 percent indicated they believe AFA should change to a member-based voting system.
- Only 40 percent indicated that the delegates adequately represent their interests at the National Convention; a greater number (more than 48 percent) were not sure.

Secondly, the task force is considering a revised national officer and director nominating process. This approach would create an application procedure that would permit any member the op-

portunity to apply to serve as an officer or director. In addition, this concept would reduce the size of the Nominating Committee, broaden its representation, and streamline its operating procedures.

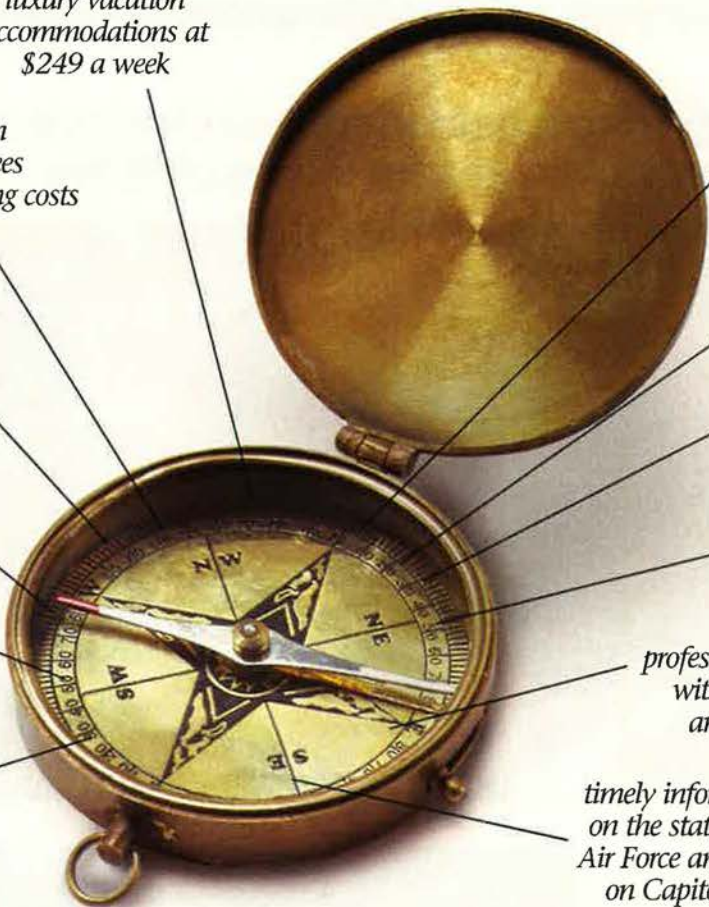
A third idea is to combine the state and region organizational structure in favor of an intermediate-level organization to provide a single level of operational management of field activities. The new organization is tentatively called an "Area" and would be led by an Area President who would be empowered to organize his or her area as deemed appropriate to enhance mission execution. Also, each area may have a designated "Mission Center" to provide mentoring, guidance, and support to other chapters in the area. The operational procedures for the areas, identification of the states that comprise the areas, and details pertaining to Mission Centers are to be further defined and developed prior to consideration by the Board of Directors.

Finally, the task force is exploring ways to refine chapter operations to simplify procedures, reduce the administrative burden on chapter leadership, and enhance focus on mission execution. Among the ideas under consideration are: instituting an annual chartering process with well-defined criteria that must be met in order to receive a charter to operate as an AFA chapter; revising the chapter reporting process to align with strategic plan requirements and the national measurement system; increasing incentives for new member recruitment; and revising the method by which chapters are provided financial support.

All of these ideas will be further analyzed in the coming months with the expectation that the task force will provide additional recommendations during 2006. We believe that we are, in fact, taking the steps needed to make AFA stronger and even more relevant in the future. It takes courage and fortitude to significantly change an organization, and we believe that the AFA leadership and AFA members have what it takes. We have been in the change process for more than five years, but we need to go much further to remain the premier professional military association in the nation. ■

John J. Politi served as AFA's Chairman of the Board (2002-04) and National President (2000-02). He is currently the president of The Avalon Group, a consulting firm specializing in helping organizations participate in the Baldrige National Quality Program, and serves as the afa21 Task Force director.

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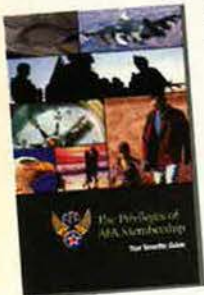
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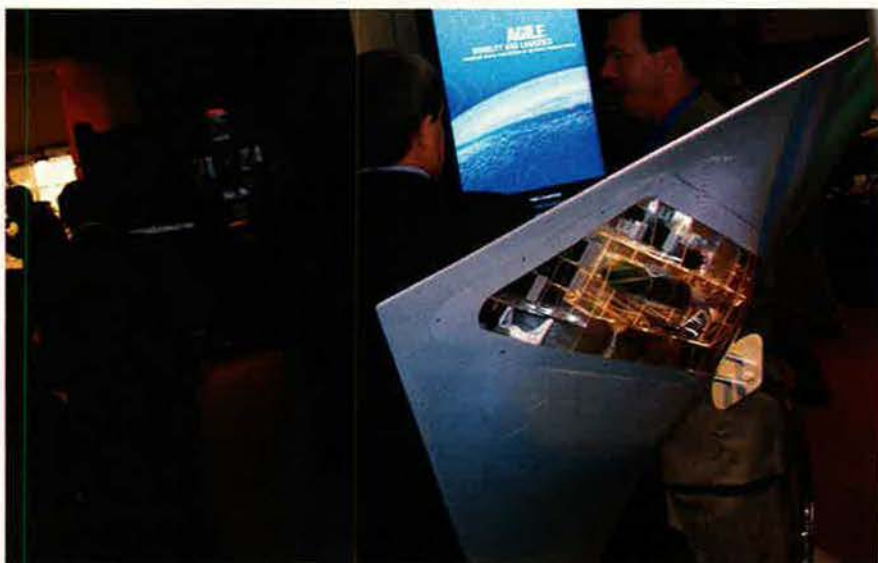
AFA's technology showcase offered conference attendees a glimpse of tomorrow's advanced capabilities.

Photos by Guy Aceto and Joe Orlando



Opening Day: The entrance hall fills up in anticipation of the grand opening of the 2005 technology exposition (above). Excitement is high, as attendees often get a sneak peek at new products and systems still on the drawing board or recently declassified.

At right, a cutaway model shows the internal arrangement of Boeing's stealthy X-45C Joint Unmanned Combat Air System. The view inside shows a Joint Direct Attack Munition loaded in the weapons bay.



Boeing's Rod Lekey talks software integration with Maj. Rick Warren, an A-10 pilot attending the Army's Command and General Staff College at Ft. Leavenworth, Kan. The other branches of the armed forces were heavily represented at the AFA exposition, since the products on display and the conference offer ever more to interest an increasingly joint military.

Technology Exposition 2005

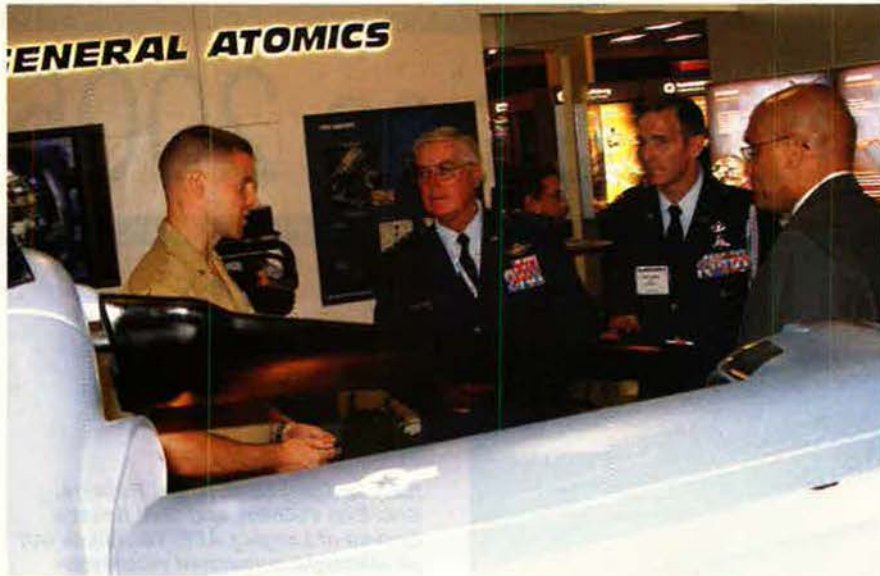


(Left to right) SSgt. Angel Roberts, SrA. Erin Putnam, and SrA. Season Groves of Langley AFB, Va., check out an ultralight unmanned reconnaissance helicopter. Like the major aerospace companies, many USAF agencies and suppliers use the exposition to broaden service member knowledge about missions or products.

A model of a Tracker mini-unmanned aerial system (right) is prominently placed at the booth of European Aeronautic Defense and Space. Unmanned aircraft, now seen in nearly all military operations, were promoted at the expo. Shown as it would look a second before impact (far right) is a Lockheed Martin Joint Air-to-Surface Standoff Missile. The weapon was recently declared operational on B-52 bombers.



A large model of the KC-767A aerial tanker anchors the Boeing booth. The Air Force is expected to launch a competition for new tankers next year. A key theme of both the exposition and the symposium was the need for the Air Force to get under way with long-deferred modernization and recapitalization.



Lt. Gen. Michael Wooley (second from left), head of Air Force Special Operations Command, stops by the Bell Helicopter display to talk about the CV-22 Osprey tilt-rotor.

Below, an F-35 Joint Strike Fighter model shows off its chin-mounted, faceted sensor and targeting aperture.

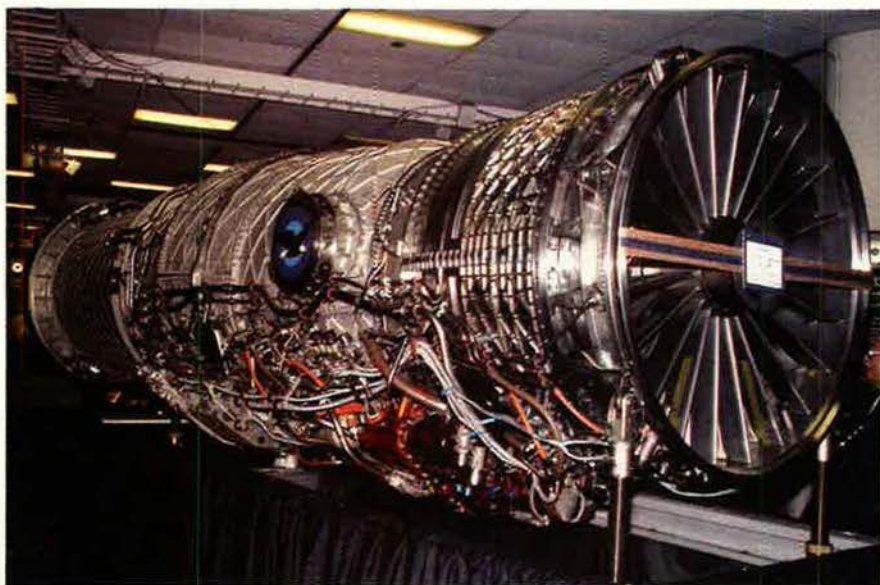


The entire Class of 2006 of the Air Command and Staff College—some 600 strong—attended the Conference and exposition. Above, some of them collect product literature and, of course, souvenirs.



At the Textron booth above, visitors view (top to bottom) full-size replicas of a Small Diameter Bomb equipped with range-extending wings; a 500-pound Joint Direct Attack Munition with both satellite and laser guidance systems; and the AIM-9X, the newest air-to-air missile in the inventory.

Pratt & Whitney brought the F135 engine prototype that powered the X-35 concept demonstrator, forerunner of the F-35 Joint Strike Fighter. This power plant was headed to the Smithsonian's Udvar-Hazy Center in Virginia, an annex to the National Air and Space Museum, where it will be displayed next to the X-35.





Critical Times For Air & Space Power

The Air Force Association 2006 Statement of Policy adopted by the delegates to the AFA National Convention meeting on Sept. 11, 2005, in Washington, D.C.

ONE factor that distinguishes the US military from the militaries of other nations is America's dominance of air and space. It is a capability provided primarily by the United States Air Force. Yet even as the Air Force nears the 60th anniversary of its birth as a separate and independent service, the very future of that air and space dominance is uncertain. Several challenges and trends give cause for concern.

Air Force modernization and recapitalization is urgently needed and long overdue. In fact, the "acquisition holiday" of the 1990s—a period characterized by lean-to-nonexistent weapon procurement—has persisted into the present day. The average ages of the Air Force fighter, tanker, and bomber fleets are at all-time highs. Projected buys of new systems such as the F/A-22 and F-35 continue to shrink. The ICBM fleet is aged, too, and needs updating.

Across the Air Force, dollars needed for modernization, recapitalization, and transformation are being squeezed by the cost of the nation's global war on terrorism. This is happening even as the US military is becoming more and more expeditionary and thus more dependent on USAF's "Global Reach/Global Power" capabilities, which will require more airlift and tanker capacity.

Additional dollars will also be



USAF photo by TSgt. Cecilio Ricardo

"Air Force modernization and recapitalization is urgently needed and long overdue."

needed to help pay for relief operations in connection with Hurricane Katrina and other natural disasters, including repairing the extensive damage done to Keesler Air Force Base. Estimates to rebuild and repair Keesler's training facilities, medical center, and base housing could well exceed \$500 million. This will add additional pressure to an already tight Air Force budget.

With budgets in turmoil, a newly formed Defense Acquisition Performance Assessment panel is looking into the overall weapons procurement process in response to Congressional concerns about program execution, cost overruns, and schedule delays. The panel is examining how to streamline and add clarity to the procurement process, yet not create unnecessary layers

of oversight. The defense community will also welcome answers on how to sustain adequate long-term procurement funding.

Too Few Dollars

Despite the high stakes in the global war on terrorism, this nation is spending less to fight it than it did to prosecute World War II, the Korean War, or the Vietnam War. Also, the current practice of supplemental budgeting, which does not cover the full cost that the war imposes on the force, too often leaves the services searching for ways to trim spending in some key places to cover the shortages in others. In this scenario, Science and Technology (S&T) programs are squeezed, too, as investments in future warfighting capabilities take a backseat to current demands.

By historical standards, the burden of defense spending on the nation's economy is light—about four percent of GDP. The frequent use of supplemental requests is fiscally irresponsible, especially in light of the fact that the global war on terrorism will continue for some time. The services cannot themselves fund these new requirements. The choice is clear—either we make a greater commitment to fighting the war or expect to achieve a less than optimal outcome.

When it comes to uniformed people, there is equal cause for concern. USAF has an authorized active duty end strength of 359,000. For several years, in order to fight the war on terrorism more effectively, the service, with Pentagon permission, stayed well above that level. In this year, however, the service drew down to the planned lower level, meaning that, though the war goes on, there will be fewer active duty airmen to fight it.

As Air Force manpower stabilizes at a lower level, it is also being reshaped to achieve a more balanced mix of skills and experience. Combine downsizing and rebalancing with the inherent uncertainty of recruiting and retention, and the difficulty in maintaining adequate force levels in the future increases.

Personnel Challenge

In addition to working through force management issues, the Air Force has been dealing with a leadership challenge. The service has lost several key civilian and uniformed leaders without receiving timely replacements. A number of positions have gone vacant for months, as the service awaited

Presidential nominations and Senate confirmations. We are beginning to see progress in the filling of these key leadership positions, and we urge continued focus on this issue. Despite these shortfalls, the Air Force has excellent leadership and great people who are performing superbly in a very challenging environment.

Compared to the very high operations tempo in the early months of the war, the pace of Air Force activity has stabilized somewhat, though not across the board. Many airmen—deployed and Stateside—are working long hours. An increased reliance on Air National Guard and Air Force Reserve units has caused extended call-ups in both components. As the Air Force and DOD look to implement the next round of Base Realignment and Closure (BRAC) recommendations, the service must increase the synergy of its components if it is to deliver its full combat capability.

A major Air Force success story has been the close cooperation and integration of the active force, Air National Guard, and Air Force Reserve into an unparalleled warfighting capability. The Air Force needs to continue to address the roles, responsibilities, and synergies of all three components, with each taking on emerging new missions such as intelligence, space, command and control, Unmanned Aircraft Systems (UASes), and cyber-warfare. Recognition of the vital roles of the active force, Air National Guard, and Air Force Reserve is necessary if the Air Force is to get through the budget crisis ahead while producing maximum combat power.

The US aerospace industry has been in a crisis of its own for some time and it continues to decline. Since 2000, the industry nationally has lost more than 100,000 jobs. Also, the number of airframe manufacturers producing Air Force combat aircraft is now down to two. Mergers and consolidation in the defense industry are the result of a combination of factors, including increased costs, fewer acquisition contracts, foreign competition, and government policies.

While the number of airframe manufacturers has declined, the space industry is facing the dual challenge of fierce competition and overcapacity. In the air and space industries alike, it will be a challenge to find enough homegrown engineers, scientists, and other technically skilled workers to replace that large part of an aged workforce which is rapidly nearing retirement.

The Air Force Association believes that, taken together, these challenges could threaten the continuation of our dominance in air and space. Our Air Force must have a sufficient budget, an active leadership (civilian and military), and the right people, equipment, facilities, and training to execute its mission. We also believe we must foster a strong defense industrial base with sound federal policies and sufficient defense acquisition programs.

The Global War on Terrorism

Today, some 2.3 million brave uniformed Americans—1.4 million on active duty and another 861,000 in the Guard and Reserve—are engaged in the global war on terrorism. They are joined by approximately 650,000 Department of Defense civilians and many additional thousands of defense industry contractors who, together, conduct and support military operations on three major fronts—Afghanistan, Iraq, and the homeland.

Airmen, soldiers, sailors, marines, and coast guardsmen will do whatever we ask of them to defend the cause of freedom. Increasingly, they deploy far away from home into extreme environments and face combat conditions. In doing so they put their lives on the line, sometimes making the ultimate sacrifice for the nation.

AFA unequivocally supports the men and women of the US Armed Forces who collectively perform above and beyond the call of duty. As they go about performing their duties, we are mindful that the goal of defeating worldwide terrorism is not solely a military effort. We call for a greater national commitment in resources and public support and better integration of the political, economic, and informational instruments of power in order to eliminate this threat.

Military operations in Iraq and Afghanistan are making a difference and for the better. As part of a powerful joint team, airmen helped break the Taliban's grip on Afghanistan in Operation Enduring Freedom. Air and space power also played a key role in overthrowing Saddam Hussein's corrupt regime in Operation Iraqi Freedom (OIF).

In Afghanistan, a fledgling and democratically elected government is making visible strides toward self-governance. Although major combat operations have ended, the country remains a dangerous place. A significant presence of US Special Forces and coalition forces, backed



"Additional dollars will also be needed to help pay for relief operations in connection with ... natural disasters."

by air and space power, will be needed for some time. These forces must assist in internal security and nation building while continuing to conduct counterinsurgency operations.

AFA believes that we must stay focused on hunting down the remnants of the Taliban and al Qaeda that helped plan and carry out the terrorist attacks of 9/11. It is in the US national interest that Afghanistan not revert to its former status as a safe haven for international terrorists. It is also imperative that we impress upon the new Afghan government that illegal drug trafficking is not in its interest or ours.

Iraq is presently the central front of the global war on terrorism. Long after the defeat and capture of Saddam Hussein, a violent insurgency seeks to keep the country in turmoil. US and coalition forces now conduct offensive operations while simultaneously reacting to roadside bombings and suicide attacks. Insurgents have targeted military and non-military personnel, including Iraqi citizens, most of whom are committed to pursuing democracy and rebuilding the country. The continuing violence has slowed reconstruction and taken a toll on US forces.

Two-and-a-half years into the war, the United States has suffered the loss of more than 1,900 service members and civilians killed, plus more than 14,000 wounded, many very seriously. While victory in Iraq will not be easy or cheap, it is imperative that the United States and its coalition partners see this fight through to victory so that these sacrifices will not have been in vain.

The insurgency in Iraq is complex and constantly changing. When US forces attack, the enemy disperses, adapts, and reconstitutes forces to exploit new tactics. The enemy also has many identities—sometimes foreign jihadis, at other times Sunni/Baathist factions, Shiite extremists, or Iraqi nationalists opposed to the presence of foreign forces.

Airmen and Counterinsurgency

Whatever the situation on the ground in Iraq, a joint force of approximately 135,000 US military personnel continues to adapt and fight well. Each enemy threat requires a response of precise and appropriate force. It is a tough task, but air and space power is making a difference. For example, the Air Force has taken the initiative to use airlift to move cargo and thereby reduce the reliance

of coalition forces on dangerous ground convoy operations.

Approximately 30,000 airmen are now deployed to forward operating bases in support of military actions in Iraq and Afghanistan. In a 12-month period, the Air Force flew more than a quarter of a million sorties supporting missions of close air support, airlift, air refueling, aeromedical evacuation, and intelligence-surveillance-reconnaissance. Battlefield airmen are providing tactical air control to help direct bombs and bullets at terrorists with sharpening accuracy. These airmen engage in the full spectrum of missions, from C4ISR to close air support to training Iraqi security forces.

In addition to battlefield airmen, the Air Force is filling for the Army more than 1,900 combat positions in 16 different combat support skills. For example, airmen now serve as vehicle operators running convoys throughout Iraq. It is a nontraditional mission for the Air Force, one that it has not performed since the Vietnam War days. Whatever the role or mission, airmen have proved that they are up to the task. AFA salutes these airmen in nontraditional roles.

Space Capabilities

Day in and day out, Air Force operators based in Nevada remotely pilot Unmanned Aircraft Systems over Iraq and Afghanistan, while space professionals here at home keep constant watch over the global battlespace.

In the 21st century, space capabilities are truly joint in nature because they serve all warfighters. Space provides for precise navigation and timing, missile warning, surveillance, space control, weather tracking, and communications.



Photo by Clive Bennett

"Joint commanders know the Air Force can be counted on across the full spectrum of missions."



USAF photo by TSgt Russell Gardner

"Whatever the role or mission, airmen have proved that they are up to the task."

In fact, space assets are essential to all military operations and to the nation. Airmen and soldiers in the field require critical information to do their jobs and to stay ahead of the enemy.

Military space requirements and the need for larger bandwidth are projected to increase exponentially in the future. More bandwidth means more information and greater capacity to serve the intelligence community and warfighters. Consequently, new systems such as the Space Radar, Space Based Infrared System (SBIRS), and the Transformational Satellite Communications System (TSAT) must be acquired. New communication developments include laser communications, which hold considerable promise as a breakthrough technology. As a key part of TSAT, laser communications will allow DOD to vastly increase its bandwidth.

Global Commitments

As if prosecuting the global war on terrorism were not enough, thousands of dedicated airmen are deployed elsewhere in the world in response to US global commitments. More than 42,000 Air Force personnel based in Japan, South Korea, Guam, and other sites and throughout the Pacific are providing on-call combat capability to joint warfighters.

Pacific Air Forces serves to counter the threat posed by North Korea and a rapidly modernizing Chinese military. At the same time, these airmen are called upon to respond to crises. They helped deliver more than 120 tons of relief supplies to Sri Lanka and other nations devastated by the recent Indian Ocean tsunami.

On the other side of the world, more than 35,000 airmen and civilians are on duty as part of America's long-standing North Atlantic Treaty Organization

commitments. US Air Forces in Europe is as busy as ever, contrary to some predictions following the end of the Cold War. Airmen have flown more than 27,000 sorties helping to enforce the peace accords in the Balkans. In support of the global war on terrorism, they are also pulling duty on the flight lines at airfields in former Soviet bloc nations.

Stateside, Air Force personnel responded when Hurricane Katrina devastated America's Gulf Coast. Active duty, Guard, and Reserve airmen rapidly deployed to assist with this national tragedy—by mid-September 2005, they had conducted more than 5,000 rescues, treated over 6,000 patients, and evacuated more than 27,000 people to safety.

Joint commanders know the Air Force can be counted on across the full spectrum of missions, from combat to humanitarian operations. Because the Air Force makes the whole force better, AFA believes that a strong national commitment is necessary in order to sustain these capabilities.

Air Sovereignty and Homeland Defense

On the home front, Guard, Reserve, and active duty pilots continue to fly air defense missions in Operation Noble Eagle. Fulfilling the air sovereignty mission now requires the efforts of 10,000 airmen. On any given day, they support 40 to 50 fighters, a dozen tankers, and Airborne Warning and Control System aircraft that take off, refuel, and land at bases across the US.

While Americans go about their daily lives, airmen patrol above our cities, seaports, and critical infrastructure. It is all part of a larger effort, led by the Department of Homeland Security but involving all the services,

the intelligence community, other government agencies, and local law enforcement.

AFA believes that improving homeland security across the board is absolutely necessary. Specifically, the Administration and Congress must work together to fully fund the cost of the air defense mission in the Air Force budget. Additionally, we urge the President and Congress to continue to follow through with national intelligence reform to make the military mission of homeland defense more manageable. Finally, in the wake of Hurricane Katrina and other natural disasters, we must make our disaster response more agile and ensure we have the proper equipment necessary to support these missions.

The Unmet Challenge

These are especially critical times for our nation because of irrevocable decisions that will be made during the coming year. Some years ago, DOD developed a framework which, if used properly, would produce a reasonable balance of attention to both current risk and future risk. AFA believes that we must make the necessary investments today to win the global war on terrorism. At the same time, we must not allow excessive focus on near-term operational risk to mortgage the future capability of the joint force. Air and space dominance cannot be taken for granted.

In keeping with our mission, we, the members of the Air Force Association, will work actively and aggressively to educate the public about defense, advocate air and space power development, and support the total United States Air Force. ■



Air Force Association National Awards 2005

National Aerospace Awards

Award

H.H. Arnold Award

AFA's highest honor in national security to a member of the armed forces

W. Stuart Symington Award

AFA's highest honor in national security to a civilian

John R. Alison Award

AFA's highest honor for industrial leadership

David C. Schilling Award

Outstanding contribution in flight

Theodore von Karman Award

Outstanding contribution in science and engineering

Gill Robb Wilson Award

Outstanding contribution in arts and letters

Hoyt S. Vandenberg Award

Outstanding contribution in aerospace education

Thomas P. Gerrity Award

Outstanding contribution in logistics

Department of Veterans Affairs Employee of the Year

Sen. Ted Stevens Leadership Award

Recipients

Gen. Gregory S. Martin, Commander, Air Force Materiel Command

Rep. Duncan Hunter, Chairman, House Armed Services Committee

Sir Richard Branson, Chairman, Virgin Atlantic Airlines & Virgin Galactic, London, England

99th Reconnaissance Sq., Beale AFB, Calif.

Team of Maj. Michael D. Ellason and Maj. Eric J. Trychon, Hq., Pacific Air Forces, Hickam AFB, Hawaii

Maj. Todd A. Ernst, 560th Flying Training Sq., Randolph AFB, Tex.

Steven Udvar-Hazy, Chairman and CEO, International Lease & Finance Corp., Los Angeles

Maj. Daniel A. Pacheco, Hq., PACAF, Hickam AFB, Hawaii

Michael Waters, VA Regional Office, Columbia, S.C.

Lt. Gen. Glen W. Moorhead III, Commander, 16th AF, USAFE, Aviano AB, Italy

Lifetime Achievement Awards

Sen. Daniel K. Inouye

World War II combat veteran; Medal of Honor recipient; third most senior member of the Senate; co-chairman of Senate Commerce Committee; ranking Democrat on the Senate Defense Appropriations Subcommittee.

William J. Perry

Former Secretary of Defense; Stanford University professor; Army veteran; Medal of Freedom and DOD Distinguished Service Medal recipient.

Patty Wagstaff

Directs Patty Wagstaff Air Shows; US national aerobatic champion; flight and instrument instructor, rated to fly aircraft from World War II to modern airplanes.



Patty Wagstaff, a 2005 Lifetime Achievement Award recipient, pauses for a snapshot with Flying Tiger legend John Alison, who was recognized with the award at the 2003 convention.



Gen. Gregory Martin, who recently retired as commander of Air Force Materiel Command, received the 2005 H.H. Arnold Award, the Air Force Association's highest honor in national security. The award is given annually to a member of the armed forces.

USAFA Outstanding Squadron

Cadet Squadron 33

"The Ratz"

Fall Cadet Commander

Cadet 1st Class Zachary B. Walter

Spring Cadet Commander

Cadet 1st Class Nicholas Jurewicz

Crew Awards

Award	Recipients	Achievement
Airborne Battle Management Crew	Crew Three, 128th Airborne Command & Control Sq., 116th Air Control Wing, Robins AFB, Ga.	Best ABM crew
CMSAF Thomas N. Barnes Award	SSgt. Poun T. Thies, 52nd Aircraft Maintenance Sq., 23rd Aircraft Maintenance Unit, Spangdahlem AB, Germany	Crew chief of the year
Lt. Gen. Claire L. Chennault Award	Capt. Matthew J. McGarry, 355th Fighter Sq., 354th Fighter Wing, Eielson AFB, Alaska	Best aerial warfare tactician
Brig. Gen. Ross G. Hoyt Award	Crew of Fever 11, 79th Rescue Sq., Davis-Monthan AFB, Ariz.	Best air refueling crew
Gen. Curtis E. LeMay Award	Crew of Dark 11, 9th Bomb Sq., Dyess AFB, Tex.	Best bomber aircrew
Gen. Jerome F. O'Malley Award	Crew of Senior Scout, Mission 1CY040605, 55th Wing, Offutt AFB, Neb.	Best reconnaissance crew
Gen. Thomas S. Power Award	Crew S-60, Capt. Jimmy R. Soles Jr. and 1st Lt. Jeffrey A. Mueller, 12th Missile Sq., Malmstrom AFB, Mont.	Best missile combat crew
Space Operations Award	Charlie Flight Crew, 2nd Space Warning Sq., Buckley AFB, Colo.	Best space operations crew
Lt. Gen. William H. Tunner Award	Crew of aircraft 50010, 22nd Airlift Sq., Travis AFB, Calif.	Best airlift aircrew
USAF Test & Evaluation Team of the Year	F/A-22 Initial Operational Test and Evaluation Center Test Team, Det. 6, Air Force Operational T&E Center, Kirtland AFB, N.M.	Best test team

Professional, Civilian, and Educational Awards

Award	Recipient
Gen. Billy Mitchell Award for C4 Excellence	MSgt. Robert T. Marquez, Scott AFB, Ill.
Paul W. Myers Award for Physicians	Lt. Col. Donald H. Jenkins, Lackland AFB, Tex.
Verne Orr Award for Human Resources	NATO Airborne Early Warning & Control Force E-3A, Component Training Wing, Geilenkirchen, Germany
Juanita Redmond Award for Nursing	Capt. Ryan P. Thornton, Elmendorf AFB, Alaska
Stuart R. Reichart Award for Lawyers	Col. Edward J. Monahan, 9th Air Force, Shaw AFB, S.C.
Personnel Manager of the Year	SSgt. Shawndra Singleton, Keesler AFB, Miss.
Civilian Wage Employee of the Year	Timothy M. Sparks, Elmendorf AFB, Alaska
Civilian Program Specialist of the Year	Sharon L. Williams, Dyess AFB, Tex.
Civilian Program Manager of the Year	George T. Denslow, Dyess AFB, Tex.
Civilian Senior Manager of the Year	James C. Patterson, Tinker AFB, Okla.
AFROTC Cadet of the Year	Natalie E. Schick, University of Kentucky
CAP Aerospace Education Cadet of the Year	Dana A. Keller, Maramec, Okla.
Joan Orr Award for Air Force Spouse of the Year	Cynthia A. Roberts, Ramstein AB, Germany
Christa McAuliffe Memorial Award for Teachers	Patrick A. Welsh, Central, S.C.
Jimmy Stewart Aerospace Education Award	LA-932 Unit, Destrehan High School, Destrehan, La.

USAF Team of the Year

Recipient	Unit
SrA. John N. Chege	1st Logistics Readiness Sq., Langley AFB, Va.
TSgt. Jason D. Hohenstreiter	5th LRS, Minot AFB, N.D.
SrA. Joshua Powell	354th LRS, Eielson AFB, Alaska
MSgt. Dennis A. Ross	11th LRS, Bolling AFB, D.C.
SSgt. Amelia C. Solomon	100th LRS, RAF Mildenhall, UK

Citations of Honor

Recipients	Achievement
Air Force Command & Control Battlelab, Hurlburt Field, Fla. (AFC2ISRC)	Harnessed emerging military/commercial technologies for application in the field, including a satellite communications fighter pod and a system to directly transfer ground close air support data to B-52s.
Vincent C. Fonner, chief, Readiness Systems Branch, Hq., AFPC, Randolph AFB, Tex. (AFPC)	Overhauled Air Force personnel readiness program to better track service personnel. Ensured smooth computer system operability for deploying personnel.
Reconnaissance Systems Wing, Wright-Patterson AFB, Ohio (AFMC)	Managed the development, acquisition, integration, and sustainment of U-2, RC-135, Compass Call, Global Hawk, Predator, and ISR sensors.
Lt. Col. Michael F. Welch, chief, Logistics Plans and Force Assessment, Reaction Force Air Staff, Germany (ACO)	Spearheaded the integration of logistics policies and plans into exercises and force structure assessment for 26 NATO nations. Served as airfield operations and logistics leader on NATO teams deployed to assess bases in Uzbekistan and Afghanistan.
3rd Air Support Operations Gp., Ft. Hood, Tex. (ACC)	Prepared terminal attack controllers. Instructed artillery officers in emergency close air support. Deployed air support operations center for Operation Iraqi Freedom. Advised AC-130s to target improvised explosive devices.
9th Special Ops Sq., Eglin AFB, Fla. (AFSOC)	Achieved 98 percent mission success rate with two highly specialized MC-130P Combat Shadows. Executed hundreds of infiltration and exfiltration missions using night vision goggles.
24th Special Tactics Sq., Pope AFB, N.C. (AFSOC)	Established a new strategic airfield. Developed close air support procedures for CENTCOM. Devised classified rescue procedures. Provided security during Afghan elections. Prepared combat weather forecasts.
48th Explosive Ordnance Flight, 48th FW, RAF Lakenheath, UK (USAFE)	Provided counterterrorism support for President and foreign leaders. Led destruction of enemy munitions. Coordinated joint minefield clearance in Iraq.
62nd Airlift Wing, McChord AFB, Wash. (AMC)	Removed Libya's weapons-grade uranium and components, eliminating weapons of mass destruction capability; key player in largest troop rotation in CENTCOM area of responsibility.
301st FW Installation Honor Guard, 301st Mission Support Gp., NAS JRB Fort Worth, Tex. (AFRC)	Trained hundreds of soldiers, sailors, airmen, marines, and coast guardsmen for the Joint Service Honor Guard to perform in military funerals. Developed lesson plans for honor guard duties.
325th Operations Support Sq., Training Flight, Tyndall AFB, Fla. (AETC)	Launched F/A-22 instruction for ACC/AETC students, including night vision goggle training and JDAM instruction. Provided F-15C instruction. Wrote new F-15C courses.
341st Maintenance Gp., Malmstrom AFB, Mont. (AFSPC)	Achieved highest alert rate in AFSPC. Changed launch codes. Hosted first responders nuclear accident response exercise. Prepared weapons systems for treaty inspections.
374th Operations Gp., Yokota AB, Japan (PACAF)	Led first US flight into Iran since 1984, for post-earthquake relief. Provided airlift support to Joint POW/MIA Accounting Command. Trained Japanese service personnel in night vision goggles.
756th Aircraft Maintenance Sq., Luke AFB, Ariz.	Bested Air Force and AETC mission capable rates for F-16s. Trained pilots in night vision goggles. Deployed for Red Flag exercise at Nellis AFB, Nev.

Management and Environmental Achievement Awards

Award	Recipient
AFMC Executive Management Award	Col. Scott W. Jansson, Wright-Patterson AFB, Ohio
AFMC Middle Management Award	Lt. Col. David L. O'Nan, White Sands Missile Range, N.M.
AFMC Junior Management Award	1st Lt. Sophie E. Parker, Hill AFB, Utah
Gen. Edwin W. Rawlings Award for Environmental Excellence (Management)	Eric S. Andrews, Wright-Patterson AFB, Ohio
Gen. Edwin W. Rawlings Award for Environmental Excellence (Technical)	TSgt. John S. Rogers Jr., Misawa AB, Japan

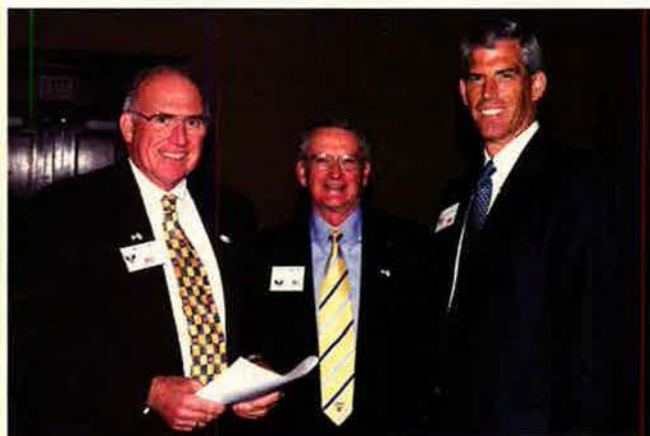
Air National Guard and Air Force Reserve Command Awards

Award	Recipient	Achievement
CMSgt. Dick Red Award	MSgt. Steven L. Auman, 122nd Maintenance Sq., Fort Wayne Arpt., Fort Wayne, Ind.	Best ANG aerospace maintenance
Best Air National Guard Unit	107th Fighter Sq., Selfridge ANGB, Mich.	Top ANG Unit
Best Air Force Reserve Unit	315th Airlift Wing, Charleston AFB, S.C.	Top AFRC unit
President's Award	Crew of Crome 32, 386th Expeditionary Airlift Sq., Ali al Salem, Kuwait	Best Reserve aircrew

2005 AFA Membership and Activity Awards

AFA Member of the Year

Charles A. Nelson



AFA Member of the Year Charles Nelson (right), the outgoing National Treasurer, is pictured (l-r) with National Secretary Tom Kemp and Chairman of the Board Pat Condon.

D.W. Steele Sr. Memorial Award

(AFA Unit of the Year)

Central Florida



Chairman of the Board Condon (left) and National President Bob Largent (right) congratulate John Timothy Brock, president of the Central Florida Chapter, which received the AFA Unit of the Year award.



National President Largent (left) and Board Chairman Condon (right) flank Bethann Fleming, the president of the Charlemagne Chapter, Germany, which won this year's Arthur C. Storz Sr. Award for membership recruiting.

Arthur C. Storz Sr. Membership Awards

Chapter Award	Individual Award
Charlemagne, Germany	Capt. John S. Nolan Jr., Carl Vinson Memorial, Ga.

Jack Gross Award

Small Chapter Charlemagne, Germany	Extra Large Chapter Gen. E.W. Rawlings, Minn.
Medium Chapter Fairbanks Midnight Sun, Alaska	Chapter Larger Than 1,500 Carl Vinson Memorial, Ga.
Large Chapter Tennessee Ernie Ford, Calif.	

Special Recognition—Sustained New Member Recruitment

Brig. Gen. Bill Spruance, Del. Carl Vinson Memorial, Ga. Central Florida, Fla. Charlemagne, Europe Charles Hudson, Calif. Cochise, Ariz. Col. H.M. "Bud" West, Fla. Columbus-Bakalar, Ind. Contrails, Kan. David D. Terry Jr., Ark. Delaware Galaxy, Del. Eagle, Pa. Edward J. Monaghan, Alaska Enid, Okla. Fairbanks Midnight Sun, Alaska Flying Yankees/Gen. George C. Kenney, Conn. Fort Dodge, Iowa Frank Luke, Ariz.	Gen. B.A. Schriever Los Angeles, Calif. Gen. David C. Jones, N.D. Gen. E. W. Rawlings, Minn. Brig. Gen. James R. McCarthy, Fla. Gen. Robert E. Huysler, Colo. Golden Triangle, Miss. Grissom Memorial, Ind. Happy Hooligan, N.D. Harry S. Truman, Mo. Hurlburt, Fla. John C. Meyer, Fla. John W. DeMilly Jr., Fla. Lance P. Sijan, Colo. Langley, Va. Leigh Wade, Va. Mel Harmon, Colo. Miami, Fla. Monterey Bay Area, Calif.	Montgomery, Ala. Mount Clemens, Mich. Newport Blue & Gold, R.I. Ouachita, Ark. Paul Revere, Mass. Pioneer Valley, Mass. Red River Valley, N.D. Richard D. Kisling, Iowa Richard S. Reid, Ariz. Roanoke, Va. Savannah, Ga. Steel Valley, Ohio Swamp Fox, S.C. Taunton, Mass. Tennessee Ernie Ford, Calif. William A. Jones III, Va.
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Unit Activity Awards

Outstanding State Organization

Florida

Outstanding Small Chapter

Mel Harmon, Colo.

Outstanding Medium Chapter

Roanoke, Va.

Outstanding Large Chapter

Hurlburt, Fla.

Outstanding Extra Large Chapter

Carl Vinson Memorial, Ga.

Exceptional Service—Best Single Program

Gen. E.W. Rawlings, Minn.

Exceptional Service—Communications

Claude Farinha Gold Rush, Calif.

Exceptional Service—Community Partners

Enid, Okla.

Exceptional Service—Community Relations

Altus, Okla.

Exceptional Service—Overall Programming

Langley, Va.

Exceptional Service—Veterans' Affairs

Paul Revere, Mass.

Community Partner Membership Awards

Gold Award

Altus, Okla.
Brig. Gen. Bill Spruance, Del.
Carl Vinson Memorial, Ga.
Col H.M. "Bud" West, Fla.
Contrails, Kan.
Eagle, Pa.
Enid, Okla.
Fairbanks Midnight Sun, Alaska
Fort Wayne, Ind.
Gen. B.A. Schriever Los Angeles, Calif.
Gen. Charles L. Donnelly Jr., Tex.
Gen. David C. Jones, N.D.
Golden Triangle, Miss.
Happy Hooligan, N.D.
High Desert, Calif.
Hurlburt, Fla.
Lance P. Sijan, Colo.
Leigh Wade, Va.
Llano Estacado, N.M.
Lloyd R. Leavitt Jr., Mich.
McChord, Wash.
Mercer County, N.J.
Mount Clemens, Mich.
Richard D. Kisling, Iowa
Richard S. Reid, Ariz.
Steel Valley, Ohio
Swamp Fox, S.C.
Ute-Rocky Mountain, Utah
Wright Memorial, Ohio

Achievement Award

Ark-La-Tex, La.
Bill Harris, Ore.
Cape Canaveral, Fla.
Central Oklahoma (Gerrity), Okla.
Charles Hudson, Calif.
Chautauqua, N.Y.
Cheyenne Cowboy, Wyo.
Cochise, Ariz.
David D. Terry Jr., Ark.
Delaware Galaxy, Del.
Del Rio, Tex.
Earl D. Clark Jr., Mo.
Edward J. Monaghan, Alaska
Flying Yankees/Gen. Geo. C. Kenney
Fort Dodge, Iowa
Frank Luke, Ariz.
Joe Walker-Mon Valley, Pa.
John W. DeMilly Jr., Fla.
Langley, Va.
Lt. Col. B.D. "Buzz" Wagner, Pa.
Mel Harmon, Colo.
Monterey Bay Area, Calif.
Montgomery, Ala.
Northeast Texas, Tex.
Palm Springs, Calif.
Panhandle AFA, Tex.
Pope, N.C.
Robert H. Goddard, Calif.
Rushmore, S.D.
South Georgia, Ga.
Tennessee Valley, Tenn.
Tidewater, Va.
Total Force, Pa.
William A. Jones III, Va.
William J. "Pete" Knight, Calif.

Named in Memorial Tribute

Deaths during the past year that were formally recognized by the association

Col. M.F. Caruthers, USAF (Ret.)
William E. Charles
Raymond Choquette
Lt. Col. Thomas D. Combs, USAF (Ret.)
Col. Marc Drinkhahn, USAF (Ret.)
Col. Adolph Eckhardt, USAFR (Ret.)
Col. Edward Elbert, USAF (Ret.)
Col. Joseph Falvey, USAF (Ret.)
Col. William E. Freeman, USAF (Ret.)
Col. Robert R. French, USAF (Ret.)
Maj. Gen. Richard A. Freytag, USAF (Ret.)
Roland E. Fry
Col. Lindy Gunderson, USAF (Ret.)
1st Lt. Tom Hissem
Lt. Col. Robert Iarussi, USAF (Ret.)
Anthony Laporte
Virginia Leitch
Col. Ralph L. Michaelis, USAF (Ret.)
Maj. Bennett Moyle, USAF (Ret.)
Col. Lloyd Pickering, USAF (Ret.)
CMSgt. Gordon Reuter, USAF (Ret.)
Gen. B.A. Schriever, USAF (Ret.)
Col. Richard E. Siner, USAF (Ret.)
Lt. Col. Robert W. Sweginnis, USAF (Ret.)
Capt. Frank Swords, USAF (Ret.)
Lt. Col. Glen Thompson, USAF (Ret.)
Brig. Gen. Anthony Tolin, USAF (Ret.)
Col. Jack Ventling, USAF (Ret.)
Col. Charles Waterman, USAF (Ret.)
Capt. Charles J. Widmar, USAF (Ret.)
Col. Sherman Wilkins, USAF (Ret.)

Individual Activity Awards

Presidential Citation

Arthur D. Bosshart, Ga.
Robert F. Cutler, Fla.
Irene Johnigan, Wyo.
William D. McGuth, D.C.
Lynn Morley, Ga.
Julie Petrina, Md.
Eric Taylor, N.H.
Ray Turczynski, Fla.

Central East Region

Medal of Merit

James M. Barker Jr., Va.
Allan Berg, Va.
Keith Ebert, Va.
Kip Hansen, D.C.
Gerald Hovatter, Va.
Jerry King, Va.
James H. McGuire, Va.
John K. Murphy, Del.
Stan "Steamer" Stevens, Va.
Scott P. Van Cleef, Va.

Exceptional Service Award

Richard Bundy, Del.
Tom Coney, D.C.
Matthew E. Monczewski, Va.
Jeffrey Platte, Va.
Jake Tweedy, Va.

Far West Region

Medal of Merit

Tom Dwelle, Calif.
Scott Edrington, Calif.
Jack Gruber, Calif.
Nelson E. Howlett, Calif.
Dick Jeffreys, Calif.
Mary J. Nishiyama, Calif.
Robert I. Recker Jr., Calif.
Tony Rollis, Calif.
Steve Scott, Calif.
John Simpson, Hawaii
Don Tomajan, Calif.

Exceptional Service Award

Paul Bell, Calif.
Don Eby, Calif.
James H. Gates, Calif.
Lee Greer, Calif.
Chris Harlambakis, Calif.
John Rosso, Calif.

Florida Region

Medal of Merit

E.J. "Bud" Albers, Fla.
James J. Burns, Fla.
James B. Connors, Fla.
Dennis E. Foley, Fla.
Robert W. Marinar, Fla.
Candace Robey, Fla.
Kevin Vislocky, Fla.
Robert Walker, Fla.

Exceptional Service Award

Marion Caruthers, Fla.
Max Friedauer, Fla.
Theresa Kemp, Fla.
Dennis Moran, Fla.
Richard Schaller, Fla.

Great Lakes Region

Medal of Merit

Lani Duquette, Mich.
James Jenkins, Ky.
Leland Nellist, Mich.
Robert Vick, Mich.
Daniel Wells, Ky.

Exceptional Service Award

Robert Brewster, Ohio
Thomas Craft, Mich.

Midwest Region

Medal of Merit

John Campo, Kan.
Justin Faiferlick, Iowa
Peter Glenboski, Neb.
Todd Hunter, Kan.
Jack Kuykendall, Mo.
Glenn Scott, Ill.
Marvin Tooman, Iowa

Exceptional Service Award

Robert D. Lewallen, Neb.
Petrina Merritt, Iowa
Loran Schnaidt, Mo.
James Snyder, Mo.

New England Region

Medal of Merit

Craig Hancock, Conn.
John W. Hasson, Mass.
David Houde, N.H.
Thomas Huizenga, R.I.
Donald G. Jones, Vt.
Robert Lachapelle, R.I.

Exceptional Service Award

Angela Dupont, Mass.
Edward H. Josephson, N.H.
Steven Negron, Mass.
Joseph N. Waller, R.I.

North Central Region

Medal of Merit

Julie Eszlinger, Minn.
Tim Jensen, Wis.
Bob McGonigal, Minn.
Glenn Shull, Minn.
James W. Simons, N.D.
Johnnie Sowell Jr., N.D.

Exceptional Service Award

Juanita Giesler, Minn.
Curtis Halverson, N.D.
Robert P. Talley, N.D.

Leo Wittenberg, Minn.
Kenneth Wofford, Minn.

Northeast Region

Medal of Merit

Cathy Ward, N.Y.
Robert Wiggins, N.J.

Exceptional Service Award

Linda Fairlie, N.J.
Susan Griffith, N.Y.
Edward Keil, N.Y.
Mary Traver, N.J.

Northwest Region

Medal of Merit

Rob Coe, Wash.
Carlene Joseph, Wash.
Jon Powell, Alaska

Exceptional Service Award

Gary A. Hoff, Alaska
Richard A. Seiber, Wash.
Joseph E. Tucker, Wash.

Rocky Mountain Region

Medal of Merit

Daniel Beatty, Colo.
Lamberth Blalock, Colo.
Dennis Guymon, Utah
Jim Hall, Colo.
Teresa Tafoya, Colo.
Kit Workman, Utah

Exceptional Service Award

Tom Cavalli, Colo.
Rick Hartle, Utah
Joan Sell, Colo.
Gayle White, Colo.

South Central Region

Medal of Merit

Mike Clowers, Ala.
Jaimee Cruz-Montanez, Ala.
Paul Dietke, Miss.
Roy A. Gibbens, Miss.
James C. Kasperbauer, Tenn.
Paul LaFlame, La.
George Livers, Tenn.
Judy Rice, Ala.
Jonathan P. Shockey, Ark.
James Van Eynde, Tenn.

Exceptional Service Award

Wes Padgett, Ala.
Joe Panza, Ala.
Jerry Reichenbach, Ark.
Ronald J. Vaughan, Miss.

Southeast Region

Medal of Merit

Sara Bishop, N.C.
Elizabeth C. Burris, Ga.
Latasha Dunn, Ga.
Lewis Feuerstein, N.C.
Edward C. Greene, N.C.
Deborah L. Marshall, S.C.
John "Bones" Marshall, S.C.
Tillman Meetze, S.C.

Exceptional Service Award

Don Adee, S.C.
Bush Hanson, S.C.

Southwest Region

Medal of Merit

Marianne Catterton, Ariz.
Herbert Egender, Ariz.
Hal Jewell, Ariz.
Jeffrey A. Laforcarde, Ariz.
Kelley Roberts-Cooper, Ariz.
Robert Sullivan, Nev.

Exceptional Service Award

Kathleen Clemence, Nev.
Robert Herculson, Nev.
James I. Wheeler, Ariz.

Texoma Region

Medal of Merit

Joan Blankenship, Okla.
Ralph Chalfant, Tex.
Jerry Christopher, Okla.
Bob Gehbauer, Tex.
Sean Habina, Tex.
Robert Pavelko, Tex.
Bill Lawson, Tex.
James C. McLeroy, Tex.
Joe Wiser, Tex.

Exceptional Service Award

Gary Beach, Okla.
John W. Blumentritt, Tex.
Mary Feightner, Okla.
Marsha D. Krotky, Tex.
Terry Thomas, Tex.



Air Force Councils

Air National Guard Council



Maj. Gen. David B. Poythress (Chair)

CMSgt. Lori Ashness
 CMSgt. Robert J. Baggstrom (Ret.)
 Capt. Robert T. Botkin
 CMSgt. Deritha M. Ceaser
 CMSgt. Kevin M. Gadd
 Lt. Col. Randy D. Johnson
 Lt. Col. Craig A. Noll
 Brig. Gen. Charles V. Ickes II (Advisor)

Civilian Advisory Council



James H. Carlock Jr. (Chair/Advisor)

Jeffrey C. Allen
 Jay Aragon
 Laura L. Loflin
 Michael W. Meyer
 Anthony R. Munson
 Sharon B. Seymour
 Jeffrey D. Specht
 Karen Thomas
 Paul K. Tierney
 Daniel F. Wenker

Company Grade Officers Council



Capt. Charles Parada (Acting Chair/
Liaison)

Capt. Catherine Barrington
 Capt. Jason Calhoun
 Capt. Eric W. Crowell
 Capt. Tammy Haley
 1st Lt. Manny Hauck
 Capt. Robert Jackson
 Capt. Marc Meyer
 Capt. Christopher Raines
 1st Lt. Kathryn Reigleman
 1st Lt. Megan Schafer
 Capt. Rebecca Weyant
 Capt. Joshua Zaker
 Brig. Gen. Glenn F. Spears (Advisor)

Enlisted Council



CMSgt. Trenda L. Voegtle (Chair)

SSgt. Sean D. Belding
 SMSgt. James E. Davis
 MSgt. Michael E. Harris
 MSgt. Douglas C. Isaacks
 MSgt. Robert N. Liles
 SrA. John A. Lockheed
 TSgt. Amber B. Mitchell
 SSgt. Terrence A. Raybon
 SMSgt. Anthony J. Rittwager
 TSgt. Paul J. Schaaf II
 SSgt. Scott V. Tamayo
 SrA. Amber J. Turek
 SMSgt. Jonathan G. Rosa (Liaison)

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 MSgt. David R. Henry
 Lt. Col. Connie C. Hutchinson
 SMSgt. Christopher Janik
 MSgt. Vicki Knox
 Col. Sheryl M. May
 Maj. Robert Palmer
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By Frances McKenney, Assistant Managing Editor

AEF Teacher of the Year

Patrick A. Welsh received the Aerospace Education Foundation's prestigious Christa McAuliffe Memorial Award as national Teacher of the Year at the Air Force Association's National Convention in Washington, D.C., in September. (See p. 81.)

The award is named for S. Christa Corrigan McAuliffe, who was a teacher at Concord (N.H.) High School when she died in the January 1986 explosion of the *Challenger* space shuttle.

The 20th recipient of the McAuliffe award, Welsh has taught physics at D.W. Daniel High School in Central, S.C., for his entire 22-year teaching career. "I have the best teaching job in the state—maybe the world," he said. The school has fewer than 1,000 students, yet it offers eight physics sections. "Virtually every senior at Daniel is taking some type of physics," he said.

Welsh teaches advanced placement, college preparatory, and technical-vocational prep physics to 11th- and 12th-graders. He incorporates aerospace topics into every course. His AP class, for example, culminates with a unit on gravitation and the physics of spaceflight, while his tech prep students learn about electrostatics, electrical circuits, waves, and sound.

Welsh earned bachelor's and master's degrees from Clemson University and a doctor of veterinary medicine degree from the University of Georgia. He had a veterinary practice before changing professions. He had many role models pointing him to his new career: His grandfather, parents, and two siblings all were teachers.

Welsh said he applied for the AEF award at the insistence of retired Col. Alton C. Whitley, a **Strom Thurmond Chapter** member and the senior aerospace science instructor for Daniel High School's AFJROTC unit.

The school proudly notes that NBA Hall of Famer "Pistol Pete" Maravich played on its basketball team as a sophomore in 1963. Now it has another claim to fame: Patrick Welsh, AEF Teacher of the Year.

AEF Recognition

AEF awards presented at the AFA Air & Space Conference included two



AEF Teacher of the Year Patrick Welsh prepares to time the flight of a free-falling object—in this case, a water balloon—about to be launched in a giant slingshot by student Kay Hemmings. Welsh teaches physics at D.W. Daniel High School in Central, S.C. His demonstrations are often dramatic and deal with spaceflight, electronics, and other aerospace-related topics.

that honor members of the Air National Guard and Air Force Reserve Command and their civilian employers.

George W. Bush Awards honoring traditional ANG officer and enlisted members and their employers went to Col. Leon S. Rice, Joint Force Headquarters, Massachusetts ANG, and employer United Airlines, Jamaica, N.Y.; and TSgt. Christopher J. Ullman, 166th Maintenance Squadron, Delaware ANG, and employer Schering-Plough Labs, Millsboro, Del.

Citizen Airman Awards for a Reserve officer and enlisted member and their employers went to Lt. Col. James A. King Jr., Hanscom AFB, Mass., and employer Boeing, Philadelphia; and MSgt. James M. Williams, 944th Fighter Wing, Luke AFB, Ariz., and employer Waste Management Industry, Phoenix.

These AEF awards were made possible by donations from AEF and William

W. Spruance, an AFA and AEF national director emeritus.

In Oklahoma

The **Tulsa Chapter** hosted the AFA Oklahoma State Convention at the 138th Fighter Wing, Tulsa Airport, in June, with AFA Chairman of the Board Stephen P. "Pat" Condon as guest speaker.

Convention-goers toured the Air National Guard facility and watched an F-16 crew take off and land on a training mission. They also had lunch on base with several Guardsmen.

Along with Condon, special guests at the convention's awards banquet, held at an airport Hilton hotel, were Maj. Gen. Harry M. Wyatt III, the state's adjutant general; Brig. Gen. Robert D. Ireton of the Oklahoma ANG; M.N. "Dan" Heth, an AFA national director; Sheila K. Jones, the Oklahoma state president; and Lee Hayes, Tulsa Chapter president.

While in Tulsa, Condon received an information briefing and tour at FlightSafety International, an aviation training company.

At Two Conventions

AFA National President Robert E. Largent was guest speaker for the New York State Convention, held at

the Niagara Falls Airport/Air Reserve Station in July. Largent presented an update on AFA and joined New York State President Fred Di Fabio in presenting awards. Barry H. Griffith, state VP, and Brother Leo F. Merriman, state chaplain, each received a New York State Presidential Award.

Griffith, who is a member of the **L.D.**

Bell-Niagara Frontier Chapter, was recognized for outstanding dedication to the state AFA organization. Merriman received the award as an AFA charter member and past president of the **Albany-Hudson Valley Chapter**.

In August, Largent traveled to the North Carolina State Convention, hosted in Raleigh by the **Tarheel Chapter**. More than 50 representatives from the state's six chapters attended the National President's briefing on the *afa21* reorganization and other challenges facing the association.

During the convention's awards presentations, State President William D. Duncan Jr. introduced AFA national-level Medal of Merit award recipients Edward C. Greene from the **Kitty Hawk Chapter**; Sara M. Bishop of the **Blue Ridge Chapter**; and Lewis E. Feuerstein from the Tarheel Chapter. The **Scott Berkeley Chapter** received Chapter of the Year honors, while Kitty Hawk's Joseph M. Hardman was named Chapter President of the Year.

AFA In Action

The Air Force Association works closely with lawmakers on Capitol Hill, bringing to their attention issues of importance to the Air Force and its people.

Hill Staffers Meet Airpower Legends

On Sept. 7, AFA launched the first in a series of history-based education programs. These are designed to help Congressional staffers think about the challenges facing the Air Force in the context of historical lessons learned.

The first event focused on fighter acquisition through the perspective of two World War II Fourteenth Air Force P-40 pilots, Donald S. **Lopez** and John R. **Alison**, and two F/A-22 pilots, Lt. Col. James **Hecker** and Capt. Jonathan **Gration**, from the 1st Fighter Wing at Langley AFB, Va.

Lopez, who is the National Air and Space Museum's deputy director, and Alison, an AFA national director emeritus, explained that the P-40 was not the airplane to take to war. Pilots died in combat and strategic objectives were not achieved because the US did not have a suitable aircraft that could perform well in the threat environment. These men did a great job under the circumstances and developed tactics that maximized the P-40's strengths, but the speakers said those pilots should never have been at such a disadvantage.

Hecker and Gration said that while F-15s and other front-line fighters do an admirable job, they are old and losing their advantage. The proliferation of "double-digit" surface-to-air-missiles and new fighters, such as China's XXJ, the French Rafale, and the European Typhoon, will severely limit the ability of the US Air Force to deliver desired effects in hostile regions.

The staffers expressed a keen interest in meeting pilots who have truly "been there and done that."

AFA Sponsors Educational Reception

AFA, the Air Force's House Liaison Office, and the Air Force History Office sponsored a Congressional Education Program for House members and their professional staffs. The theme was "Air Force History: Lessons of the Past, Challenges for the Future."

AFA supplied storyboards recounting significant events in Air Force history and explaining how they contributed to the development of new aircraft and weapon systems and the employment of airpower. Starting with Maj. Gen. Billy Mitchell, the storyboards also presented lessons from World War II, the Cold War, and post Cold War and information on operational challenges facing airmen today and tomorrow. Photos and text explained the importance of preparedness to meet any emerging threat. Also on display: period uniforms and newspapers, flight gear, and new oil paintings from the Air Force art program.

Lawmakers attending the program included House Armed Services Committee members Mike **Conaway** (R-Tex.), Thelma **Drake** (R-Va.), Robin **Hayes** (R-N.C.), Frank **LoBiondo** (R-N.J.), Silvestre **Reyes** (D-Tex.), and Joe **Schwarz** (R-Mich.). Attending from the House Appropriations Committee were Randy "Duke" **Cunningham** (R-Calif.), Norm **Dicks** (D-Wash.), Rodney **Frelinghuysen** (R-N.J.), Kay **Granger** (R-Tex.), Jack **Kingston** (R-Ga.), and Todd **Tiahrt** (R-Kan.). Other lawmakers there: Tom **Cole** (R-Okla.), Sam **Johnson** (R-Tex.), and the ranking member of the House Judiciary Committee, John **Conyers Jr.** (D-Mich.).

A large delegation of the Air Force's senior leaders attended, including Acting Air Force Secretary Pete **Geran**, Undersecretary of the Air Force Ronald M. **Sega**, Gen. T. Michael **Moseley**, USAF Chief of Staff, Lt. Gen. Steven R. **Polk**, inspector general, Lt. Gen. John A. **Bradley**, commander, Air Force Reserve Command, and Maj. Gen. Daniel J. **Darnell**, legislative liaison director. AFA Chairman of the Board Pat **Condon** and Executive Director Donald L. **Peterson** represented AFA.

Spaghetti for All

Lunch for 300? No problem. In fact, the **Tennessee Ernie Ford Chapter (Calif.)** deliberately timed their Spaghetti Feed to pull in the maximum number of guests.

Chapter President John K. Barbour says the chapter's board of directors thought up the alfresco meal while brainstorming on how to attract new members from the 129th Rescue Wing (ANG) at Moffett Federal Airfield, Calif. Barbour then planned the event with Command CMSgt. Liliانا L. Ramos of the wing. They scheduled it for the annual muster drill weekend in May, aiming to reach the biggest number of Guardsmen.

An ANG group set up chairs and decorated tables on a field at Moffett, while chapter members cooked the spaghetti off site and brought it to the base.

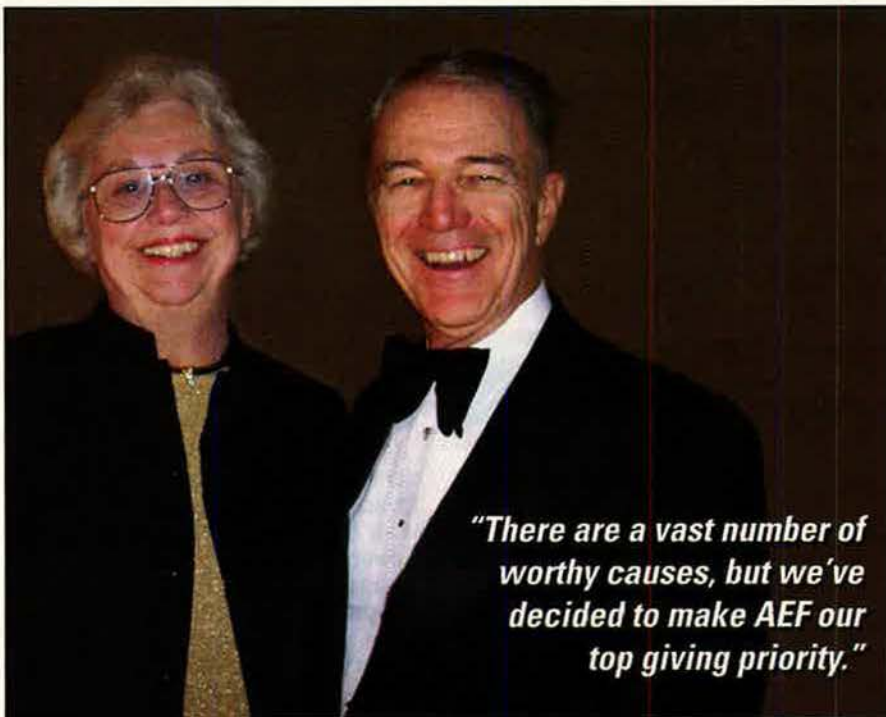
Accompanied by music from an ANG band, Barbour and chapter members John Mulhern, R.F. "Fred" DeVaughn, and Joseph Shriber served up the food. Other volunteers helping them included AFROTC cadets from Det. 45, San Jose State University.

Every Guardsman who went through the Spaghetti Feed received an AFA membership application, and Barbour used a public address system to tell them about the chapter. The lunch was so well-received that Barbour said it would become an annual event.

"So Cool!"

AEF received enthusiastic thank-you letters from many of the 50 students who went to Space Camp in August.

The foundation had selected the stu-



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dents, in grades four through 12, from more than 850 essayists who entered an AEF writing contest that required them to describe a planet they wanted to visit. The prize was five days—designated as AEF Week—at Space Camp. The camp is run by the US Space and Rocket Center science museum in Huntsville, Ala. It teaches children about aviation, space, or robotics. It also lets them sample astronaut, pilot, or mission specialist training.

When Eric P. Taylor, New England Region president, found out that one winner lived near the site of an upcoming AFA region meeting, he invited the student to join the AFAers on a tour of the 103rd Fighter Wing, Bradley Arpt., Conn. David Sindel, from Juliet W. Long Elementary School in Gales Ferry, Conn., got to sit in an A-10 trainer and donned a survival vest and parachute harness. Taylor said later, "I think the Region [Executive Committee] mem-

bers had as much enjoyment out of meeting David as he did getting up close to some hardware."

In a letter to AEF after Space Camp, Sindel wrote that he tried a multiaxis trainer, piloted a simulated shuttle mission, and toured the museum's rocket display. "So cool," he said.

More AFA/AEF News

■ In August, US Rep. Jim Marshall (D-Ga.) was guest of honor at a luncheon co-hosted by the **Carl Vinson Memorial Chapter (Ga.)**. He is a member of the House Armed Services Committee. Other special guests at the gathering included Maj. Gen. David E. Tanzi, vice commander of Air Force Reserve Command, and Stephen L. Davis, then the executive director for Warner Robins Air Logistics Center. Also at Robins Air Force Base, Jack H. Steed, then Southeast Region president, and Chapter President Lynn Morley recently presented awards and scholarships to some 11 airmen.

■ US Rep. Tom DeLay (R-Tex.) teed up with the **San Jacinto Chapter** at a golf tournament in August to show support for the 147th Fighter Wing of Ellington Field, Tex. Several hundred members of the Air National Guard F-16 unit deployed to Southwest Asia on Aug. 2. Two weeks later, the San Jacinto Chapter hosted the "Honor the Wing" golf tournament to raise funds for a welcome-home party that the chapter planned to hold for the unit on its return to Houston in October. Nearly 200 golfers turned out for the tournament. Joining DeLay on the greens were Buster Horlen, Texoma Region president; Tommy Thompson, vice president for the state's southeast section; and Karl F. Schmidt, chapter president, who described DeLay as a "good golfer."

■ Road trip! The **Joe Walker-Mon Valley Chapter (Pa.)** traveled by tour bus to the National Museum of the US Air Force, located at Wright-Patterson AFB, Ohio. James M. Cain, the chapter's membership VP, said the group was particularly impressed with the museum's Imax movie, "Fighter Pilot: Operation Red Flag." The 41 guests on this two-day tour included members of a local chapter of The Retired Enlisted Association. Combining forces "doubles the opportunities for exposure to the public," Cain pointed out.

■ The **Hurlburt Chapter** held its fifth annual Teacher Recognition Banquet at Hurlburt Field, Fla. Rick Soria from Choctawhatchee High School in Fort Walton Beach was named AFA Florida State Teacher of the Year, as well as High School Teacher of the Year. Lisa Locklin from Thomas L. Sims Intermediate School in Pace was named Middle

School Teacher of the Year, while Danna Chatwell of Holley-Navarre Intermediate School in Navarre was honored as Elementary School Teacher of the Year. Norman E. Thagard, who made five spaceflights between 1983 and 1995—including the 115-day Russian Mir 18 mission—was guest speaker for the August meeting.

■ In Tallahassee, Fla., **Col. H.M. "Bud" West Chapter** members marked the 60 years that have passed since the Allied invasion of Iwo Jima. They invited as guest speaker a marine who took part in the February 1945 battle for the island. Retired USMC Lt. Gen. Lawrence F. Snowden commanded a rifle company in 4th Marine Division during the assault. He told the nearly 70 members at the August chapter meeting that today's troops serve with as much dedication and bravery as those who fought alongside him in the 36-day battle to take the Pacific island.

■ For their August meeting in Columbus, Ind., the **Columbus-Bakalar Chapter** looked back on the Vietnam War. Retired Col. Kenneth L. Weber was guest speaker. A former AC-47 gunship pilot in Vietnam in 1968, Weber completed 185 combat sorties, several with A1C John L. Levitow, who later received a Medal of Honor.

■ **McChord Chapter (Wash.)** President Helen F. "Fran" McGregor recently presented an AEF Spouse Scholarship to a recipient from her area. Johanna Redo accepted the \$1,000 award at a chapter executive council meeting. Her spouse is SSgt. Watani Redo of the 62nd Aerial Port Squadron at McChord. AEF awarded 30 scholarships this year to active duty, Guard, and Reserve spouses pursuing college degrees.

■ Chapter VP Terry Hardy announced that the **Pease Chapter (N.H.)** has signed up its first Community Partner—the barber who's been cutting hair at Pease for nearly 50 years. Community Partner Sal Zona has been at the facility for so long he's seen it evolve from Pease Air Force Base to an Air National Guard base to Pease International Tradeport Air National Guard Station. He told a local newspaper that when he opened up his barbershop in 1956 "the cement wasn't dry on the runway." ■

Have AFA/AEF News?

Contributions to "AFA/AEF National Report" should be sent to *Air Force Magazine*, 1501 Lee Highway, Arlington, VA 22209-1198. Phone: (703) 247-5828. Fax: (703) 247-5855. E-mail: afa-aeef@afa.org. Digital images submitted for consideration should have a minimum pixel count of 900 by 1,500 pixels.

Reunions

reunions@afa.org

601st/615th ACWRON, Rothwesten and Prum, Germany (from 1950). April 2-7, 2006, in Branson, MO. **Contact:** Nick Mascis (nickmascis@yahoo.com).

Ramey AFB Historical Assn, MacDill AFB, FL. March 7-11, 2006. **Contact:** Rudi Fischer (609-804-0482) (wrfischer@comcast.net).

USAF Pilot Training Class 55-D. Nov. 16-18 at the Palace Station Hotel in Las Vegas. **Contact:** Jim Reed (707-539-2184) (jrflies@aol.com).

Seeking members or instructors of **Pilot Class 56-K**, Laughlin AFB, TX, for a reunion in 2006. **Contact:** Harold Wesley, 374 Scottsdale Ct., Westerville, OH 43082 (614-899-7528) (hwesley@columbus.rr.com). ■

Joe L. Shosid (1927-2005)

Retired Maj. Gen. Joseph Lewis Shosid, who was AFA Chairman of the Board (1972-73 and 1975-76) and National President (1973-75) recently passed away at his home in Fort Worth, Tex. He was 77. AFA was informed in September of his Aug. 7 death.



A native of Fort Worth, he was born on Aug. 27, 1927, and graduated from Texas Christian University with a bachelor's degree in journalism and later a master's degree in government. He was an enlisted veteran of World War II, serving in the US Maritime Service and US Army before transferring to the Air Force Reserve, where he rose to the rank of major general. He earned numerous military awards, including the Distinguished Service Medal, and, in 1975, received an Air Force civilian Exceptional Service Award.

He was a special assistant to House Speaker James C. Wright Jr. (D-Tex.), beginning in 1961, and also to Vice President Hubert H. Humphrey from 1966 to 1969. He was president of an international firm and a public relations and advertising agency in Fort Worth.

General Shosid held all levels of AFA leadership positions, from chapter and state officer to vice president for the Southwest Region and national director, as well as chairman of several committees. AFA named him Man of the Year in 1963.

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